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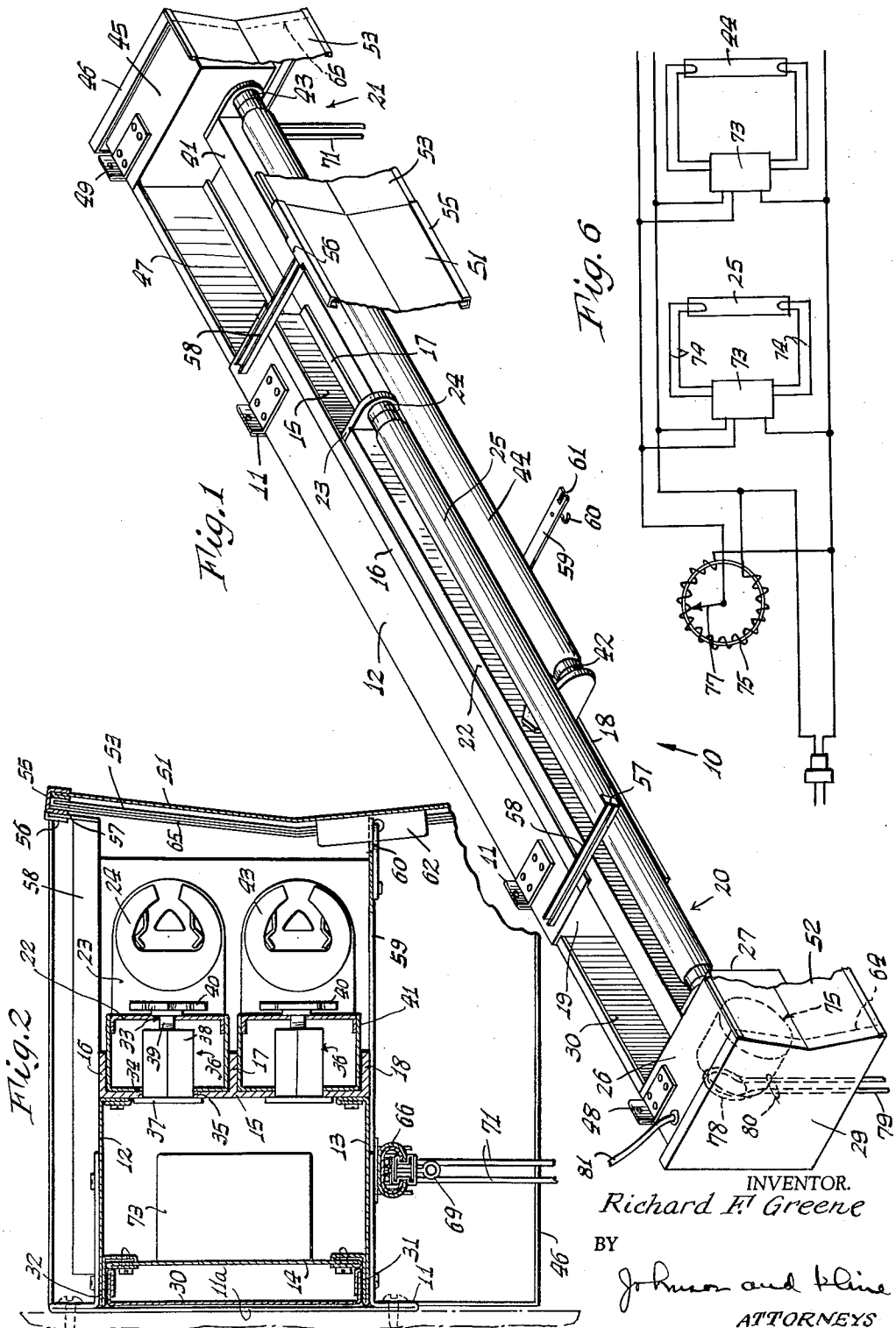
R. F. GREENE

3,064,121

LIGHTING UNIT

Filed Oct. 16, 1958

2 Sheets-Sheet 1



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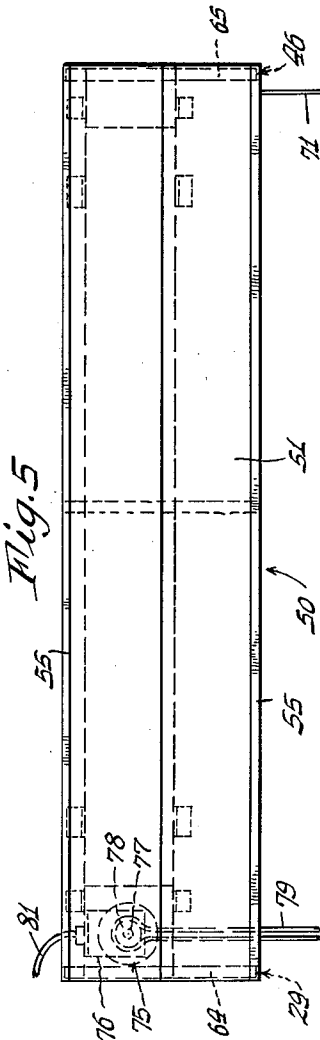
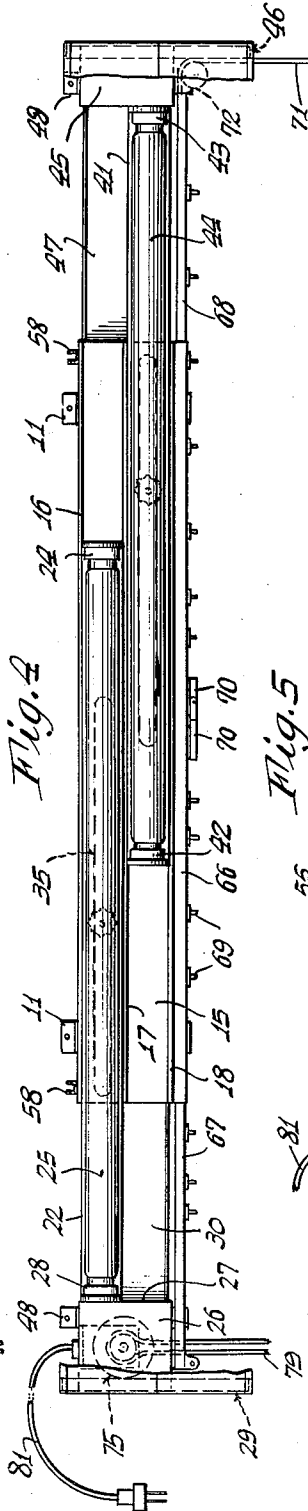
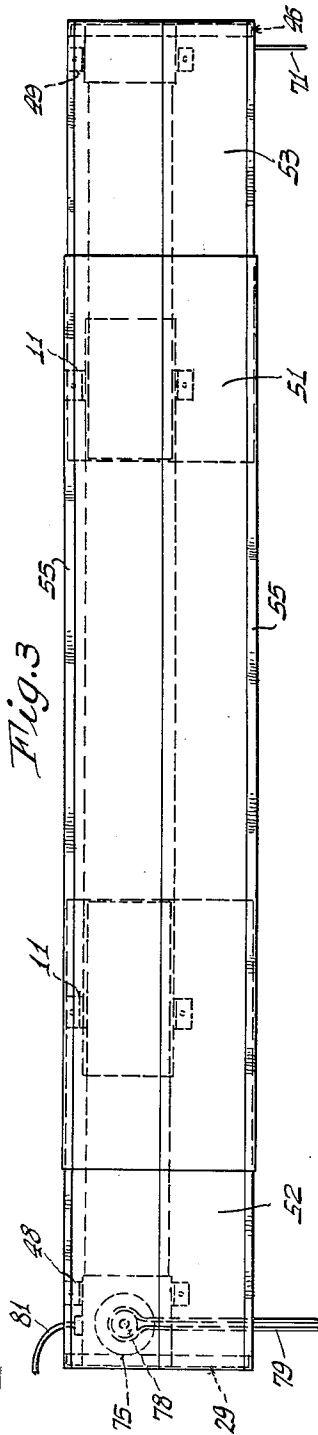
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LIGHTING UNIT

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5 Claims. (Cl. 240-2)

The present invention relates to a lighting unit having light emitting devices such as electric bulbs and having incorporated therein hangers from which curtains may be hung when the unit is mounted on a supporting structure, such as a wall.

An object of the present invention is to provide a lighting unit having electrically energized light emitting means in which the amount of light from the means may be adjusted and in which there are curtain hanging means associated therewith.

Another object of the present invention is to provide a lighting unit of the above type that is adjustable in length and in which the light producing means is movable to extend throughout the length of the unit.

A further object of the present invention is to provide a lighting unit of the above type that is relatively economical to manufacture, reliable in use and simple to operate in order to adjust the length, the degree of illumination or manipulate the curtains appended thereto.

In attaining the above objects the instant invention of a lighting unit has a main supporting frame which is securely fastened to a supporting structure such as a wall. The frame has slots which telescopically receive extension members that extend on opposite sides of the main frame thereby enabling the length of the lighting unit to be adjustable in length. Also telescopically supported by the main frame are curtain hangers which have their end portions connected to the extension members and accordingly are adjustable in length therewith to extend substantially throughout the length of the unit.

Each extension member carries illuminating means with it so that illumination is produced for substantially the length of the extension member and hence for approximately throughout the length of the unit irrespective of its adjusted length. In the specific embodiment disclosed the illuminating means comprising two fluorescent lights with one being carried by each extension member so that the lights are relatively movable with respect to each other and also as each of the extension members are extended to vary the length of the lighting unit, the bulbs are carried therewith to extend throughout the length of the unit.

The lighting unit further contains manually operable light control means for adjusting the amount of light emitted from the bulbs, and in the particular embodiment of the invention disclosed, constitutes a variable autotransformer which is interconnected with the ballast of the fluorescent lights to form a variable load on the lights and hence enable adjustment of the illumination therefrom by controlling the amount of energy to the lights. The autotransformer is mounted in one extension member (though, of course, may be mounted on the main frame if desired) and its manipulating means consists of a cord looped around a pulley with the cord depending from the lighting unit adjacent one end thereof.

Other features and advantages will hereinafter appear.

In the drawing:

FIGURE 1 is a perspective view with portions broken away, of the lighting unit of the present invention with the extension members being partially extended.

FIG. 2 is a section taken through the center of the lighting unit.

FIG. 3 is a front view of the hanger, partially extended.

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FIG. 4 is a view similar to FIG. 3 with the front screen broken away.

FIG. 5 is a front view of the lighting unit with the extension members being completely collapsed.

FIG. 6 is a schematic diagram of the wiring of the lighting unit of the present invention.

Referring to the drawing, the lighting unit is generally indicated by the reference numeral 10 and has a pair of brackets 11 for mounting the unit to a supporting structure such as a vertical wall. A supporting frame includes upper and lower horizontal plates 12 and 13, respectively, a back panel 14 and a front support 15 interconnected to form a hollow substantially rectangular housing, with the brackets 11 being secured to the supporting frame. The front support 15 is formed to have flanges 16, 17 and 18, top, middle and lower respectively to define a top groove and a bottom groove on the front side of the support 15. End caps 19 complete enclosing the supporting frame to form a hollow enclosure.

Referring to FIGS. 1 and 2, there are provided two extension members 20 and 21, extension member 20 being the upper and extending to the left as shown in FIG. 1, while extension member 21 is the lower and extends to the right. Extension member 20 includes an elongate, hollow bar 22 having a rectangular cross-section which is telescopically received into the groove formed between the flanges 16 and 17 of the front support 15. An end plate 23 closes one end of the bar and has a socket 24 for receiving the terminals of a bulb 25, the bulb 25 being a fluorescent light tube and the socket 24 being a two-pin socket for use with such a tube in a manner that is well known in the art.

Mounted at the other end of the bar 22 is a rectangular, hollow enclosure 26 having a vertical side 27 nearest the other end of the bulb 25 and a socket 28 (similar to the socket 24) is secured thereto, the bulb being mounted between the sockets 24 and 28. The other vertical side of the enclosure 26 is formed by an end plate 29 which is larger than the enclosure and projects beyond the enclosure on the top, bottom and front thereof and serves to provide a decorative end piece for the lighting unit. The back of the enclosure 26 consists of an elongate channel member 30 which is telescopically received between upper and lower lips 31 and 32 respectively formed by the overhanging of the top and bottom plates 12 and 13 of the supporting frame. The bracket 11 has a back 11a which maintains the channel within the groove defined by lips.

It will accordingly be appreciated that the supporting frame by providing grooves in which the channel 30 and bar 22 are telescopically movable enables the extension member 20 to be longitudinally extendible and retractable with respect to the supporting frame and thus the unit can be adjusted in length.

The extension member 20 is locked in the selected extended position by a releasable clamping means which is incorporated in the lighting unit in the following manner. The hollow bar 22 is provided with an aperture 33 in its front side and a hexagonal aperture 34 in its rear side. A longitudinal slot 35 is formed between the flanges 16 and 17 in the front support 15. A locking nut 36 having a head 37 and a hexagonal shank 38 is positioned to project with the head within the enclosure of the supporting frame and the shank extending through the slot 35. A threaded portion 39 of a thumb screw 40 extends through the aperture 33 and threads into the nut 36. Thus by loosening the thumb screw the extension member 20 may be permitted to move relative to the main frame since the clamping means is released and upon tightening of the thumb screw, the extension is clamped in position.

The lower extension member 21 which extends in the

opposite direction than that of the upper extension 20 also has a hollow bar 41, sockets 42 and 43 and a fluorescent light 44 extending between the sockets. The socket 43 is secured on one side of a hollow enclosure 45 which has an end plate 46 symmetrical to the end plate 29 and in addition the plate 46 extends above, below and in front of the enclosure 45. Similarly a back channel 47 also forms a part of the extension member 21. The extension member 21 is also locked in position by a clamping means which is identical to that described in connection with extension member 20. Brackets 48 and 49 are secured to the enclosures 26 and 45 respectively at the ends of each extension member to provide additional means for securing the unit to a supporting structure.

A screen 50 extends between the end plates 29 and 46 to serve as a decorative facing for the lighting unit and also to shade the bulbs from direct viewing, it being wider than the bulbs. The screen 50 has a central portion 51, a left portion 52 and a right portion 53, the left portion being part of the extension member 20, the right portion being part of the extension member 21 and both portions being telescopically movable within the central portion 51. Each of each portions is provided with a longitudinal crease which aids in diffusing the light upwardly and downwardly from the two bulbs. The central portion 51 has U-shaped channel members 55 secured to its upper and lower longitudinal edges and in addition on the upper channel are provided lips 56 which mate with a projection 57 formed on hanger 58, the latter being secured to the top of the main supporting frame 12 to support the central portion of the screen. A bar 59 extends from the lower plate of the supporting frame and is provided with a hook 60 and a slot 61 with the hook being received within an aperture of an inwardly extending flange 62 secured on the lower portion of the screen with the flange 62 extending into the slot 61 to releasably lock the lower edge of the screen.

The end portions of each of the left and right screen portions 52 and 53 of the screen are secured to a front intumed flange 64 formed on the end plate 29 and a front intumed flange 65 on the end plate 46 preferably, though not shown, by each end being formed to have a U-shaped channel interfitting with the intumed flange to enable the ends to be longitudinally moved for removal of the screen when desired.

To provide for supporting a curtain from the lighting unit, the bottom plate 13 of the supporting frame has fastened to it a C-shaped traverse rod 66 and telescopically movable therein is a C-shaped left rod 67 and a C-shaped right rod 68. Eyelets 69, having the shape shown, are positioned in the rods for movement therein in a manner well known in the art and curtains are attached to the hangers. A pair of end runners 70 is connected to ends of a cord 71 which extends over guides 72 and depends downwardly from the outer end of the right extension member 21. It will be appreciated that operation of the cord in one direction serves to move the runners 70 in opposite directions to open a curtain while pulling the cord in the other direction moves the runners 70 towards each other to close the curtain.

As shown in FIG. 6, which is the schematic diagram of the electrical connections of the lighting unit, each of the fluorescent bulbs 25 and 44 is provided with a ballast 73 and the ballasts are connected to the bulbs by leads 74 in the manner shown. The ballasts are mounted within the enclosure formed by the supporting frame with the wires extending therefrom through the slots 35 through the hollow bar 22 to the sockets 24 and 27 respectively of the upper extension member. Similarly the extension member 21 has a ballast with the wires extending to the socket members through the hollow bar 41.

The present invention enables the adjusting of the amount of illumination from the bulbs and to this end there is mounted in the enclosure 26 a light controller 75 on an L-shaped bracket 76, with one leg of the bracket

supporting the light controller 75 and the other leg being secured to the top plate of the enclosure. The light controller has a shaft 77 on which is mounted a pulley 78. A cord 79 is looped about the pulley 78 and extends through an aperture 80 formed in the bottom surface of the enclosure 26.

The light controller 75, since the bulbs 25 and 44 are fluorescent, is electrically connected between an input cord 81 connectible to a source of electrical energy and the ballasts in a manner disclosed in U.S. Patent 2,830,232. Though, of course, if the bulbs are incandescent, they may be controlled by the light controller by electrically connecting the controller in a manner disclosed in U.S. Patent 2,805,367. The light controller specifically employed in the present connection and disclosed in the above-mentioned two patents comprises an annular magnetic core having a toroidal winding formed with a commutating surface on which a brush rides. The brush is operated by rotation of the shaft 77. The wires between the controller 75, the ballasts and the sockets are led from the enclosure 26, through the bar 22 to the enclosure formed by the supporting frame containing the ballasts.

It will accordingly be appreciated that there has been disclosed a lighting unit which may be attached to a supporting structure and from which curtains may be hung. The lighting unit is adjustable in length and provides throughout its length for illumination by having each of the illuminating means movable with the telescoping extensions.

There is further provided a lighting controller which enables a user to adjust the amount of light emanating from the light sources to provide the amount of illumination desired from the unit.

Variations and modifications may be made within the scope of the claims and portions of the improvements may be used without others.

I claim:

1. A lighting unit comprising an elongate supporting frame having at least one bracket for enabling the frame to be secured to a supporting structure, such as a wall, at least one extension member having an end portion forming an end portion of the lighting unit, means mounting the member for telescoping movement in the frame, an electric light emitting means mounted on the member for movement therewith, an elongate screen formed of at least two telescoping sections having one end connected to the end portion of the first extension member and its other end connected to the other end portion of the lighting unit, said screen having a width wider than the light emitting means and being located forwardly in front of said means, elongate curtain hanging means having one end being fastened to the end portion of the extension member and its other end being fastened to the other end portion of the lighting unit, said curtain hanging means being disposed below and rearwardly of the light emitting means and having curtain runners operable by a cord, an adjustable light controller supported on the frame, and electrical connections interposing the light controller between the light emitting means and a source of electrical energy whereby said controller controls the amount of energy to the means and hence the light emitted therefrom.

2. A lighting unit comprising an elongate supporting frame having at least one bracket for enabling the frame to be secured to a supporting structure, such as a wall; a first extension member having an end portion, means for mounting the member on the frame for telescoping movement, an electric light emitting means mounted on the member for telescoping movement on the frame, a second member having an end portion, means mounting the second member for telescoping movement on the frame, a second electric light emitting means mounted on the second member for movement therewith; an elongate screen formed of a plurality of telescoping sections having one end of the screen connected to the end portion of the

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first extension member and the other end of the screen connected to the end portion of the second extension member, said screen having a width wider than the two light emitting means and being located forwardly, in front thereof; elongate curtain hanging means having a plurality of telescoping sections with one end of the means being fastened to the end portion of the first extension member and the other end of the means being fastened to the end portion of the other extension member, said curtain hanging means being disposed below and rearwardly of the light emitting means and having curtain runners operably by a cord; an adjustable light controller supported on the frame; and electrical connections interposing the light controller between the two light emitting means and a source of electrical energy whereby said controller controls the amount of energy to the means and hence the light emitted therefrom.

3. A lighting unit comprising an elongate supporting frame having at least one bracket for enabling the frame to be secured to a supporting structure, such as a wall, said frame having a pair of parallel, lengthwise extending grooves formed in the front thereof; a first extension member having an end portion and an elongate bar telescopically movable in one of the grooves, an electric light bulb mounted on the bar in sockets disposed adjacent each end of the bar; a second extension member having an end portion and a second elongate bar telescopically movable in the other of the grooves, a second electric light bulb mounted on the second-mentioned bar in sockets disposed adjacent each end of the second-mentioned bar; an elongate screen formed of a plurality of telescoping sections having one end of the screen connected to the end portion of the first extension member and the other end of the screen connected to the end portion of the second extension member, said screen having a width wider than the distance between the two bulbs and being located forwardly, in front of the bulbs; elongate curtain hanging means having a plurality of telescoping sections with one end of the means being fastened to the end portion of the first extension member and the other end of the means being fastened to the end portion of the other extension member, said curtain hanging means being disposed below and rearwardly of the bulbs and having curtain runners operable by a cord; an adjustable light controller mounted in the end portion of one of the extensions; electrical connections interposing the light controller between the bulbs and a source of electrical energy whereby said controller controls the amount of energy to the bulbs and hence the light emitted from the bulbs; and a cord connected to the light controller for adjusting same and de-

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pending downwardly adjacent one end of the lighting unit; said cord for operating the curtain hangers depending downwardly adjacent the other end portion of the lighting unit.

4. A lighting unit comprising a supporting frame having at least one bracket for enabling securement of the frame to a supporting structure, such as a wall, at least one extension member having an end portion constituting one of the end portions of the lighting unit, means formed on the supporting frame for supporting the extension member for telescoping sliding movement with respect to said frame, light emitting means secured to said extension member for movement therewith, and curtain supporting means including at least two portions telescopically connected and fastened to and extending between the end portion of the member and the other end of the lighting unit for coextensive movement with the extension member, said curtain supporting means being positioned below the light emitting means.

5. A lighting unit comprising a supporting frame having at least one bracket for enabling securement of the frame to a supporting structure, such as a wall, at least one extension member having an end portion constituting one of the end portions of the lighting unit, means formed on the supporting frame for supporting the extension member for telescoping sliding movement with respect to said frame, light emitting means secured to each extension member for movement therewith, and a telescoping screen including at least two sections telescopically connected and fastened to and extending between the end portion of the member and the other end of the lighting unit for coextensive movement with the extension member, said screen being positioned in front of the light emitting means.

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