

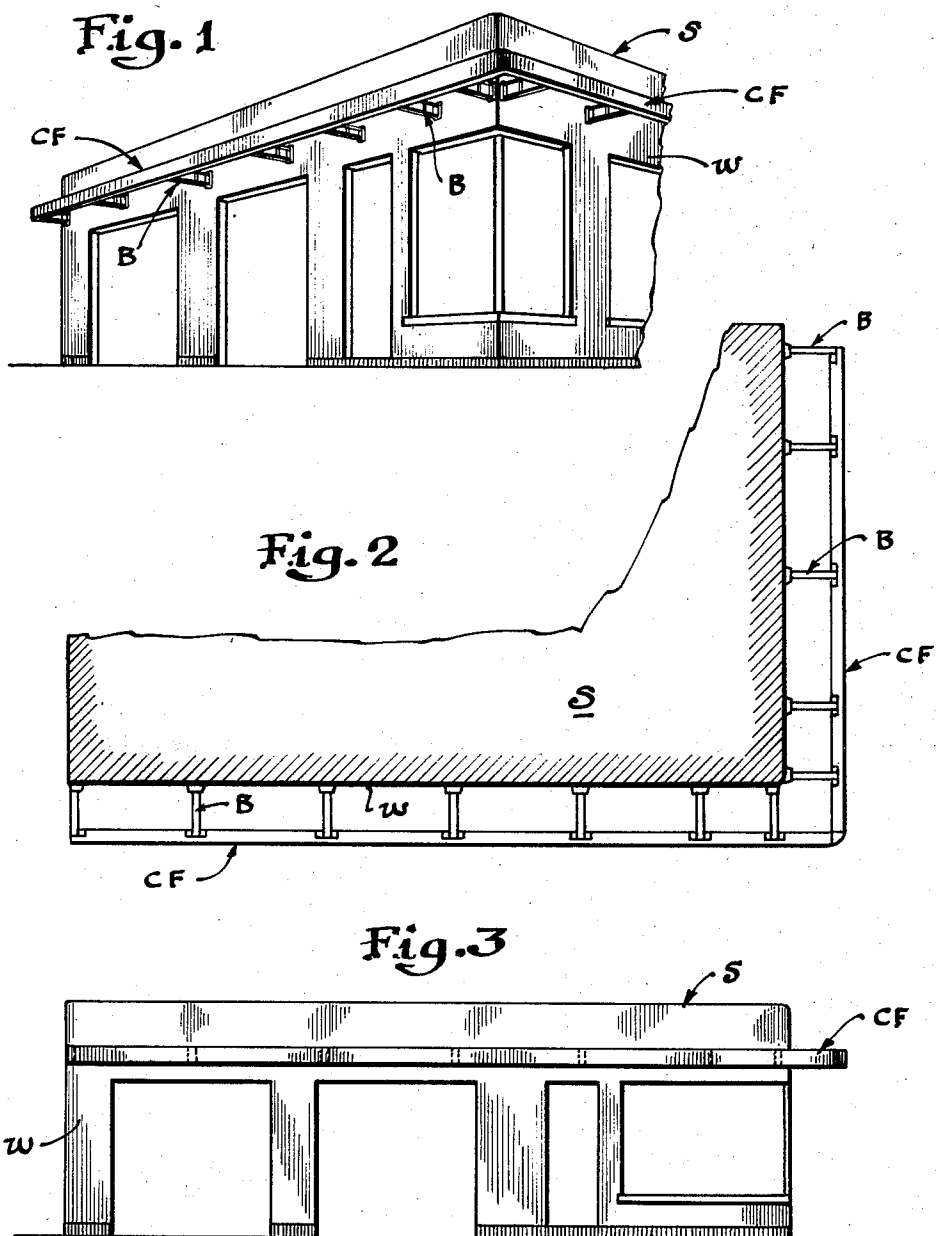
July 28, 1959

W. S. AKELY ET AL
LIGHTING FIXTURES

2,897,348

Filed Feb. 20, 1956

3 Sheets-Sheet 1



Inventors
William S. Akely
Robert Paul Karlen
By *Wallace and Cannon*
Attorneys

July 28, 1959

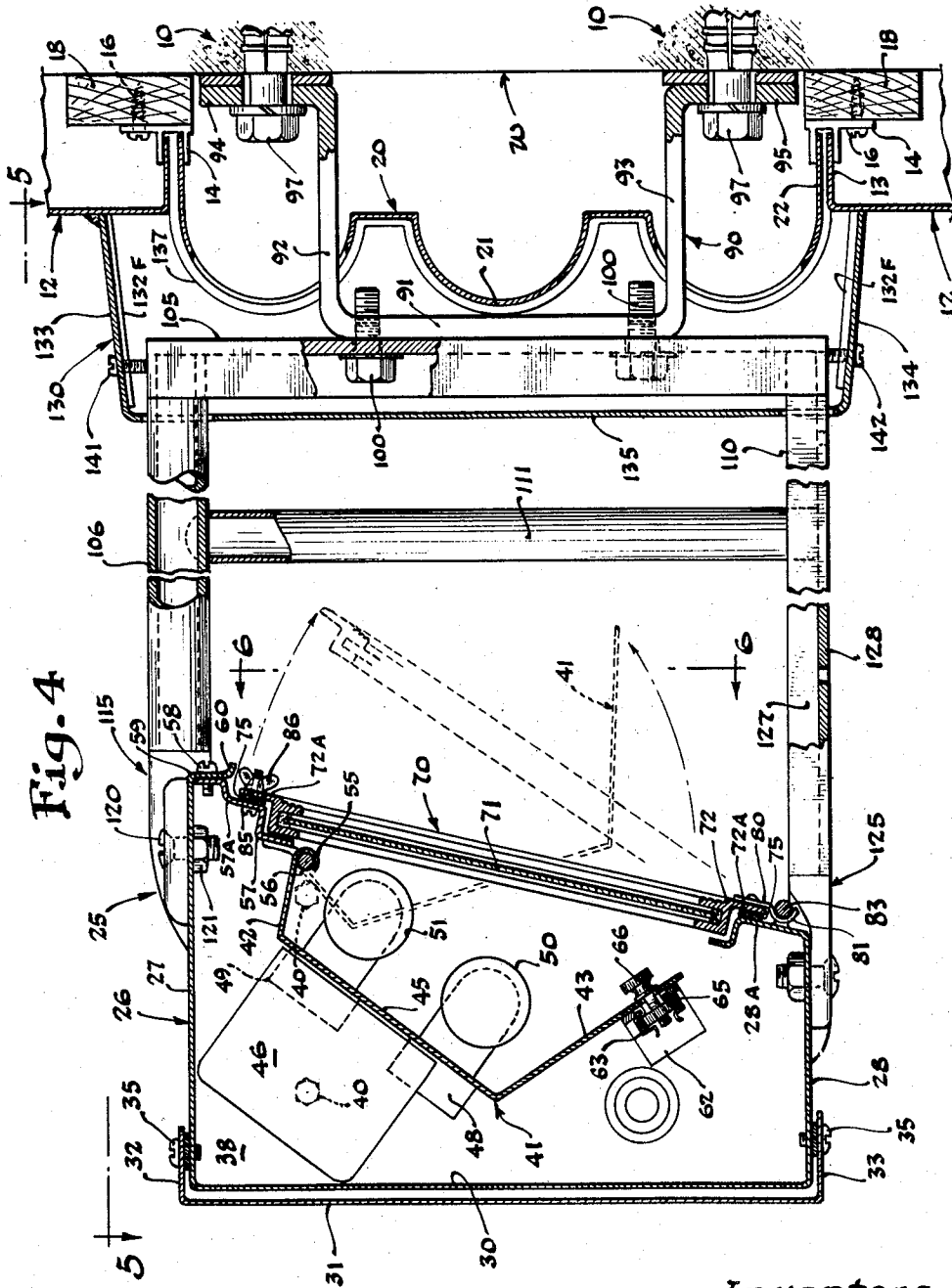
W. S. AKELY ET AL

2,897,348

LIGHTING FIXTURES

Filed Feb. 20, 1956

3 Sheets-Sheet 2



Inventors
William S. Akely
Robert Paul Karlen
By *Wallace and Cannon*
Attorneys

July 28, 1959

W. S. AKELY ET AL
LIGHTING FIXTURES

2,897,348

Filed Feb. 20, 1956

3 Sheets-Sheet 3

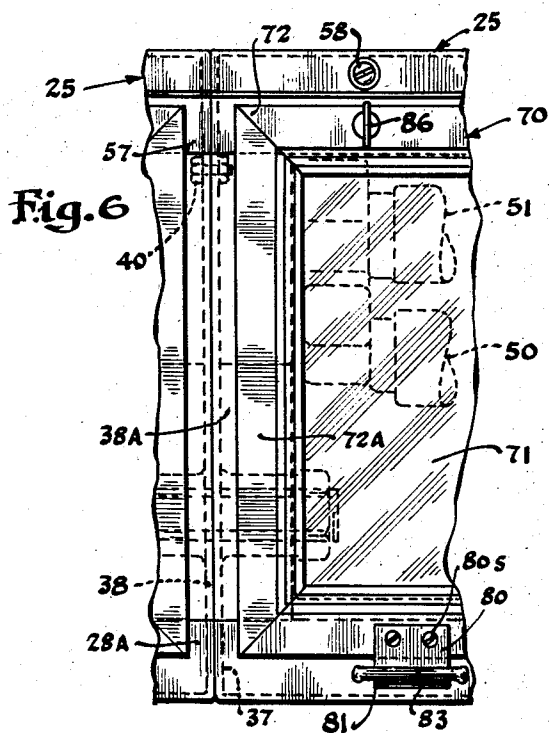
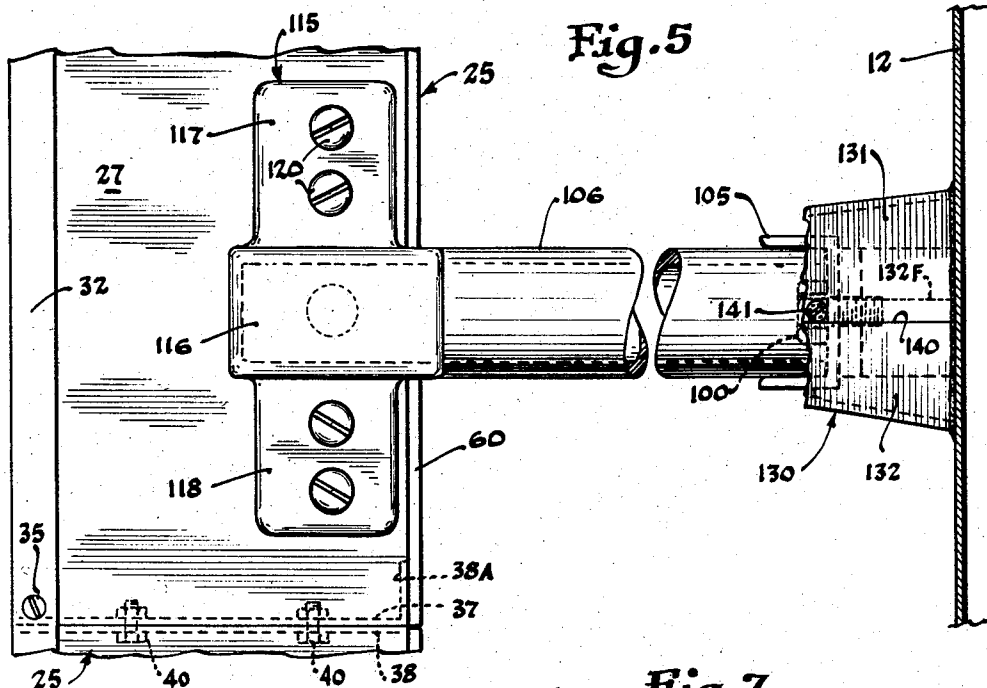
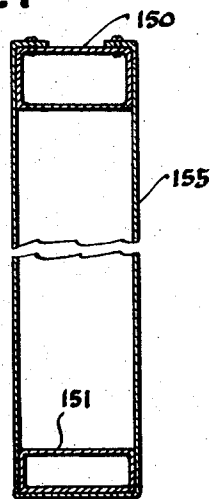


Fig. 7



Inventors
William S. Akely
Robert Paul Karlen

By Wallace and Cannon
Attorneys

1

2,897,348

LIGHTING FIXTURES

William S. Akely, Oak Park, Ill., and Robert Paul Karlen, Pittsburgh, Pa., assignors to Guardian Light Company, Oak Park, Ill., a corporation of Illinois

Application February 20, 1956, Serial No. 566,701

8 Claims. (Cl. 240—73)

This invention relates to lighting fixtures and more particularly to a lighting fixture adapted to be projectibly mounted outwardly of a wall to illuminate the wall.

It is desirable in certain instances to illuminate wall structure as for instance in service stations provided with exterior decorative tiling. Heretofore, such wall illumination of the service station walls has been accomplished by floodlights installed on towers at selected positions about the apron of the service station, but this is objectionable for the reason that the resultant glare of the lamps is an inconvenience to the attendants as well as customers. The primary object of the present invention is to enable walls such as service station walls to be illuminated by fixtures attached to the walls so as to direct the light emanating therefrom directly against the wall. Another object of the present invention is to enable the foregoing to be accomplished in such a way that adjacent fixtures may be readily connected in tandem so as to be capable of uniformly illuminating the wall along the entire length thereof, and another object of the present invention is to equip such a fixture with relatively rigid mounting brackets enabling the fixture to be securely attached to the wall in projecting relation outwardly therefrom.

Where a relatively large lighting fixture including multiple interfitting parts such as in the present instance is to be affixed to a wall, it is advantageous to facilitate this by having the several parts of the fixture adapted for quick assembly and disassembly so that the fixture can be easily transported to the place of installation in assembled, stabilized condition, assuring that the fixture will not be damaged, and there disassembled and installed piece by piece. Another object of the present invention is to enable such to be accomplished.

Where the lighting fixtures of the present invention are to be installed on outside wall structure, it will be appreciated that these will be exposed in many instances to rather severe weather conditions and accordingly a further object of the present invention is to assure that the fixture is effectively protected against adverse weather. Inasmuch as it is desirable to be able quickly and easily to remove burned out lamps from the fixture or to repair the ballast, it is another object of the present invention to enable this to be so accomplished by means of a pivoted reflector and a pivoted shield in front of the reflector which are adapted to open in the direction of the wall that is illuminated in the space between the shield and the wall.

Other and further objects of the present invention will be apparent from the following description and claims and are illustrated in the accompanying drawings which, by way of illustration, show preferred embodiments of the present invention and the principles thereof and what we now consider to be the best mode in which we have contemplated applying these principles. Other embodiments of the invention embodying the same or equivalent principles may be used and structural changes may be made as desired by those skilled in the art without departing from the present invention and the purview of the appended claims.

2

In the drawings:

Fig. 1 is a diagrammatic perspective view of a service station wherein the walls thereof are provided with lighting fixtures in accordance with the present invention;

Fig. 2 is a diagrammatic plan view of Fig. 1;

Fig. 3 is a front elevation of the service station;

Fig. 4 is a sectional view at one of the walls of the service station showing details of the present fixture;

Fig. 5 is a top plan view of the present fixture, broken away in part and taken substantially on the line 5—5 of Fig. 4;

Fig. 6 is a fragmentary elevation, partly broken away, showing two fixtures secured in tandem one to the other; and

Fig. 7 is a sectional view illustrating a modified form of bracket structure.

In Fig. 1, a typical service station S is in part illustrated. Modern service stations of this kind have walls W faced with porcelain tiling or the like, and it is desirable that such be illuminated at night to develop fully the attractiveness of the wall. Heretofore, this has generally been accomplished by expensive floodlights affixed to towers spaced about the apron of the service station, and these also present objectionable glare. Under the present invention, objectionable floodlights of the foregoing kind are supplanted by lighting fixtures cantilevered to the walls that are to be illuminated as shown at CF in Figs. 1, 2, and 3. Thus, the fixtures in the present instance for illuminating a vertical wall or the like are supported outwardly from the wall preferably about the upper areas thereof, and as will be described the lamps are arranged to flood the walls with light so that there is uniform illumination from the top to the bottom thereof. Moreover, the arrangement is such that the fixtures are supported outwardly from the walls by bracket structure B sufficiently to enable access to be had readily to the lamp's fixtures for repair and the like.

In Fig. 4, the wall W is illustrated as constructed of concrete block 10, and it will be appreciated that such is merely illustrative of typical constructional material. In facing the wall W attractively with tile, different arrangements are of course resorted to, and in Fig. 4 a typical installation is illustrated as afforded by porcelain paneling 12 provided with inwardly directed flanges 13 that are adapted to fit into outwardly opening grooves afforded by wall brackets 14. The wall brackets 14 in this instance are fastened as by wood screws 16 to furring strips 18 which in turn are secured to the wall W by expansion bolts or the like as is well known.

In certain designs, trim of a color contrasting to the tile panels is sometimes used especially about upper areas of the wall, and in order to illustrate the way in which the fixture of the present invention may be associated therewith without removing the trim, typical trim is illustrated at 20 in Fig. 4 as comprising a plurality of elongated half-round strips 21, the upper and lower end strips 21 including inwardly directed flanges 22 that are adapted to fit into the same groove of the wall brackets 14 wherein the flanges 13 are fitted. Spot welding may be used between the flanges and the brackets 14.

It will be appreciated of course that the particular kind of paneling thus described is merely illustrative of a typical installation and that such constitutes no part of the present invention.

The fixture 25, Fig. 4, of the present invention comprises an outer housing 26 of sheet metal, including upper and lower walls 27 and 28 respectively and a rear wall 30. Preferably, the rear wall 30 is shrouded by an enameled fascia panel 31 having upper and lower flanges 32 and 33 fastened as by screws 35 to outer end portions of the upper and lower walls 27 and 28 of the housing 26. Sheet metal end panels 37 and 38, Figs. 5 and 6, are provided

3

at opposite ends of the housing 26, and flange means (not shown) are afforded between adjacent edges of the rear wall and the two end walls enabling spot welding to be utilized to connect the end walls to the rear wall. Suitable bracing structure may be required in some instances, and this may conveniently take the form of double thicknesses of sheet metal if desired.

As shown in Figs. 5 and 6, the respective end walls 37 and 38 of a pair of adjacent housings 26 can be arranged in side by side relation and connected together by nuts and bolts as 40 passed through such end walls to afford a series of housings as 26 in tandem, and it may be noted in this connection that in this way a plurality of fixtures constructed in accordance with the present invention can be arranged about the entire length of the structural wall that is to be illuminated as shown in Figs. 1, 2 and 3.

The lamps used in connection with the fixture in the present instance are of the fluorescent type, and to this end a reflector 41, Fig. 4, is mounted within the housing 26 rearwardly of the lamps as will be described. The reflector 41 is somewhat trapezoidal in section, including a top wall 42, a bottom wall 43 and a rear wall 45 connecting the upper and lower walls. Mounted on the rear wall of the reflector 41 is a so-called ballast box 46 of the usual kind for the electrical connections that are commonly used for fluorescent lighting. Attached in a suitable fashion to the reflector 41 are end brackets as 48 and 49 which include forwardly extending ears affording sockets for a pair of fluorescent lamps 50 and 51 forwardly of the forward facing rear wall 45 of the reflector 41.

The reflector 41 is hingedly supported within the housing 26 normally in a recessed relation. Thus, the forward edge of the upper wall 42 is provided with an inwardly turned lip 55, and this lip is journaled on a plurality of spaced apart hinge pins 56. The hinge pins 56 in turn are supported in depending relation by a bracket 57, and in the present instance the bracket 57 is separable and at the upper end is fastened as by screws 58 to a downwardly extended flange 59 provided at the forward edge of the upper wall 27 of the housing 26. Preferably, the lower edge of the flange 59 is bent outwardly at 60 to provide a drip edge for rain water.

It will be appreciated that the reflector 41 tends to rotate counterclockwise as indicated by dotted lines in Fig. 4 about the hinge pins 56. To hold the reflector 41 in a normal retracted position, a releasable latch is afforded. In the present instance, this latch takes the form of a captive nut carried and associated at the lower wall 43 of the reflector 41. Thus, a bracket 62 is secured in a suitable fashion to an end wall of the housing 26, and this bracket is provided with a conventional spring clip 63 for holding a captive nut 65 in a well known relation. The lower end of the lower wall 43 adjacent to the nut 65 is formed with an opening therein, and a thumb screw 66 is passed therethrough and is threadedly mounted in the nut 65. The thumb screw 66 is formed with a shoulder of larger size than the aforesaid opening of the reflector wall 43 so that by tightening the screw 66 in the nut 65 the reflector 41 can be releasably held in the normal position shown in Fig. 4. In this position, it will be observed that the arrangement of the reflector and lamps is such as to cast light in part downwardly along the wall W. As will be described below, a transparent shield is provided at the open front of the housing 26 so as to protect the lamps and the reflector. This shield is adapted to be opened, and when this has been accomplished the reflector 41 can be pivoted outwardly as shown by dotted lines in Fig. 4 by releasing the screw 66 from the nut 65.

To protect the lamps and the reflector, a shield 70, Fig. 4, is provided, and this shield includes a pane of glass 71 mounted in an extruded aluminum frame 72 of the usual kind. The frame 72 includes a peripheral flange 72A, Fig. 4. The forward edges of the end walls 37 and 38 are provided with inwardly turned flanges 38A, Figs. 5

4

and 6, corresponding to the opposite side portions of the flange 72A of the shield frame 72. Likewise, the forward edge of the bottom wall 28 of the housing 26 is provided with an upwardly extended flange 28A corresponding to the lower portion of the flange 72A of the shield frame 72, and the bracket 57 mentioned above for supporting the hinge pins 56 is provided with a vertical flange portion 57A corresponding to the upper portion of the flange 72A. Between the flange 72A, and the corresponding flanges 38A, 28A and 57A there is interposed a resilient sealing strip 75 of a preferred kind so as to afford a gasket or seal between the shield and the open front of the housing 26.

Hinge plates 80 are fastened removably by screws 80S to the outer face of the lower portion of the flange 72A at the bottom of the shield 70, and these are provided with lips 81 which pivotally embrace corresponding hinge pins as 83 attached to the forward face of the flange 28A of the housing 26 so as to pivotally mount the shield at the front of the housing 26. Screws 85 are mounted in the flange 57A included in the bracket 57, and these screws are adapted to extend through corresponding openings in the upper portion of the flange 72A of the shield frame 70. Wing nuts 86 are threadedly mounted on projecting end portions of the screws 85, thereby affording a releasable latch for holding the shield 70 normally in the position shown in Fig. 4. It will be recognized that by removing the wing nuts thus provided, the shield 70 can be pivoted forwardly and downwardly to expose the reflector 41.

Under the present invention, the housing 26 is adapted to be supported outwardly of the wall as W that is to be illuminated. To this end, a generally U-shaped bracket 90, Fig. 4, is adapted to be anchored to the wall W, and in turn the bracket 90 is adapted to support certain members attached to the housing 26 as will be described. Thus, the bracket 90 includes a vertical web portion 91, and upper and lower leg portions 92 and 93. The ends of the legs 92 and 93 opposite the web 91 are formed with vertical ears 94 and 95. These ears 94 and 95 include openings through which expansion bolts 97 may be passed to be anchored in the wall W in the usual fashion. It will be appreciated that this is merely illustrative of one way of securing the bracket 90 to the wall W that is to be illuminated.

Secured to the outer face of the vertical portion 91 of the bracket 90 as by screws 100 is a vertical channel bar 105 having the channel thereof facing outwardly relative to the wall W. If desired, suitable washers and spacers may be mounted on the shanks of the screws 100 so as to be interposed between the vertical web portion of the channel bar 105 and the heads of the screws 100. Welded to the upper end of the channel bar 105 is a rearwardly extending tube 106, and welded to the lower end of the channel bar 105 is a rearwardly extending channel bar 110 having the channel portion thereof facing upwardly. The tube 106 and the channel bar 110 are reinforced by a vertical tube 111 having the upper end saddled on the tube 106 and the lower end thereof welded to the horizontal web portion of the channel bar 110.

The parts thus described constitute bracket means serving to support the housing 26 outwardly of the wall W. Thus, the end of the tube 106 opposite the end that is connected to the channel bar 105 has welded thereto a casting 115, Figs. 4 and 5. The casting 115 includes a head portion 116, Fig. 5, and a pair of arms 117 and 118 extend horizontally therefrom on either side. The arms 117 and 118 are apertured, and the upper wall 27 of the housing 26 is provided with corresponding openings which register therewith when the arms 117 and 118 are engaged with the upper wall 27 of the housing 26. Fastening screws 120 are then passed through the openings when aligned, and nuts 121, Fig. 4, are threaded onto the lower ends of the screws 120 to secure the housing 26 to the bracket 115. If desired, a gasket (not shown) may be

5

interposed between the bracket 120 and upper face of the upper wall 27 of the housing 26.

As shown in Fig. 4, a casting 125 is provided on the end of the lower channel bar 110 opposite the end that is attached to the vertical channel bar 105. This casting may be configured similarly to the casting 115 described above and attached to the lower wall 28 of the housing 26 so as to afford a bottom support therefor. Likewise, a gasket (not shown) may be interposed between the casting 125 and the bottom face of the lower wall 28 of the housing 26.

In certain instances, it may be advantageous to dispense with the casting 125 and to so dispose the parts that by removing portions of the opposite vertical walls 127 of the channel bar 110 at the end thereof corresponding to the casting 125 the web portion 128 of the channel bar 110 can be utilized as a bottom support for the housing 26.

It is advantageous to enclose the bracket structure which is between the wall W and the vertical channel bar 105. In the present instance, a removable two-part cover 130, Figs. 4 and 5, is used for this purpose. The cover 130 includes two sections 131 and 132, Fig. 5, and each such section includes an upper wall as 133, Fig. 4, a lower wall 134, and a rear wall 135, the relation being such that the top and bottom walls are adapted to extend from the panel 12 rearwardly so as to extend somewhat beyond the vertical channel bar 105 as shown particularly in Fig. 4. The cover sections 131 and 132 also include side walls as 137, Fig. 4. It will be appreciated that the rear wall 135 of the cover 130 is notched where the tube 106 and the channel bar 110 are encountered, and likewise the side walls 137 are formed with notches complementary to the several sections of the molding 20.

As shown in Fig. 5, the inner edges of the top and bottom walls of the cover sections 131 and 132 abut at junctures as 140. In the present instance, the cover section 132 along the edge 140 is provided with an off-set flap 132F, Fig. 4, adapted to be disposed beneath the corresponding opposite edge portion of the cover section 131 to afford a flap joint between the two sections thus afforded. The cover 130 may be conveniently arranged in the manner shown in Figs. 4 and 5 and secured in place by set screws 141 and 142 which are passed through the aforementioned flap joint to engage the tube 106 and the channel bar 110. Preferably, caulking is provided at the front edges of the cover 130 where these engage the paneling 12 as shown in Fig. 4.

As was mentioned in connection with the several parts of the fixture described above, various alternatives and modifications can be resorted to, and in many instances this will depend upon the type of wall structure that is encountered in use. Illustrative of a further modification that may be resorted to are the two beams 150 and 151, Fig. 7, which may be substituted, respectively, for the tube 106 and the channel bar 110 in the bracket structure. It may be desirable also in some circumstances to afford facia plates for the beams 150 and 151 or the tube 106 and the channel bar 110. Thus, as shown in Fig. 7, such bracket structure may be encased in a housing 155 of relatively thin sheet construction, thereby shrouding the bracket structure in the portion thereof that extends between the housing 26 of the fixture and the cover 130 inwardly of the housing 26.

It will be seen from the foregoing that under the present invention a lighting fixture is afforded for illuminating a vertical wall, and the arrangement is specifically such that this fixture is adapted to be supported outwardly of the wall in spaced relation thereto so that access may be had to the fixture for repair and replacement thereof. This is particularly facilitated by the way in which the arms 106 and 110 are removably secured to the housing 26 at one end and the wall bracket 90 at the other end. In this same connection, the front shield 70

6

may be readily released and easily removed if desired by disassociating the hinge plate 80 from the hinge pins 83 as will be recognized from the drawings. This is likewise true with respect to the reflector 41, inasmuch as the reflector, like the shield, can be so turned as to enable the hinging means thereof to be disassociated from the corresponding hinge pins. In other words, the housing, the reflector, the shield and the bracket supports including the arms 106 and 110 can be readily knocked down and re-assembled as required. Further, the various parts comprising the fixture and the mounting brackets are adapted to be faced or covered with plates or shrouds which enable an attractive appearance to be accomplished consistent with the decorative appearance of the wall that is to be illuminated.

Hence, while we have illustrated and described the preferred embodiments of our invention, it is to be understood that these are capable of variation and modification, and we therefore do not wish to be limited to the precise details set forth, but desire to avail ourselves of such changes and alterations as fall within the purview of the following claims.

We claim:

1. In a lighting fixture adapted to be cantilevered from a vertical wall to illuminate the wall, means affording a housing of sheet material having a rear wall, top and bottom walls, end walls and an open front, a reflector for lamps mounted pivotally within said housing and adapted to be swung forwardly from a retracted position within the housing, means affording a light transmissive shield at the open front of said housing, flanges about the open front of said housing cooperating with edge portions of said shield to seal off the front of said housing, means affording a pivot for said shield means to enable the shield to be swung forwardly from a closed position to an open position exposing the reflector, means to releasably hold the shield in a closed position, bracket means secured to the top and bottom walls of said housing and extending forwardly therefrom and affording points of attachment to said wall to support the fixture outwardly of said wall, and means on said end walls enabling a set of such fixtures to be connected one to the other in tandem.

2. In a lighting fixture adapted to be cantilevered from a vertical wall to illuminate the wall, means affording a housing of sheet material having a rear wall, top and bottom walls, end walls and an open front, a reflector for lamps mounted pivotally within said housing adjacent the top thereof and adapted to be swung forwardly and upwardly from a retracted position within the housing, means affording a light transmissive shield at the open front of said housing, flanges about the open front of said housing cooperating with edge portions of said shield to seal off the front of said housing, means affording a pivot for said shield means adjacent the bottom of the housing to enable the shield to be swung forwardly and downwardly from a closed position to an open position exposing the reflector, means to releasably hold the shield in a closed position, bracket means secured at one end to the top and bottom walls of said housing and extending forwardly therefrom and affording points of attachment to said wall to support the fixture outwardly of said wall, and means on said end walls enabling a set of such fixtures to be connected one to the other in tandem.

3. In a lighting fixture adapted to be cantilevered from a vertical wall to illuminate the wall, means affording an outer housing of sheet material having a rear wall, end walls and an open front, a reflector mounted within said housing and adapted to be swung forwardly from a retracted position within the housing, means affording a light transmissive shield at the open front of said housing, flanges about the open front of said housing cooperating with said shield to seal off the front of said housing, means enabling the shield to be swung forwardly from a closed position to an open position exposing the

7

reflector, means to releasably hold the shield in a closed position, bracket means secured to said housing and extending forwardly therefrom and affording points of attachment to said wall to support the fixture outwardly of said wall, and means on said end walls enabling a set of such fixtures to be connected one to the other in tandem.

4. In a lighting fixture adapted to be cantilevered from a vertical wall to illuminate the wall, a housing of sheet material having a rear wall, top and bottom walls, end walls and an open front, a reflector removably and pivotally mounted on hinge means within the housing and so arranged that lamps associated with said reflector cast light in part forwardly and downwardly along the wall to be illuminated, a releasable clamp for holding the reflector normally in recessed relation within the housing, a light transmissive shield mounted removably on hinge means at the front of said housing and adapted to be pivoted forwardly on said hinge means to expose the interior of said housing, a releasable clamp for holding the shield to the housing, upper and lower arms removably secured at respective ends thereof to the top and bottom walls of said housing, means at the other ends of said arms for attachment to a wall bracket in turn secured to the wall to be illuminated, and said end walls of the housing being adapted to be attached to the end walls of a similar fixture to connect such fixtures in tandem.

5. In a lighting fixture adapted to be cantilevered from a vertical wall to illuminate the wall, a housing of sheet material having a rear wall, top and bottom walls, end walls and an open front, a reflector removably and pivotally mounted on hinge means within the housing adjacent the top thereof, a releasable clamp for holding the reflector normally in recessed relation within the housing, a light transmissive shield mounted removably on hinge means at the front of said housing adjacent the bottom thereof and adapted to be pivoted forwardly and downwardly on said hinge means to expose the interior of said housing, a releasable clamp for holding the shield to the housing, said housing having flanges at the front thereof cooperating with marginal edge portions of said shield to securely seal off the front of said housing, upper and lower arms removably secured at respective ends thereof to the top and bottom walls of said housing, means at the other ends of said arms for attachment to a wall bracket in turn secured to the wall to be illuminated, and said end walls of the housing being adapted to be attached to the end walls of a similar fixture to connect such fixtures in tandem.

6. In a lighting fixture for illuminating a vertical wall, a housing having an open front, a lamp supporting reflector member, pivotally mounted within said housing adjacent the top thereof for movement from a retracted position within said housing, in which said reflector member faces downwardly and forwardly with respect to said open front, to a secondary position in which said reflector member is swung outwardly and upwardly toward said open front, a light transmissive shield pivotally mounted adjacent the lower edge of said open front for movement from a closed position, in which said shield closes said open front, downwardly and forwardly to an

8

open position exposing the reflector, means for releasably holding said shield in closed position, and bracket means secured to said housing and extending forwardly therefrom to afford a cantilever structure supporting said fixture in spaced relation to a vertical wall with said open front facing the wall.

7. In a lighting fixture for illuminating a vertical wall, a housing having an open front, a lamp supporting reflector member, pivotally mounted within said housing adjacent the top front portion thereof for movement from a retracted position within said housing, in which said reflector member faces downwardly and forwardly with respect to said open front, to a secondary position in which said reflector member is swung outwardly and upwardly through said open front, means for releasably holding said reflector in said retracted position, a light transmissive shield pivotally mounted adjacent the lower edge of said open front for movement from a closed position, in which said shield closes said open front, downwardly and forwardly to an open position exposing the reflector, means for releasably holding said shield in closed position, and bracket means secured to said housing and extending forwardly therefrom to afford a cantilever structure supporting said fixture in spaced relation to a vertical wall with said open front facing the wall and with said shield disposed at an acute angle from the vertical.

8. In a lighting fixture for illuminating a vertical wall, a housing having top, bottom, side and rear walls and an open front, a lamp supporting reflector member, pivotally mounted within said housing adjacent the top thereof for movement from a retracted position within said housing, in which said reflector member faces downwardly and forwardly with respect to said open front, to a secondary position in which said reflector member is swung outwardly and upwardly toward said open front, a light transmissive shield pivotally mounted adjacent the lower edge of said open front for movement from a closed position, in which said shield closes said open front, downwardly and forwardly to an open position exposing the reflector, means for releasably holding said shield in closed position, and bracket means secured to said top and bottom walls of said housing and extending forwardly therefrom to afford a cantilever structure supporting said fixture in spaced relation to a vertical wall with said open front facing the wall, and means at opposite sides of the housing to enable the fixture to be connected in tandem to a like fixture.

References Cited in the file of this patent

UNITED STATES PATENTS

1,843,844	Slough	Feb. 2, 1932
2,272,176	Leinen	Feb. 10, 1942
2,327,552	Poehling	Aug. 24, 1943
2,606,998	Winkler et al.	Aug. 12, 1952
2,625,646	Goebel	Jan 13, 1953
2,684,498	Zingone	July 27, 1954
2,712,594	Zingone	July 5, 1955

FOREIGN PATENTS

1,040,525	France	May 20, 1953
-----------	--------	--------------