

Dec. 28, 1965

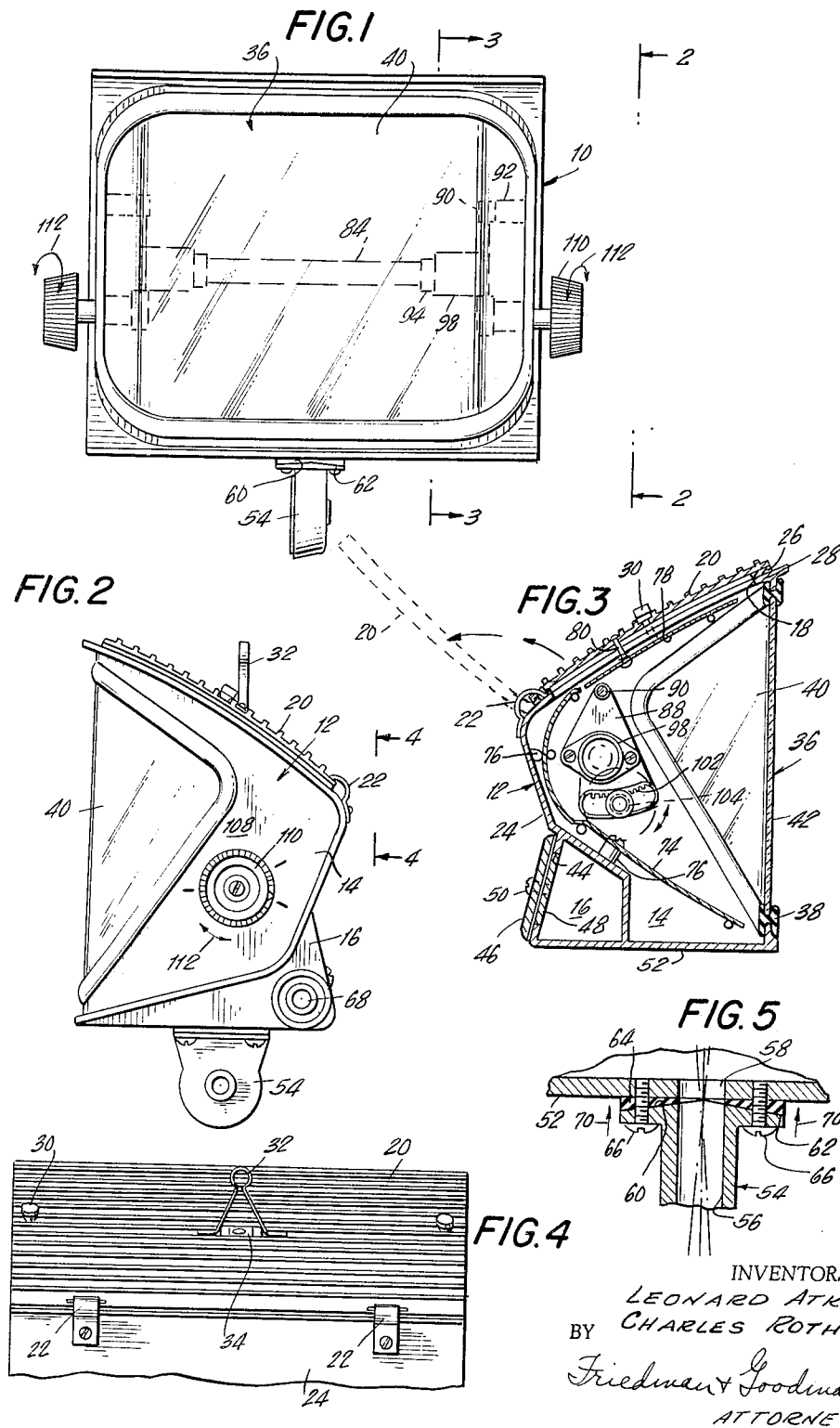
L. ATKIN ET AL

3,226,536

LIGHTING FIXTURE

Filed June 15, 1962

2 Sheets-Sheet 1



INVENTORS
LEONARD ATKIN
BY CHARLES ROTH
Friedman & Goodman
ATTORNEYS

Dec. 28, 1965

L. ATKIN ET AL
LIGHTING FIXTURE

3,226,536

Filed June 15, 1962

2 Sheets-Sheet 2

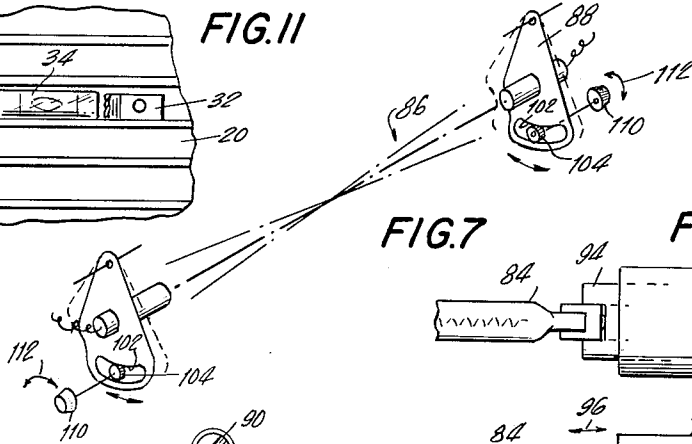
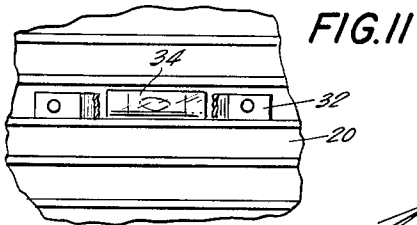
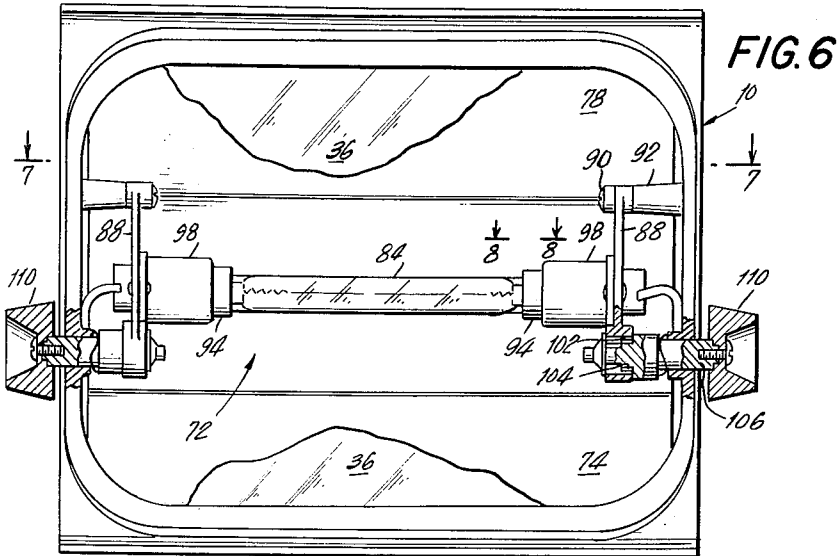


FIG. 7

FIG. 8

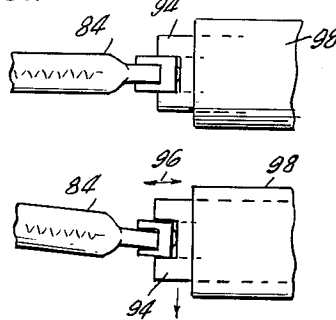
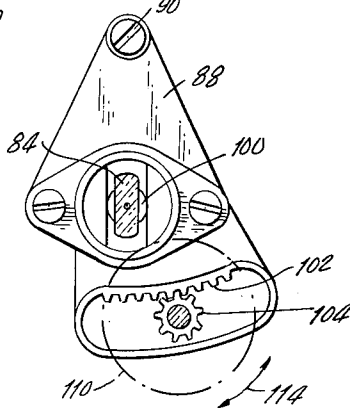


FIG. 9

FIG. 10



INVENTORS
LEONARD ATKIN
CHARLES ROTH
BY
Friedman & Goodman
ATTORNEYS

1

2

3,226,536

LIGHTING FIXTURE

Leonard Atkin, Springfield, and Charles Roth, Scotch Plains, N.J., assignors to Stonco Electric Products Company, a corporation of New Jersey

Filed June 15, 1962, Ser. No. 202,917

7 Claims. (Cl. 240—3)

The present invention relates to floodlights.

It is an object of the present invention to provide a floodlight in which the light beam can be controlled to provide desired beam shapes.

It is another object of the present invention to provide a floodlight in which the light beam can be adjustably focused.

It is another object of the present invention to provide a floodlight in which provision is made to check on the orientation of the fixture and to correctly aim the latter.

It is a further object of the present invention to provide a floodlight in which provision is made to facilitate the servicing thereof.

It is still a further object of the present invention to provide a generally improved and highly efficient floodlight fixture.

Other and further advantages and objects of the present invention will become apparent to those skilled in the art from a consideration of the following specification taken in connection with the appended drawings.

In the drawings, which illustrate the best mode presently contemplated for carrying out the invention:

FIGURE 1 is a front elevation view of a floodlight apparatus pursuant to the present invention;

FIGURE 2 is an end view taken in the direction of arrows 2—2 of FIGURE 1;

FIGURE 3 is a sectional view taken on line 3—3 in FIGURE 1;

FIGURE 4 is a fragmentary top plan view;

FIGURE 5 is a fragmentary sectional view taken through a portion of the apparatus;

FIGURE 6 is a view similar to FIGURE 1, on an enlarged scale, with portions broken away and shown in section for purposes of illustration;

FIGURE 7 is a more or less diagrammatic illustration of the focusing mechanism;

FIGURES 8 and 9 are fragmentary views, on an enlarged scale, of the light socket in two different positions thereof;

FIGURE 10 is an enlarged view of the socket mounting device; and

FIGURE 11 is an enlarged detail view of a portion of FIGURE 4 with a part broken away for purposes of illustration.

Referring now to the drawings in detail, there is shown a floodlight fixture or apparatus 10, pursuant to the present invention. The fixture is provided with a casing 12 formed of a suitable material, preferably steel. The casing defines a light housing 14 and a wiring trough or junction box 16.

The light housing 14 has a top access opening 18 which is closed by a removable cover 20. The cover is mounted by a pair of hinges 22 provided on the rear wall 24 of the casing. A resilient gasket 26 is provided for interposition between the cover and rim 28 at the opening 18. Screws 30 secure the cover on the rim. It will be apparent that the cover may be pivoted, on hinges 22, to the open position thereof illustrated in broken lines in FIGURE 3 for access to the interior of the casing 12 through the top opening 18 thereof. The cover, on its outer surface, mounts a rifle-type sighting device 32 and a bubble-type horizontal leveling device 34, as best shown in FIGURE 4, the functions of which are hereinafter described. At the front thereof, the light housing is provided

with a lens 36 mounted within a resilient gasket 38. The lens is provided with substantially triangular side wall portions 40 which extend rearwardly from the front wall portion 42 thereof to minimize trapped light within the light housing. The junction box 16 is provided also with a rear access opening 44 which is closed by a removable cover 46. A resilient gasket 48 is provided at rear opening 44. Screws 50 secure cover 46 on the junction box.

The bottom wall 52 of the casing is provided with an adaptor arm 54 for mounting the fixture on a wire conduit pipe or other suitable mounting. The adaptor arm is hollow, as best shown in FIGURE 5, to provide a channel 56 in registry with an opening 58 in wall 52, which is in communication with the interior of junction box 16. The adaptor arm is provided with mutually inclined upper surface portions 60 and 62 and a resilient gasket 64 is interposed between casing wall 52 and said surface portions. Screws 66 secure arm 54 to the bottom casing wall.

The floodlight fixture 10 can be mounted either by engagement of the adaptor arm 54 with a complementary mounting arm (not illustrated) or by engagement of the integral mounting knockouts 68, at the opposite ends of junction box 16, with complementary mounting elements (not shown). In either case, it is necessary to mount the fixture in approximately horizontal disposition. For example, when a quartz iodine lamp is used in the fixture, it must be operated within 4 degrees of horizontal for this purpose, the screws 66 may be adjustably threaded to compress gasket 64, as shown by arrows 70 in FIGURE 5, or to permit the gasket to expand, for horizontally tilting casing 12 on the inclined upper surfaces 60 and 62 of adaptor arm 54, to correctly dispose the casing relative to the horizontal. The adjustment of the four screws 66 to horizontally orient the casing may be checked by means of the horizontal levelling device 34. The sight 32 is utilized to aim the fixture.

Provision is made within the light housing for light reflector means 72 constituted by a reflector 74 mounted on the inner surface of rear wall 12 by means of spacers 76. As here shown, the reflector 74 has an arcuate conformation directed at the lens 36. In addition to reflector 74 the reflector means 72 includes a reflector 78 mounted on the inner surface of hinged cover 20. More specifically, reflector 78 is mounted on bolts 80 provided on cover 20, compression springs 82 being seated on the bolts between the reflector and the cover. In the closed condition of the cover, reflectors 74 and 78 are in edgewise abutment to form the continuous reflector means 72.

In the present embodiment of the invention, the fixture is provided with a light source 84 constituted by a quartz iodine lamp. The lamp is mounted by an adjustable focusing means 86. Said focusing means comprises a pair of substantially triangular mounting plates which are pivotally mounted at their apices by pivots 90 seated in projections 92 in the light housing 14. Each plate mounts a socket 94 for the lamp 84. The right hand socket, viewing FIGURE 6, is mounted for reciprocation, as indicated by arrows 96, in its holder 98, provided on plate 88. Each end of the lamp has a pivot portion 100 disposed within its socket whereby the lamp can pivot as will be apparent from a comparison of FIGURES 8 and 9. Each plate is provided with an enclosed rack 102 in which there is engaged a companion pinion 104, which is mounted on one end of an adjustment shaft 106. Each shaft is journaled in a side wall 108 of the casing and is provided with a knob 110 for rotating the shaft. It will be apparent that rotation of the knob, as indicated by arrows 112 in FIGURE 7, will result in similar rotation of pinion 104 to pivot the associated plate 88 as indicated by arrows 114, to and from the full line and broken line portions in said figure.

3

In order to provide a narrow beam or spot of light from the fixture 12, both knobs 110 are rotated to position the lamp 84 close to the reflector. For a wide beam or flood of light, the knobs are rotated to bring the lamp farthest from the reflector. In addition, since the lamp sockets can be adjusted separately relative to the reflector, it is possible to provide a beam substantially in the form of a trapezoid in which the height of the beam varies between the opposite vertical marginal edges thereof.

While the presently preferred embodiment of the invention has been illustrated and described herein, it will be apparent that changes and modifications may be made therein within the scope of the appended claims.

We claim:

1. A light fixture comprising a housing provided with reflector means and a lens in spaced relation from said reflector means, means for mounting a lamp between said reflector means and said lens, and means for adjusting the horizontal disposition of said fixture when mounted on a support, said fixture having a bottom wall portion, and said adjusting means comprising means provided on said bottom wall portion and having mutually inclined surface portions in opposition to said wall portion, resilient means interposed between said surface portions and said wall portion, and means to adjustably vary said wall portion relative to said resilient means.

2. A light fixture as in claim 1 and a level indicator provided on said housing.

3. A light fixture as in claim 1, said inclined surface portions being provided on an adaptor arm for a fixture mounting device.

4. A light fixture comprising a housing provided with reflector means and a lens in spaced relation from said reflector means, means for mounting a lamp between said reflector means and said lens, said mounting means comprising a pair of laterally spaced mounting plates each provided with a socket adapted to receive one end of the lamp, said plates being mounted for pivotal movement for moving said sockets relative to said reflector means, and means accessible externally of said housing for pivoting said plates, one of said sockets being mounted for reciprocation transversely of its mounting plate.

5. A light fixture comprising a housing provided with reflector means and a lens in spaced relation from said reflector means, means for mounting a lamp between said reflector means and said lens, said mounting means comprising a pair of laterally spaced mounting plates each

4

provided with a socket adapted to receive one end of the lamp, said plates being mounted for pivotal movement for moving said sockets relative to said reflector means, and means accessible externally of said housing for pivoting said plates, each plate having rack means, and a pinion engaged with each rack means, and said externally accessible means being means for individually rotating each pinion.

6. A light fixture comprising a housing provided with reflector means and a lens in spaced relation from said reflector means, means for mounting a lamp between said reflector means and said lens, said mounting means comprising a pair of laterally spaced mounting plates each provided with a socket adapted to receive one end of the lamp, said plates being mounted for pivotal movement for moving said sockets relative to said reflector means, and means accessible externally of said housing for pivoting said plates, each plate having rack means, and a pinion engaged with each rack means, and said externally accessible means being a shaft for each pinion, said shafts being journaled in said housing and extending externally thereof.

7. A fixture as in claim 5, and manual means for rotating the external portions of said shaft means.

References Cited by the Examiner

UNITED STATES PATENTS

280,203	6/1883	McCurry	248—180
1,584,369	5/1926	Graham	240—41
1,752,273	3/1930	Lewis	240—44.2
1,768,757	7/1930	Graham	240—44.2 X
1,790,185	1/1931	Werner	240—44.2
2,166,394	7/1939	Crossley	240—52
2,228,642	1/1941	Robertson	240—44.2
2,321,640	6/1943	Adkins	220—3.8
2,341,189	2/1944	Morris	240—44.26
2,710,911	6/1955	Krauskopf	240—41
2,763,774	9/1956	Beach et al.	240—52
2,928,327	3/1960	Blackmer et al.	95—75
2,966,998	1/1961	Schwartz	220—3.8
3,121,381	2/1964	Sandmeier	95—75 X
3,167,258	1/1965	Wilde	240—41.3

45 NORTON ANSHER, *Primary Examiner*.

JEROME SCHNALL, EVON C. BLUNK, *Examiners*.