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W. B. ELMER

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REFLECTOR SUPPORT FOR STREET LIGHTING FIXTURES

Filed Nov. 28, 1951

2 Sheets-Sheet 1

Fig. 1.

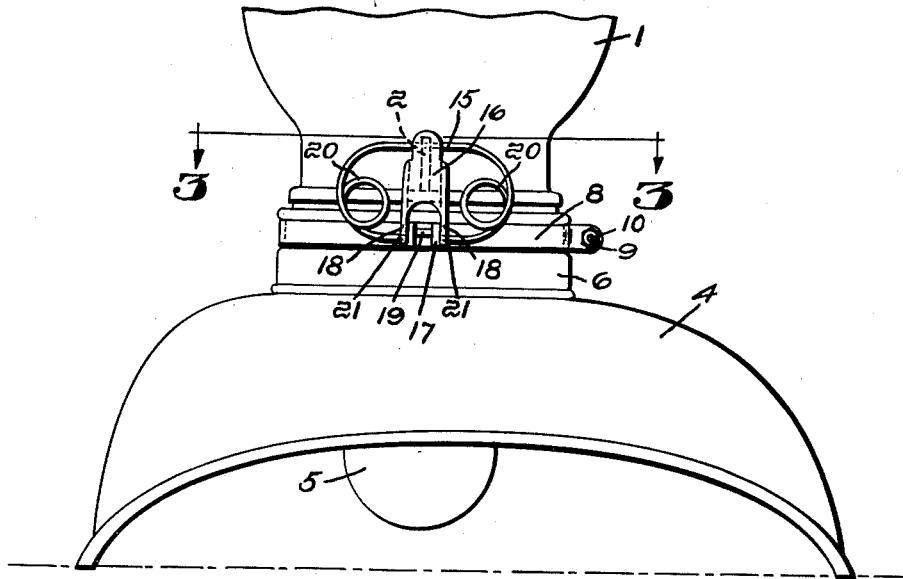
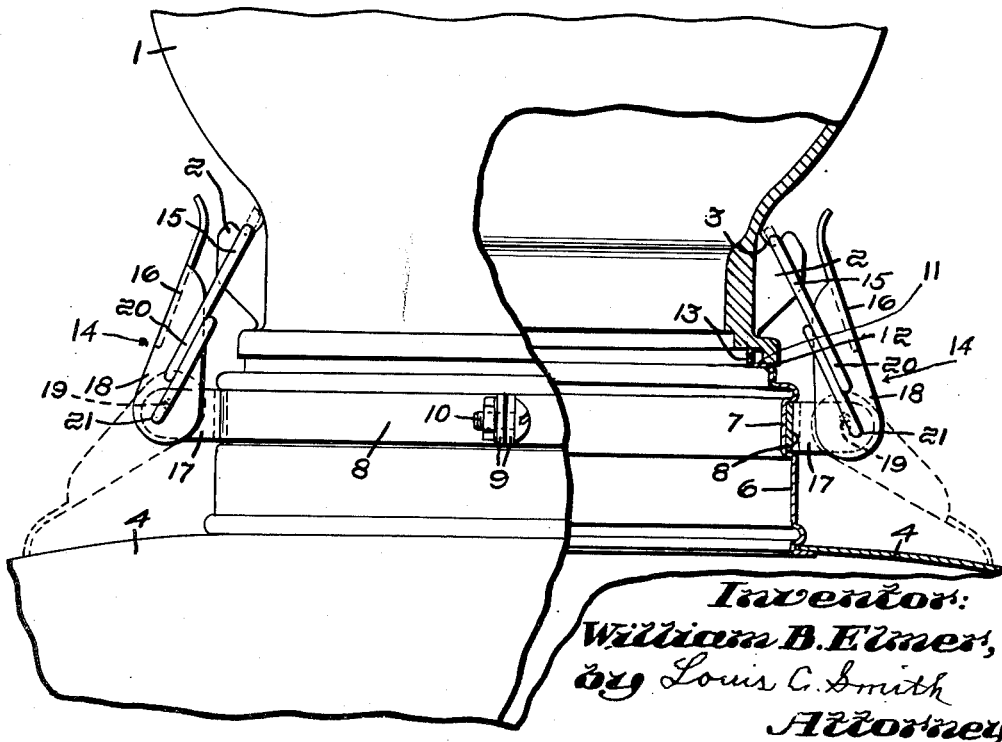


Fig. 2.



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Fig. 3.

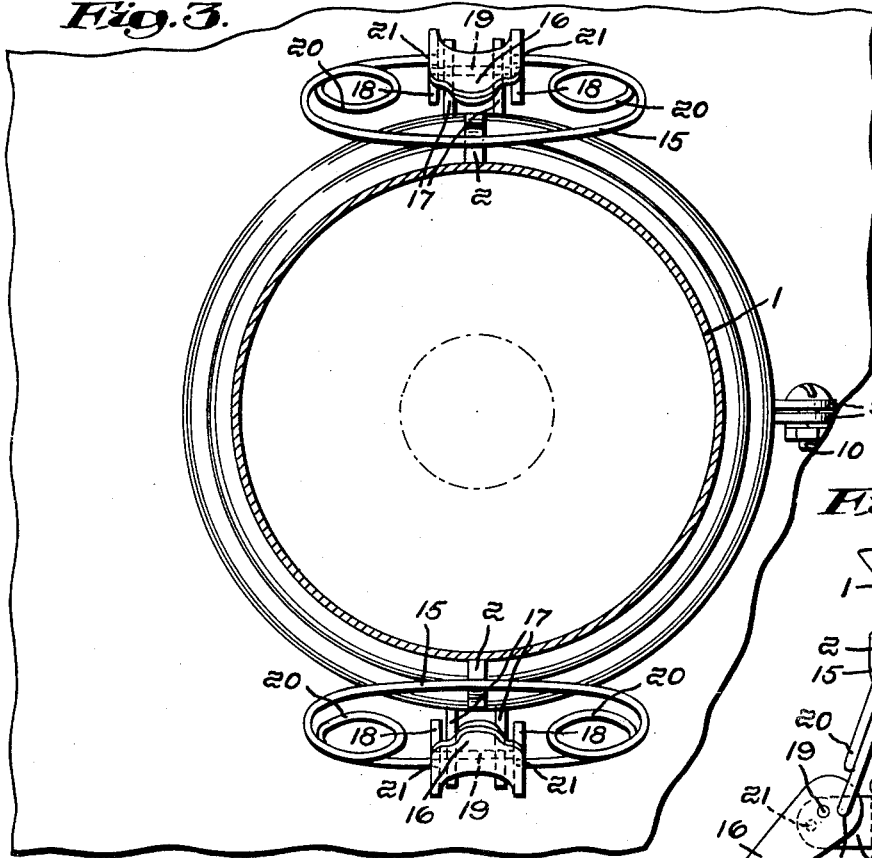


Fig. 5.

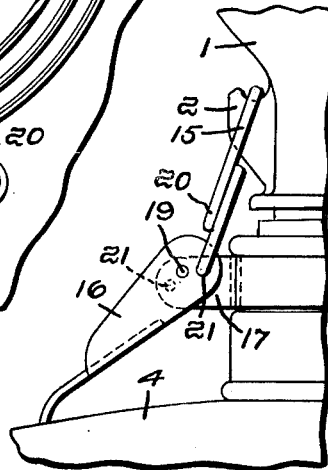
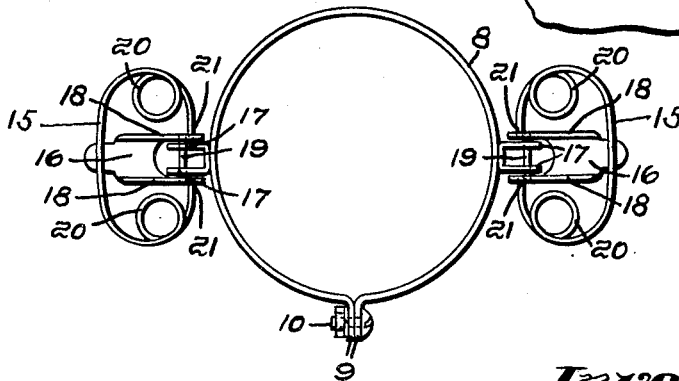


Fig. 4.



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UNITED STATES PATENT OFFICE

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REFLECTOR SUPPORT FOR STREET LIGHTING FIXTURES

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1 Claim. (Cl. 240-146)

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This invention relates to a reflector support for a street lighting fixture, and it has for its general object to provide a simple and inexpensive support by which the reflector can be easily oriented relative to the receptacle head for the purpose of properly lighting the pavement area.

A standard method of attaching a reflector to the receptacle head of a street lighting fixture is by means of two ring latches that are adapted to be snapped over two hookshaped lugs with which the receptacle head is provided.

While this construction serves to properly support the reflector, yet it does not permit of any adjustment or orientation of a directional reflector. It sometimes happens that the arm or bracket by which a street lighting fixture having a directional reflector is supported becomes bent or misplaced, and when this condition exists a directional reflector will not distribute the light as it was planned to do.

My invention provides a simple construction by which such a misplaced directional reflector can be readily oriented to reestablish it in its correct position to give the desired illumination on the pavement area.

This end is accomplished by employing a reflector supporting member by which the reflector is supported in a manner to permit it to be oriented by turning it relative to the supporting member about a vertical axis, and by employing two spring latch assemblies for connecting the supporting member to the hook lugs of the receptacle head, each spring latch assembly including a spring latch member which is hooked over the corresponding hook lug and a clamping member by which the spring latch may be placed under tension for clamping the reflector supporting member to the receptacle head and by which the spring latch may also be relieved from tension while the reflector is still being supported on the hook lugs. When the spring latches are thus relieved from the tension, the neck of the reflector can be easily turned relative to the supporting member and thus can be oriented, after which the clamping members may be operated to place the spring latches under tension, thereby clamping the reflector supporting member in position.

In order to give an understanding of the invention, I have illustrated in the drawings a selected embodiment thereof which will now be described, after which the novel features will be pointed out in the claim.

In the drawings:

Fig. 1 is a side view illustrating a portion of

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a receptacle head and a reflector attached thereto by my improved reflector supporting means.

Fig. 2 is an enlarged fragmentary view partly in section, taken at right angles to Fig. 1.

Fig. 3 is an enlarged section on the line 3-3, Fig. 1.

Fig. 4 is a view of the supporting band with the spring latch assemblies mounted thereon.

Fig. 5 is a fragmentary view showing one spring latch assembly in its unclamped position.

In the drawings, 1 indicates a portion of a receptacle head for a street lighting fixture, which is shown as having at its lower end a neck portion, on the exterior of which are two oppositely disposed supporting lugs 2 from which the reflector is supported, each lug 2 being integral with the neck portion and having an indentation 3 in its top face to provide an upwardly directed hooked shape. The receptacle head is also formed at its lower edge with an annular rim which presents a downwardly facing seat 12.

4 indicates a reflector which may be of any suitable or usual shape, although that herein shown is what may be termed "a directional reflector" in that it is designed to direct the light from the source of light 5 over a prescribed area. The reflector 4 is provided with the usual upstanding neck portion 6, and in the construction herein shown said neck portion is formed with an exterior circumferential groove 7 in which is loosely received a reflector supporting band or ring 8.

This band 8 may conveniently be made by bending a strip of metal into circular shape and then deforming the ends of the strip to provide the two lugs 9 which are clamped together by a clamping screw 10.

The band 8 is so constructed that it is loosely received in the groove 7, so that normally the neck 6 of the reflector can be easily turned within the band.

The upper end of the neck 6 is provided with the inwardly extending portion 11 which rests against the downwardly facing seat 12 of the receptacle head 1, said inwardly extending portion merging into an upstanding rim 13 which is located within the seat-carrying rim of the receptacle head.

The band 8, which constitutes a reflector support, is connected to the hook lugs 2 by means of two spring latch assemblies 14. Each spring latch assembly comprises a resilient loop shaped latch member 15 which engages the hook portion 3 of the corresponding lug, and a rigid clamping member 16 which is pivotally secured to the band

8 and with which the spring latch member 15 has pivotal connection.

The band 8 has secured thereto by welding or otherwise two outwardly directed arms 17, and each clamping member 16 is formed with two cheek pieces 18 which embrace the corresponding arms 17, said cheek pieces being pivotally connected to the arms by means of a pivot pin 19.

Each resilient latch member 15 is formed from resilient wire which is bent to form the main loop that engages a lug 2 on the head 1 and also to form an auxiliary loop 20 in each side of the main loop, such auxiliary loops making the main loop resiliently extensible. The ends 21 of the main loop have a pivotal connection with the cheek pieces 18 of the corresponding clamping member, said ends straddling the cheek pieces and one end being pivotally connected to one cheek piece and the other end being pivotally connected to the other cheek piece, said pivotal connections being at points which are eccentric to the pivotal axis 19 of the clamping member. The eccentric relation of the ends 21 of the spring latch is such that when the clamping member is swung about its pivot 19 the ends 21 of the spring latch move in the arc of a circle having the pivotal axis 19 as its center.

When each clamping member 16 is in its raised clamping position shown in full lines Fig. 2, the ends 21 of the spring latch 15 will have been carried below the pivotal axis 19 and said spring latch will thus have been placed under tension and will have been extended slightly thereby holding the inwardly extending portion 11 of the neck 6 of the reflector snugly against the seat 12 of the head 1. When, however, the clamping member 16 is swung into the dotted line position, Fig. 2, or the position shown in Fig. 5, the ends 21 of the spring latch will have been brought into the position shown in Fig. 5, and the tension on the spring latch will be relieved thereby relieving the pressure of the inwardly extending portion 11 of the neck 6 against the seat 12. When the clamping members are in this lowered position, the reflector will hang loosely on the lugs and the clamping pressure between the neck 6 of the reflector and the bottom edge of the receptacle head will be relieved so that the neck is free to be turned within the ring 3 for the purpose of orienting the reflector 4. When a satisfactory orientation has been achieved, then by swinging the clamping members 16 into their clamping position shown in full lines, Fig. 2, the spring latches 15 will be placed under tension and the neck of the reflector will be clamped against the seat 12 of the receptacle head. Furthermore, when clamping members 16 are in their lowered position as shown in Fig. 5, the spring latches can be easily removed from the lugs 2, thereby

disconnecting the reflector support 8 and the reflector from the receptacle head 1.

The fixture herein illustrated provides an inexpensive and simple construction which readily permits horizontal angular orientation of directional street lighting reflectors, so that variations in the position of the supporting arm or bracket can easily be compensated for.

I claim:

A reflector support for a street lighting fixture comprising a receptacle head having at its lower end an annular downwardly facing seat portion and also having integral therewith two exterior oppositely disposed reflector-supporting lugs located above the seat portion, each lug having an indentation in its top face which provides an upwardly facing hook portion, a reflector having an upstanding neck provided with an exterior circumferential groove and presenting at its upper edge an inwardly directed annular portion adapted to engage said seat, an annular band received in said groove and having a permanent loose fit therein, said band having two oppositely disposed outwardly directed arms, a rigid clamping member having two cheek pieces which straddle the corresponding arm, means pivoting said cheek pieces to the arm, a loop-shaped latch member formed of wire bent to present a main loop adapted to engage the hook portion of the corresponding reflector-supporting lug, the ends of the sides of the main loop embracing the cheek pieces of the clamping member and being pivoted thereto at points eccentric to the pivotal axis of the clamping member, the wire constituting each side of the main loop being bent to form a complete auxiliary loop whereby the main loop is resiliently extensible, said clamping member being swingable between a raised operative position in which the main loop is placed under tension and the inwardly directed portion of the neck of the reflector is clamped against said seat of the receptacle head and a lowered inoperative position in which the latch member is relieved of tension and the clamping engagement between the neck of the reflector and the head is also relieved, the loose mounting of the reflector neck within the annular band permitting the reflector to be turned about a vertical axis for orientation purposes whenever the reflector neck is unclamped from said seat and while the latch members are still connected to the lugs.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,848,276	Smythe et al. _____	Mar. 8, 1932
2,040,690	Halvorson _____	May 12, 1936