

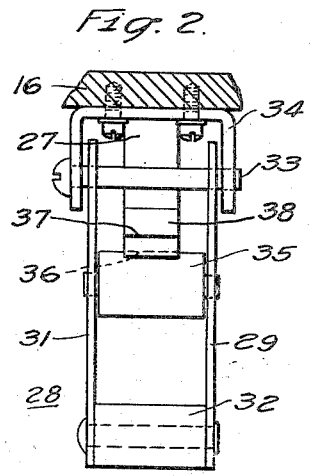
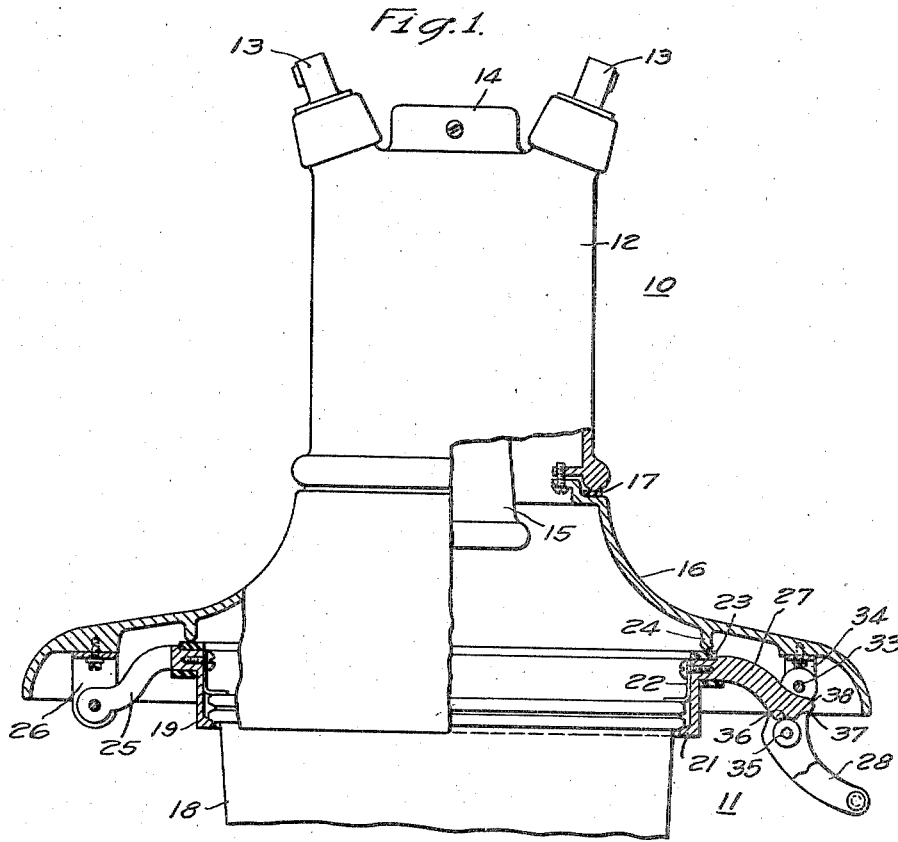
Nov. 7, 1939.

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2,179,340

LIGHTING FIXTURE

Filed April 10, 1937



WITNESSES:

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2,179,340

LIGHTING FIXTURE

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Application April 10, 1937, Serial No. 136,141
In Canada March 15, 1937

5 Claims. (Cl. 240—147)

My invention relates, generally, to lighting fixtures and, more particularly, to globe supporting rings and latching mechanisms therefor.

Heretofore in the construction of pendant lighting fixtures wherein the globe is supported by a ring hinged at one side to the canopy, it has been the usual practice to detachably secure the opposite side of the ring to the canopy or skirt thereof by means of screws, wing nuts, springs or some other type of fastener requiring some definite knowledge as to its mode of operation and proper degree of adjustment.

These devices were generally of such nature that it required considerable manipulation of the parts to release or secure the globe and ring in position when servicing the fixture. This required that the one servicing the unit either place himself in a position to reach the unit or lower the fixture to the floor. Furthermore, such securing means cannot be readily operated by the use of only one hand or by a gloved hand and cannot be operated from a remote point.

In addition, there is another important disadvantage in using screw, wing nut and spring fasteners in that uniform pressure on the gasket between the canopy and globe supporting ring cannot be secured because of the human element involved in the manipulation of these devices under all kinds of conditions.

It is, therefore, the object of my invention generally stated to provide a lighting unit having a globe ring supporting latch which is of simple construction, economical to manufacture and which is easy to operate even from a remote point.

A more specific object of the invention is to provide a latching mechanism for a globe holding element of a lighting unit which may be readily operated to release or secure the holding element in its closed position from a remote point, such as when the lighting unit is suspended above normal reach.

Another object of the invention is to provide a latch of the character described which is automatically operable to the extent that it will function to catch and retain the globe supporting ring of the fixture in a partially closed position when the globe is swung toward the closed position and which is thereafter manually operable to force the ring to its fully closed position.

A still further object of the invention is to provide a latch mechanism for globe supporting rings which functions to always subject the sealing gasket of the ring to a uniform pressure regardless of how the latch mechanism is operated.

These and other objects of the invention will

become more apparent from a study of the following description in connection with the drawing, in which:

Figure 1 is a partial elevational view of a lighting unit embodying the principal features of my invention, certain parts being broken away to show details of construction; and

Fig. 2 is an end elevational view of the latching mechanism in its fully latched position.

In practicing my invention in its preferred form, the globe-supporting ring of the fixture is hinged at one side to the canopy or skirt of the canopy and is releasably secured thereto at its opposite side by means of a single latch mechanism so constructed that it automatically functions to catch and retain the supporting ring and globe in a partially closed position when the globe assembly is swung toward the closed position and is further operable to completely close the globe ring against its sealing gasket by simply pulling downward on the movable element of the latch.

The invention has been illustrated in the manner that it may be applied to a lighting fixture of a well known type wherein the supporting canopy is provided with a skirt portion and the globe assembly supported therefrom with a sealing gasket between the globe ring and the skirt. It is to be understood, however, that the latch mechanism may be also applied to other types of fixtures where it is necessary to gain access to the interior of the fixture to replace the lamp or for other reasons.

Referring now to Fig. 1 of the drawing, there is illustrated a lighting fixture of a well known type for street illumination to which the principles of the invention have been applied for illustrative purposes.

As shown the fixture comprises, generally, a main body element 10 and a globe or refractor assembly 11. The body element comprises a hood or canopy 12 which is provided with terminals 13 and a threaded boss 14 for attaching the unit to a suitable supporting hanger (not shown). A lamp socket 15 is secured within the hood in any suitable manner. A skirt member 16 is attached to the bottom of the hood as shown, and the joint therebetween sealed with a gasket 17.

The globe assembly 11 comprises, generally, a globe or refractor element 18 and a suitable supporting ring 19 which is disposed to be attached to the canopy 16 in accordance with the principles of the present invention. As shown, the ring 19 is provided with an annular shoulder 21 disposed to engage the upper rim of the globe

18. The globe is held in position in the ring by means of removable clips 22, as shown.

In order to provide for sealing the joint between the canopy 16 and the ring 19, the ring 19 is provided with a sealing gasket 23 which engages the annular shoulder 24 on the underside of the canopy when the ring is in its normal position.

In this embodiment of the invention provision is made for supporting the globe assembly 11 in such manner that it may be readily released from its normal position or secured therein by operating a simple latch mechanism.

The globe ring 21 is provided at one side with a hinge arm 25 which is pivotally attached to a suitable hinge hanger 26 secured to the outer edge of the skirt 16. As will be readily understood, this hinge connection permits the globe assembly to swing downwardly from its normal position in order to give access to the interior of the lighting fixture.

The globe ring is provided at its opposite side with a latch arm 27 which is disposed to cooperate with the latch lever or toggle 28 to support this side of the globe ring from the canopy.

The latch lever 28 may be constructed, as shown, more clearly in Fig. 2, which is an enlarged end view of the latching mechanism of Fig. 1. The lever or toggle element of the latch comprises two parallel arms 29 and 31 held in spaced relation by the spacer 32 and pivotally mounted upon a screw 33 which extends through the downwardly depending arms of the latch clip 34. The latch clip is connected to the skirt 16 in substantially the same manner as the hinge clip 26. The latching mechanism is also provided with a roller element 35 which is disposed to cooperate with the latch arm 27 in performing the functions to be described.

In Fig. 1, the latching mechanism is shown in its fully latched position. It will be observed that the end of the latch arm 27 is provided with two adjacent notches 36 and 37, either of which may be engaged by the roller element 35 of the toggle. When the globe assembly 11 is in its released position and is moved or swung upwardly toward the closed position, the rounded end 38 of the latch arm will engage the roller 35, thereby lifting the toggle 28 upwardly to such a position that it permits the roller 35 to roll around the end of the latch arm and engage the first notch 37. When in this position, the latch holds the globe ring in a partially closed position.

The globe ring may be actuated to its fully closed position by simply pulling down upon the end of the toggle 28 to cause the roller 35 to disengage the first notch 37 and engage the second notch 36. The relative positions of these notches with respect to the radius of movement of the roller 35 are such that this operation forces the globe ring into its fully closed position, thereby compressing the sealing gasket 23. It is apparent that when the globe assembly is in its released position the toggle 28 hangs downwardly from the skirt 16 in a freely swinging position, the spacer 32 functioning as a weight, if necessary.

In view of the foregoing description of the latching mechanism, it will be apparent that it may be easily operated by one in close proximity to the unit or it may be readily actuated from a remote point by means of a suitable latch operating stick. If it is desired to completely release the globe assembly in order that it may swing downwardly, the toggle 28 is merely moved up-

wardly until the roller 35 clears the end of the latch arm. When the globe assembly is moved or swung upwardly toward its closed position, the toggle 28 will automatically function to catch and retain the globe ring in its partially closed position without any manipulation on the part of the operator other than that required to move the globe assembly. Following this operation it is only necessary to exert a downward force on the toggle 28 in order to completely latch the globe assembly in its fully closed position.

In view of the simplicity and ease of operation of this latching device, it will at once become apparent that its use completely eliminates all of the difficulty and trouble in servicing units of this type which result from the human element. The latching mechanism functions at all times to securely lock the globe assembly into position and to subject the sealing gasket between the two elements to a uniform pressure.

While I have illustrated a specific embodiment of the invention and have shown how it may be applied to a particular type of lighting fixture, it is to be understood that the details of construction may be considerably modified and that it may be applied to other forms of lighting fixtures without departing from the spirit of the invention as defined in the appended claims.

I claim as my invention:

1. In a lighting unit, in combination, a main body element including a socket for a lamp, a globe, a globe supporting ring hinged at one side to the main body element and having an arm at the opposite side, and a latch member pivotally secured to the main body element in cooperative relation to the said arm to retain the opposite side of the globe supporting ring in a plurality of predetermined positions, said latch member being automatically operable to engage said arm and hold the globe supporting ring in a partially closed position on predetermined movement of the globe ring toward its closed position and thereafter operable about its pivot point to force the globe supporting ring to and hold it in its fully closed position.

2. A lighting unit comprising a body element, a lamp socket supported by the body element, a globe supporting ring pivotally secured at one side to the body element, and latch means comprising a notched arm on the supporting ring and a cooperating lever device hinged to the body element for detachably securing said ring at its opposite side to the body element, said lever device of the latch means being automatically operable to engage one of the notches in the arm to catch and retain the said ring in a partially closed position on movement of the ring toward its closed position and further operable manually to engage the other of said notches in the arm to actuate said ring to its fully closed position.

3. A lighting unit comprising a body element, a lamp socket supported by the body element, a globe supporting ring pivotally secured at one side to the body element, an arm on the opposite side of the supporting ring, and a freely movable gravity controlled latch lever hinged to the housing disposed to engage one portion of the arm on the ring on movement of said ring toward its closed position to retain said ring in a partially closed position and being thereafter manually operable to engage another portion of the arm to actuate said ring to its fully

closed position and retain the ring in said position.

4. A lighting unit comprising a housing, a globe, a globe supporting ring hinged to the housing, a support arm on the ring, said arm having a plurality of notches at its outer end, and a latch lever pivotally connected to the housing and having a normal position determined by gravity and a roller member mounted thereon, said latch lever in its normal condition being so positioned with respect to the path of movement of the end of the arm that the latch lever will be automatically actuated on movement of the ring toward its closed position to cause the roller member to roll around the end of the arm and engage one of said notches therein to retain said ring in its partially closed position and further operable manually to cause the roller member to disengage the first notch and

engage the other notch to actuate said ring to, and hold it in, its fully closed position.

5. A lighting unit comprising a housing member, a skirt member attached to the lower part of the housing, a globe, a globe supporting ring hinged at one side to the skirt member, a gasket for sealing the joint between the skirt member and ring, and a latch device comprising an arm on the opposite side of the ring and a freely swinging lever pivotally attached to the skirt member and having roller means disposed to automatically catch the arm and retain the ring in a partially closed position when the ring is moved toward the closed position and thereafter manually operable in further cooperation with said arm to force the ring to and retain it in its fully closed position to compress the sealing gasket.

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