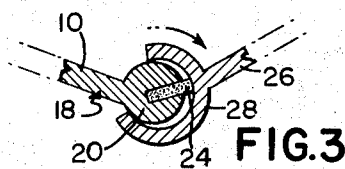
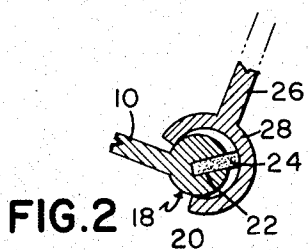
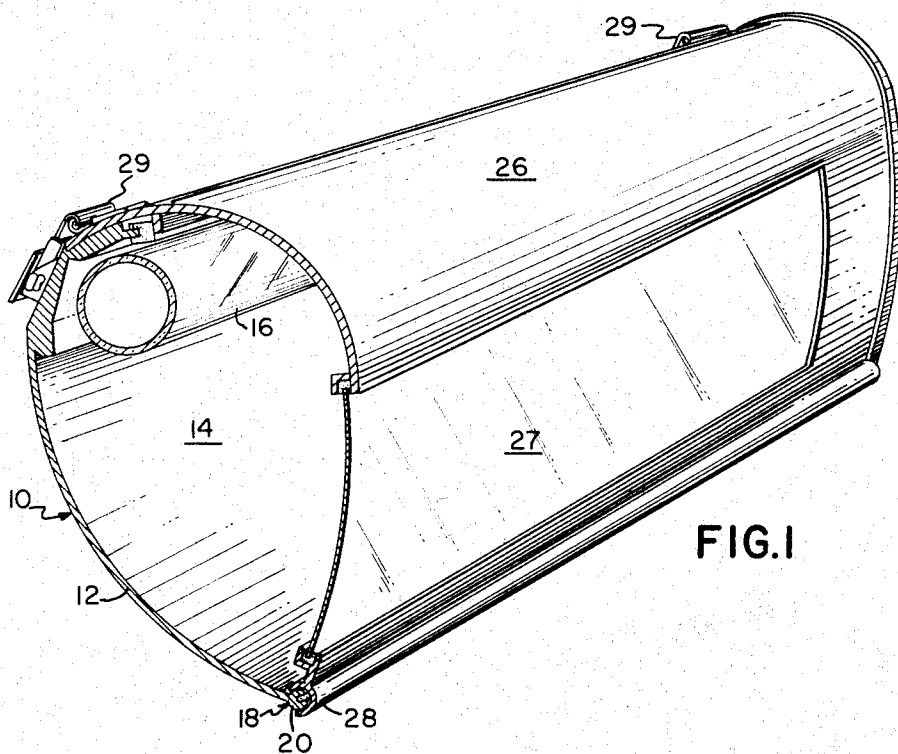


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WEATHERPROOF HINGE

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WEATHERPROOF HINGE

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ABSTRACT OF THE DISCLOSURE

A weatherproof frictional hinge for outdoor fixtures is disclosed. The hinge comprises a continuous extruded ball and socket arrangement. The diameter of the ball is much smaller than the internal diameter of the socket, and is provided with a longitudinal groove. A strip of resilient material is fitted in the groove to take up the diameter difference between the ball and socket. This resilient fitting between the ball and socket provides a weatherproof and frictional hinge for the fixture.

This invention relates to lighting fixtures and more particularly to lighting fixtures designed primarily for outdoor installations.

In the design and manufacture of lighting fixtures for outdoor use, a number of problems are confronted which normally do not arise in the design and manufacture of lighting fixtures for indoor use. The two major problems are protecting the lighting unit from the weather, especially at the critical hinge area and designing a hinge cover plate with frictional qualities. By frictional qualities it is understood that the cover plate can be maintained at any desired opened position, therefore preventing possible breakage of the window insert during maintenance of the fixture.

Ways and means for solving these problems have been developed, however, it is significant to note that these solutions usually involve the use of structural components which are both expensive and cumbersome. In addition thereto, maintenance has been both difficult and expensive.

Outdoor lighting fixtures are usually designed of light weight material such as aluminum, etc., which can be extruded to a desired shape. Maintenance of the fixtures, that is replacing the lamps and cleaning the window insert is of prime importance. Therefore fixtures are designed with a windowed hinge cover plate that is an integral part of the fixture body. As mentioned above one of the desired goals in designing such a unit is to provide a hinge cover that has frictional qualities.

A weatherproof hinge is a prime requisite in designing outdoor fixtures. Many of the present-day fixtures are burdened with the defect that by constant usage the hinge seal becomes deformed and misaligned so that leakage will occur, this in itself making the maintenance procedure an expensive and troublesome process.

The desired qualities required are obtained in the fixture of my design wherein the hinge cover plate is a single extruded piece with a hinge yoke formed the length at one edge. The base member or the lamp and reflector portion of the fixture is also an extruded section formed to a desired optical shape, the bottom edge of this piece having a grooved, ball-shaped edge. This ball edge is adaptable to fit within the confines of the hinge-yoke edge of the cover plate, thus joining the base member to the cover plate. A strip of resilient sealing material such as rubber, nylon, Teflon or similar material is fitted into the groove of the ball-joint for the purpose of providing the hinge-joint with frictional and weather-tight qualities required for outdoor fixtures.

As evident from the foregoing, one of the principal

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objects of this invention is to provide an outdoor fixture which is compact and relatively inexpensive.

Another object is to provide an outdoor lighting fixture, the structural components of which readily lend themselves to mass production and assembly.

A further object of this invention is to provide a weatherproof type of hinge.

A still further object is to provide a hinge that has internal frictional qualities.

Further objects, advantages and features will be apparent to those skilled in the art from the description below of a specific embodiment of the invention.

FIGURE 1 is a perspective cross-sectional view of an outdoor fixture that will utilize this particular type of hinge.

FIGURE 2 is an enlarged cross-section detail of a hinge portion showing in particular the relationship of the ball and yoke arrangement. In this particular view the hinge is shown in a closed position.

FIGURE 3 is a view of parts shown in FIG. 2 but rotated to an open position.

Referring to FIG. 1 an extruded outdoor lighting fixture is illustrated showing in particular the adaptability of this invention. The base member 10 is extruded to form a curved surface 12 for the installation of a reflective surface 14 to reflect light from a source, such as a lamp 16, positioned at the top part of the curved portion of the base member 10. The lower transverse edge 18 of the base member 10 is formed as a ball-shaped lip 20 that has a circular cross-section as shown in FIGS. 2 and 3. As seen in FIGS. 2 and 3 a groove or slot 22 is formed the length of the ball edge 18, and the strips of sealing material 24 such as rubber, nylon, Teflon, etc., are fitted into groove 22. The sealing material 24 extends above the outer surface of the ball lip 20.

An extruded curved cover or hinge plate 26 is mated with the base member 10 to form a desirable shape for the particular outdoor fixture. In this case the cover or hinge plate is provided with a window insert 27 extending along the face of plate 26. Suitable latches 29 are spaced along the top edge, the latches 29 provide a locking arrangement for the hinge plate when the hinge plate is in its closed position. The hinge plate 26 is also provided with a yoke shaped edge 28 extending longitudinally along the bottom edge, equal in length to that of the base plate 10.

As seen in FIGS. 2 and 3 the yoke portion 28 is fitted over the ball edge 20 of the base member 10. The ball edge 20 as mentioned above is provided with a strip of resilient sealing material 24 fixed in the groove 22, thereof. More clearly seen in FIGS. 2 and 3 the ball edge 20 has a smaller diameter than the internal diameter of the yoke 28 thereby providing slack or freedom of movement between the base 10 and the cover plate 26. This slack or play is taken up by the resilient material 24 positioned in the groove 22 of the ball edge 20. As seen in FIGS. 2 and 3 the resilient material 24 extends beyond the circumferential edge of ball edge 20 a desired amount so that the resilient material 24 will exert frictional pressure against the interior surface of yoke 28, thereby providing frictional qualities and allowing the cover plate 26 to be rigidly held open in any desired position.

It is apparent that modifications in the above-described system may be made by those skilled in the art. It is my intent, however, to be limited in this invention only by the scope of the appended claims.

What I claim is:

1. A lighting fixture comprising: an elongated curved housing, said housing being provided with a grooved ball-shaped edge, a resilient member fitted in said groove of said ball edge, and a curved extruded cover, said cover

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being provided with a yoke-shaped edge that encircles said ball edge and said resilient member to provide a frictional hinge between said base member and cover.

2. A lighting fixture comprising: an elongated curved housing, said housing being provided with a grooved ball-shaped edge, a resilient weatherproof member seated in groove of said ball edge, a curved extruded cover, said cover being provided with a circular yoke-shaped edge that encircles said ball edge and said resilient weatherproof member to provide a frictional weatherproof hinge for said lighting fixture.

3. A lighting fixture comprising: an elongated curved housing, said housing being provided with a grooved ball-shaped edge; a resilient weatherproof member seated in said groove and extending above the surface of said ball edge; and a curved extruded cover, said cover being provided with a circular yoke-shaped edge, said yoke-shaped edge having a somewhat larger diameter than said ball edge; whereby said weatherproof member seated in said groove of said ball-shaped edge and extending beyond the surface of said ball edge provides a frictional weatherproof hinge for said lighting fixture.

4. A lighting fixture comprising: a base member having a bulbous lip defining one of the longitudinal edges thereof, said lip having a longitudinal extending groove formed therein; a cover member having a curved yoke defining

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one of the longitudinal edges thereof, said yoke being disposed in cooperative relationship with respect to said bulbous lip; and a strip of resilient weatherproof material seated in said groove and being in frictional engagement with said curved yoke.

5. A lighting fixture comprising: a base member, a cover plate pivoted to said base member, a separate resilient member located in the pivot area of said base member and said cover plate, thereby providing a frictional and weatherproof hinge arrangement.

6. A lighting fixture comprising: a base member, a cover plate pivotally arranged with said base member, a separate resilient weatherproof strip fitted between said base member and said cover plate at the pivotal area to provide a weather tight and frictional cover plate.

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