D. E. WORRELL.

ELECTRIC FIXTURE SUPPORT.

APPLICATION FILED JUNE 16, 1917.

1,309,052. Patented July 8, 1919.

Fig. 1.

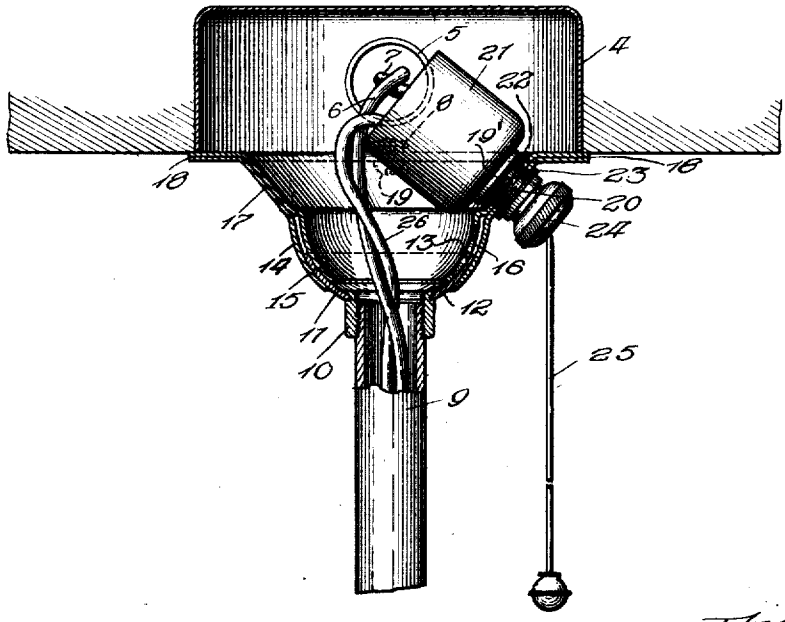


Fig. 2.

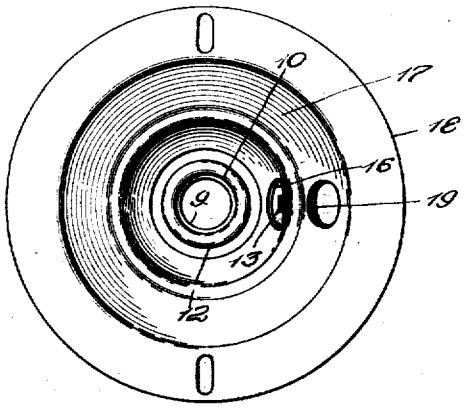
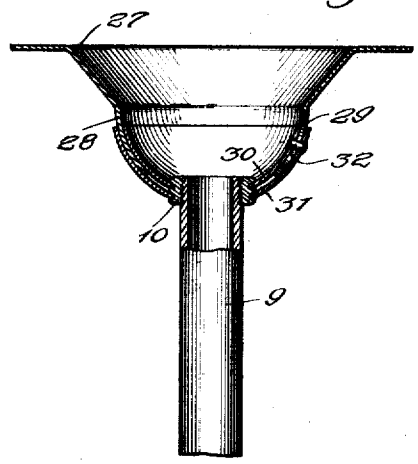


Fig. 3.



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ELECTRIC-FIXTURE SUPPORT.

1,309,052. Specification of Letters Patent. Patented July 8, 1919.

Application filed June 16, 1917. Serial No. 175,069.

To all whom it may concern:

Be it known that I, DWIGHT E. WORRELL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Electric-Fixture Supports, of which the following is a specification.

This invention relates to a hanger for fixtures which has a universal movement about the point of support so that the fixture-supporting stem will be suspended in a vertical position regardless of the position of the fixture-supporting box in the ceiling. The invention consists in the novel construction, combination and arrangement of the parts.

In the accompanying drawing—

Figure 1 is a sectional view illustrating the invention as applied to an outlet box and with a pull switch in position within the box;

Fig. 2 is a plan view of the fixture-supporting member with the switch and electric connections omitted; and

Fig. 3 illustrates a modification.

In suspending a fixture from an outlet box it often happens that the bottom of the box is not exactly in a horizontal plane, so that if the fixture-supporting stem is rigidly secured to the outlet box the stem will not be exactly vertical, but will stand at a fixed angle, which is very objectionable and unsightly in appearance.

The present invention relates to a support by which the above-mentioned objection is overcome by permitting a limited universal movement of the supporting stem at its upper end. With such a construction the fixture can be hung evenly and the stem will assume a vertical position regardless of the position of the outlet box.

In the accompanying drawing, the numeral 4 designates generally an outlet box which is secured in the ceiling, or at the top of the room where the fixture is to be placed, and has connected with it a conduit 5 in which are insulated conductors 6 and 7 for supplying current to the electric fixture. The lower side of the box is wholly or partly open, and at opposite sides are threaded ears or projections 8 to which a cover, or a fixture support is secured.

The fixture-supporting means comprises a tube or stem 9 provided at the top with a threaded fitting 10. As shown in Fig. 1, a segment 11 of a spherical shell is secured by means of a flange to the fitting 10, and has an inward projection 13 at one point in the nature of a pin. On each side of the shell 11 are members 14 and 15 which are also preferably in the form of a segment of a sphere which terminate short of the inner periphery of the shell 11 and extend beyond the outer periphery thereof, so that a universal guide is made for the shell 11 permitting it to rotate freely to a limited degree in all directions. In the inner member 15 is a hole 16 through which the projection 13 of the shell 11 extends to limit the universal movement of the shell 11 in all directions. The supporting members 14 and 15 are pressed together at the portion surrounding the curved part forming a solid angular portion 17 which is continued and bent outwardly forming a circular flange 18, through which screws 19 may be inserted into the threaded projections 8 of the outlet box 4 in order to secure the supporting members 14 and 15 to the outlet box.

In the angular portion 17 of the supporting member is a perforation 19′ through which a threaded stem 20 of a pull switch 21 is inserted, the edges of the hole 19′ being first insulated by means of a bushing 22 and a washer 23. A nut 24 is attached on the outside of the threaded stem 22, thereby binding the switch firmly in place, and extending through the nut for operating the switch is a pull cord 25. The construction of the switch itself constitutes no part of this invention, except as hereafter set forth in the claims. The conductor 7 extends from the conduit 5 to the switch, and a conductor 26 extends from the switch with the other conductor 6 through the stem 9 of the electric fixture.

In the form shown by Fig. 3 there is a supporting member 27 of a single thickness of material, which is formed at the lower end with a segmental spherical shell 28 having a perforation 29. Secured to the fitting 10 are two segmental shells 30 and 31 which fit over the inside and outside of the shell 28, with a connecting pin 32 disposed in the perforation 29.

It is evident that with either of these forms of supports the stem 9 can be rotated a considerable distance in any direction in order to permit the stem to ex-

tend vertically, even though the supporting means for the fixture support may be uneven, or at a considerable angle from the horizontal. It is obvious that although an outlet box 4 has been described as the supporting means for the fixture support, any other supporting means to which the support formed by the junction of the members 14 and 15 with the support 27 may be secured, is also contemplated by the invention. It is also obvious that other modifications might be made without departing from the spirit and scope of the invention.

I claim:—

1. In an electric fixture, a fixed support, a depending stem, a self-centering connection between them comprising spherical shell segments slidably fitting one within the other and one attached to the upper end of the stem and another attached to the support, and means for permitting a limited movement between the shells in any direction, said means including a perforation in one of the shells and a projection from the other shell extending loosely into the perforation and normally disposed centrally thereof.

2. In an electric fixture, a fixed support, a depending stem, a self-centering connection between them comprising concentric spherical shell segments fitting one within the other and one attached to the upper end of the stem and the other attached to the support, and means for permitting a limited universal movement between the shell portions in any direction, said means comprising a perforation in one of the shells and a projection bent up from the other shell which extends loosely into the perforation and is normally disposed centrally of said perforation.

3. In an electric fixture, the combination with a depending stem, of a fixed support, a plurality of concentric spherical shells one of which is attached to the upper end of the stem and extends upwardly therefrom with an integral inwardly extending projection, the other shell portions being secured to the fixed support and depending therefrom engaging the opposite sides of the other shell member and terminating at a distance from the stem, the innermost shell having a perforation in which the projection fits loosely, but is normally in the center thereof, the said perforation and the edges of the shells which are spaced from the end of the stem permitting a limited universal movement of the stem with respect to the fixed support about the common center of the said shells.

In testimony whereof I have signed my name to this specification on this 9th day of June, A. D. 1917.

DWIGHT E. WORRELL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."