

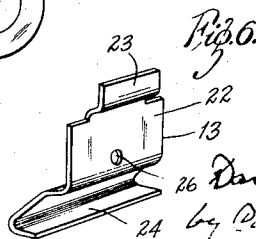
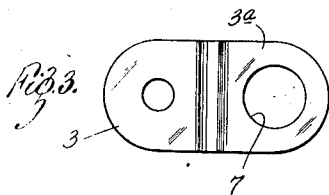
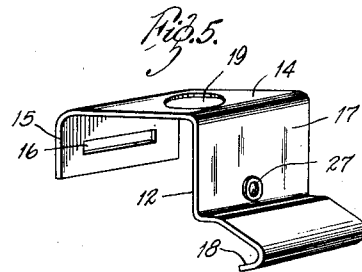
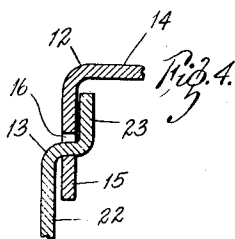
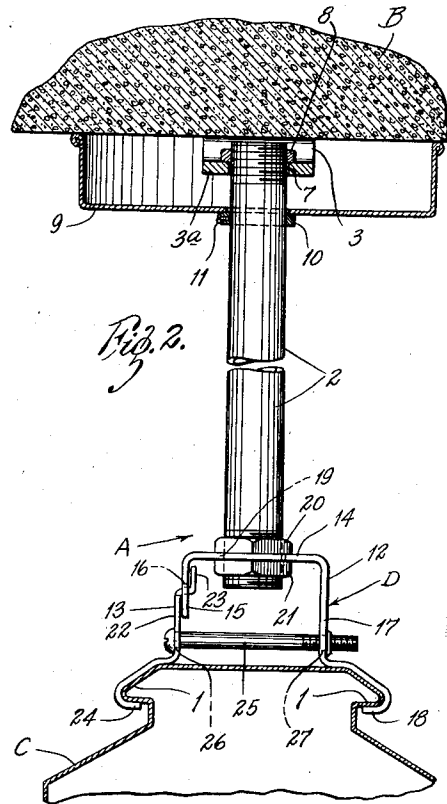
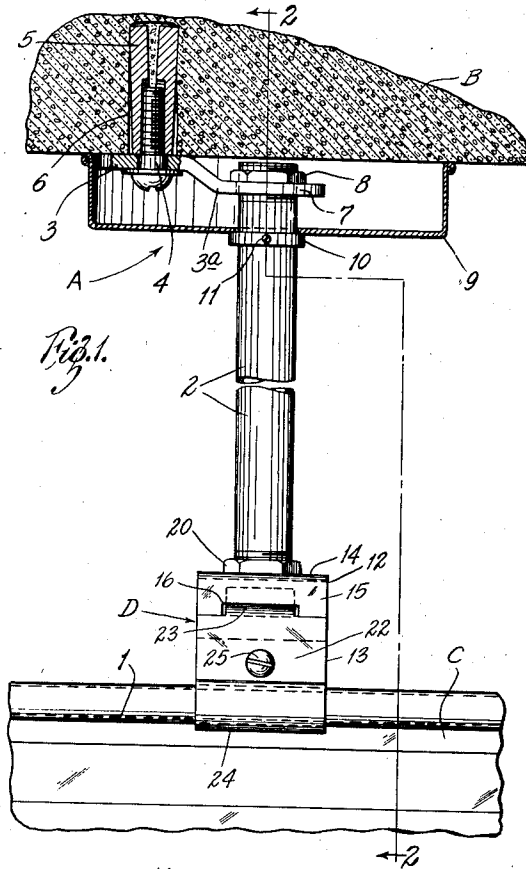
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D. J. BILLER

2,297,869

SUSPENSION SUPPORT FOR ELECTRIC LIGHTING FIXTURES

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2,297,869

SUSPENSION SUPPORT FOR ELECTRIC
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6 Claims. (Cl. 248—343)

This invention relates to suspension supports for electric lighting fixtures or the like, particularly relatively long fluorescent lighting fixtures that are suspended from the ceiling by means of a plurality of hangers spaced apart longitudinally of the fixture. The principal object of the present invention is to provide for adjusting the suspension support relative to the fixture and relative to the ceiling so as to bring said supports into exactly upright or vertical position. Other objects are to provide for simplicity and cheapness of construction and the easy attachment of the suspension support to the fixture and to the ceiling. The invention consists in the suspension support and the construction, combinations and arrangements of parts hereinafter described and claimed.

In the accompanying drawing, which forms part of this specification and wherein like symbols refer to like parts wherever they occur,

Fig. 1 is a side elevation of a suspension support embodying my invention, said support being shown suspended from a ceiling and secured at its lower end to the upper portion of a fluorescent lighting fixture,

Fig. 2 is a vertical cross-section on the line 2—2 in Fig. 1,

Fig. 3 is a plan view of the hanger plate for suspending the support from the ceiling,

Fig. 4 is an enlarged fragmentary vertical cross-section through one side of the fixture supporting bracket at the lower end of the suspension support,

Fig. 5 is a perspective view of one section of said bracket; and

Fig. 6 is a perspective view of the other section of said bracket.

My suspension support or hanger A is particularly designed for use in suspending an electric lighting fixture from a ceiling, beam or other overhead support B. The fixture C, of which only the upper portion is shown, is a fluorescent lighting fixture having outstanding ribs or ledges 1 on opposite sides thereof. The fixture C is of the relatively long or continuous type and is suspended from the ceiling at points spaced apart along the length of the fixture by means of a plurality of the suspension supports A.

Each of the suspension supports A comprises an upright pipe or rod 2 which is suspended from the ceiling B by means of an anchor or hanger plate 3 that has one end secured flatwise to the ceiling by means of a vertical screw or bolt 4. The screw 4 is located approximately in a vertical plane passing through the longitudinal

center line of the fixture C. The ceiling B shown is a concrete ceiling, which necessitates the use of an expansion plug 5 which is mounted in a vertical hole 6 in said ceiling and is threaded to receive the screw 4. The hanger plate or bracket 3 has its outer or free end portion 3a offset downwardly to clear the ceiling B; and a hole 7 extends vertically through said downwardly offset free end portion and is adapted to loosely receive the upper end of the upright hanger pipe or rod 2. The hanger pipe or tube 2 extends upwardly through the opening 7 in the downwardly offset free end portion 6 of the hanger plate 3 and is provided with a nut 8 that seats on said portion and retains said pipe in said opening. The hanger plate 3, anchor screw 4 and nut 8 are all concealed by a cup-shaped canopy 9, which is sleeved on the hanger pipe 2 and is held in abutting relation to the ceiling B by means of a collar 10 that is sleeved on said pipe and is locked thereon in the desired position of vertical adjustment by means of a set screw 11.

The hanger pipe 2 is provided at its lower end with a fixture supporting member or clamp D comprising two sections 12 and 13, respectively, that are separable in directions crosswise of the fixture. The section 12 of the fixture support or holder D comprises a substantially inverted channel-shaped body portion having a horizontal web 14, a relatively shallow depending side flange 15 with a horizontally elongated slot 16 extending therethrough, and a relatively deep depending flange 17 that terminates in an inwardly extending flange or hook 18 adapted to extend beneath the ledge 1 along one side of the fixture C. The web portion 14 of the section 12 has a hole or opening 19 extending vertically therethrough; and the lower end of the hanger pipe 2 extends downwardly through said opening and is threaded to receive lock nuts 20 and 21, respectively. The lock nut 20 seats against the upper surface of the web portion 14 of the section 12, and the other nut 21 bears against the underside of said web portion, thereby firmly locking said section to the lower end of the hanger pipe 2. The other or opposite section 13 of the holder D comprises a vertically disposed portion 22 that is disposed alongside of the depending shallow side flange 15 of the section 12 in lapping relation to the lower marginal portion of said shallow flange and has a tongue 23 at its upper end that extends inwardly through the slot 16 in said shallow side flange and thence upwardly alongside the inner face thereof. The holder section 13 terminates at its lower end in an inwardly extending flange

or hook 24 that extends beneath the overhanging rib or ledge 1 along the adjacent side of the lighting fixture C. The tongue-and-slot connection between the two sections 12 and 13 of the fixture holder D serves to prevent accidental disengagement of said sections. The two sections, however, may be readily disengaged by swinging the section 13 upwardly into a position that will permit the tongue 23 thereof to be withdrawn outwardly through the slot 16 in the section 12. The two sections of the holder D are drawn together to rigidly clamp the upper portion of the lighting fixture C therebetween by means of a clamping screw 25 that extends through a horizontal opening 26 provided therefor in the vertical portion 22 of the section 13 and is threaded through a horizontal opening 27 provided therefor in the deep side flange 17 of the section 12.

By the arrangement described, the hanger pipe 2 is suspended from the hanger plate 3 by the nut 8 that seats on said plate, while the fixture C is suspended from said rod by the fixture holder D on the lower end thereof. The fixture may be adjusted vertically by means of the nuts 20 and 21 on the lower end of the hanger pipe 2, and some vertical adjustment is also afforded by the suspension nut 3 on the upper end of said pipe. The lower end of the hanger pipe 2 may be adjusted longitudinally of the lighting fixture C by sliding the holder D lengthwise thereof, after which said holder may be rigidly secured to said fixture in the desired position of adjustment by tightening the horizontal clamping screw 25. The hanger pipe 2 may also be adjusted crosswise of the lighting fixture C by swinging the hanger plate 3 around the securing screw or bolt 4 therefor as a pivot, after which said hanger plate may be securely locked in the desired position of rotary adjustment by tightening said screw or bolt. The longitudinal adjustment afforded by the fixture holder D and the crosswise adjustment provided by the hanger plate 3 permit the hanger pipe 2 to be positioned in exactly upright or vertical position regardless of any slight inaccuracy in the location of the hanger plate securing bolt or the necessity for shifting this bolt due to the surface of the ceiling or some obstruction therein. The slot 16 and tongue 23 connection between the two sections of the fixture holder or clamp D permits said sections to be quickly connected and disconnected to enable said bracket to be attached to and detached from the fixture.

Obviously, the hereinbefore described suspension support admits of considerable modification without departing from the invention. Therefore, I do not wish to be limited to the precise arrangement shown and described.

What I claim is:

1. A suspension support for an electric lighting fixture or the like, said support comprising a rigid hanger member, a support for the upper end of said hanger member, a fixture holder fixed to the lower end of said hanger member, and separate means for horizontally adjusting the support for the upper end of said hanger member and the fixture holders on the lower end thereof at substantially right angles to one another to cause said hanger member to hang perpendicular.

2. A suspension support for an electric lighting fixture or the like, said support comprising an anchor member, means for securing said anchor member to an overhead support for horizontal adjustment relative thereto, a hanger member 75

having its upper end supported by and for adjustment with said anchor member, a holder for said fixture secured to the lower end of said hanger member, and means for securing said holder to said fixture for horizontal adjustment with said lower end of said hanger member relative to said fixture in a direction substantially at right angles to the direction of adjustment of said anchor member and said upper end of said hanger member.

3. A suspension support for a horizontally elongated electric lighting fixture or the like, said support comprising a bracket, means for pivotally securing said bracket to an overhead support for horizontal swinging movement relative thereto crosswise of said fixture, said bracket having a hole extending vertically through the free end portion thereof, a vertically elongated hanger member having its upper end loosely disposed in said opening and a portion that seats on said bracket around said hole and retains said upper end of said hanger member therein, a holder for said fixture secured to the lower end of said hanger member, and means for attaching said holder to the lower end of said fixture for adjustment lengthwise thereof.

4. A suspension support for a horizontally elongated electric lighting fixture with outstanding ribs along opposite sides thereof, said support comprising a horizontal plate, means for pivotally securing said plate to an overhead support for horizontal swinging movement relative thereto crosswise of said fixture, said plate having a downwardly offset free end portion with a vertical opening therethrough, a hanger member having its upper end disposed in said opening, a nut threaded on said end of said hanger member, and resting on said downwardly offset free end portion of said plate, and a holder for said fixture mounted on the lower end of said hanger member and slidable lengthwise of said fixture, said holder comprising a section rigidly secured to said hanger member, and a section detachably secured to said first mentioned section, each of said sections having an intumed lower end portion adapted to hook beneath the outstanding rib along an adjacent side of said fixture, and a screw cooperating with said sections for clamping the latter to said fixture.

5. A suspension support for a horizontally elongated electric lighting fixture with outstanding ribs along opposite sides thereof, said support comprising a horizontal plate, means for pivotally securing said plate to an overhead support for horizontal swinging movement relative thereto crosswise of said fixture, said plate having a downwardly offset free end portion with a vertical opening therethrough, a hanger member having its upper end disposed in said opening, a nut threaded on said end of said hanger member and resting on said downwardly offset free end portion of said plate, a canopy sleeved on said hanger member and covering said plate, and a holder for said fixture mounted on the lower end of said hanger member and slidable lengthwise of said fixture, said holder comprising an inverted channel-shaped section, with a web secured to said hanger member, a depending side flange having an intumed portion adapted to lock beneath the outstanding rib along one side of said fixture, and a depending side flange having a slot therein, and a section having an intumed portion adapted to hook beneath the outstanding rib along the other side of said fix-

ture, and a tongue detachably engaged in said slot, and a screw cooperating with said sections for clamping them to the sides of said fixture.

6. A suspension support for an electric lighting fixture with outstanding ribs on opposite sides thereof, said support comprising an inverted channel-shaped section with a web adapted to be secured to an overhead support, a depending side flange having an inturned portion adapted

to hook beneath the outstanding rib on one side of said fixture and a depending side flange having a slot therein, and a section having an inturned portion adapted to hook beneath the outstanding rib on the other side of said fixture, and a tongue detachably engaged in said slot, and a screw cooperating with said sections for clamping them to the sides of said fixture.

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