Jan. 13, 1931. J. A. WEVER 1,789,124

OUTLET BOX SUPPORT

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Fig. 1.

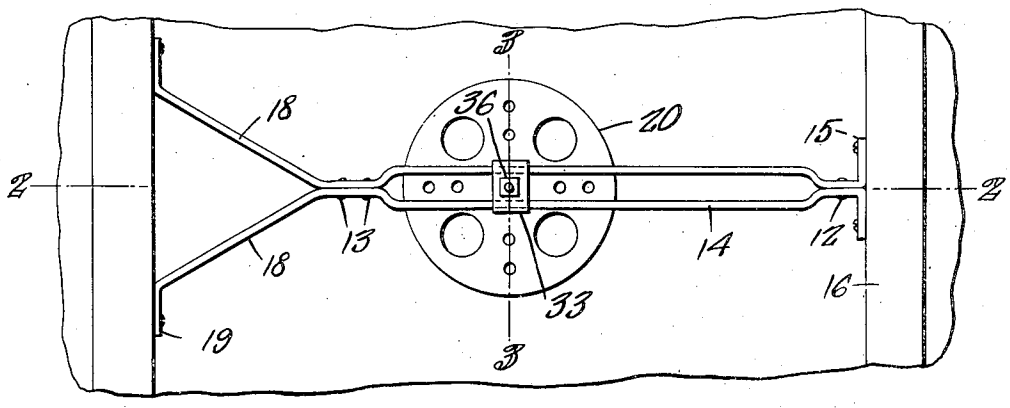


Fig. 2.

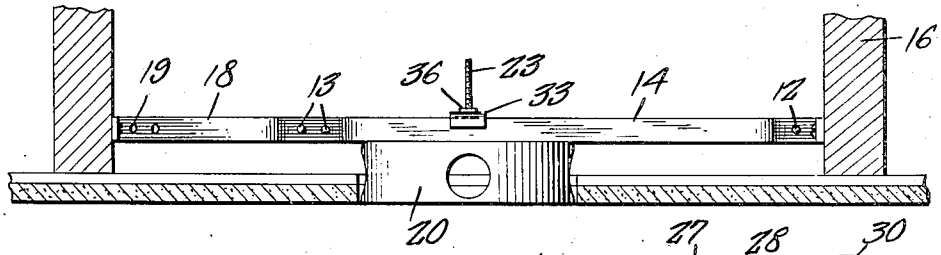


Fig. 6.

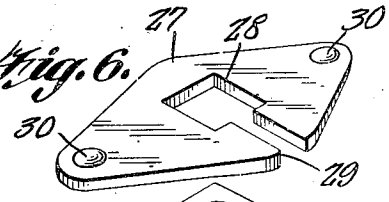
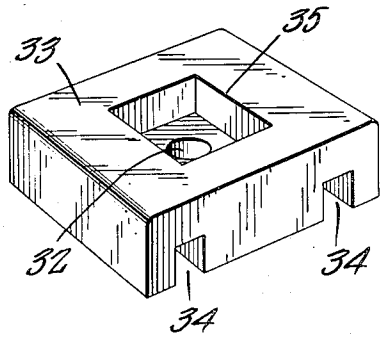


Fig. 5.



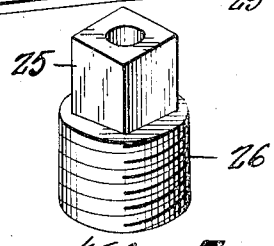


Fig. 7.

John A. Wever, INVENTOR

BY Victor J. Evans ATTORNEY

O. A. Hickey

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Fig. 3.

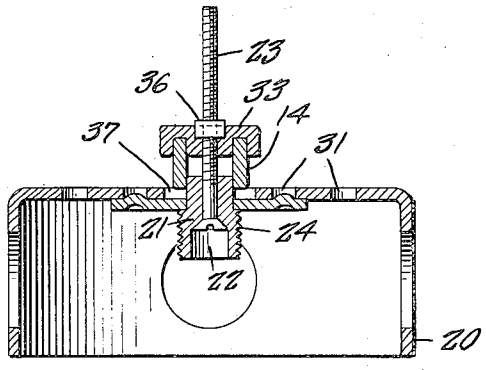


Fig. 4.

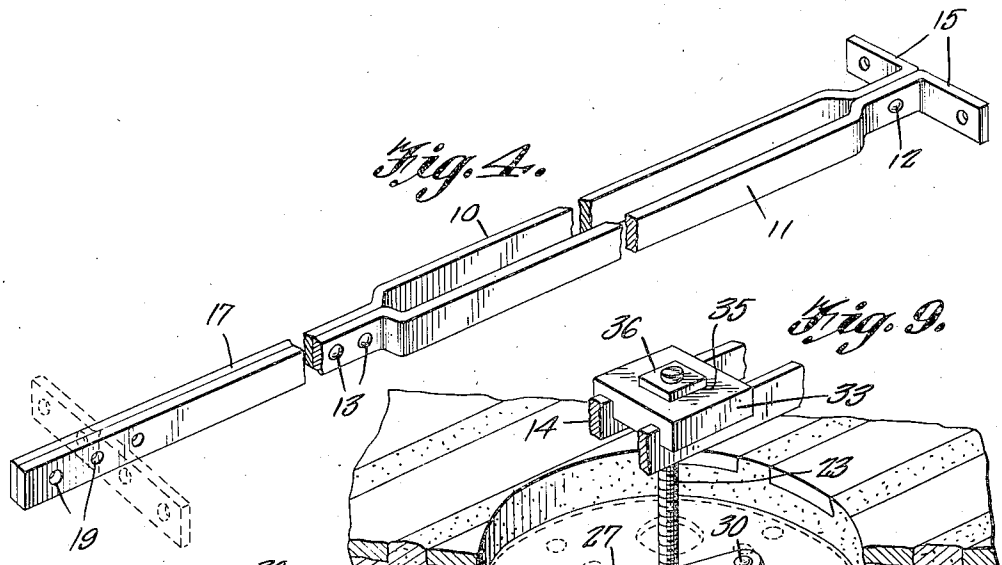


Fig. 8.

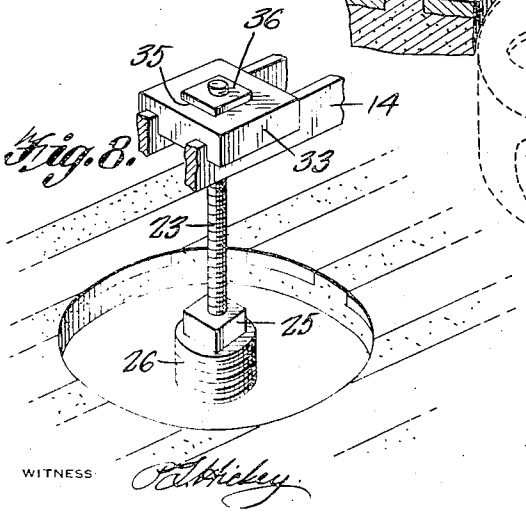
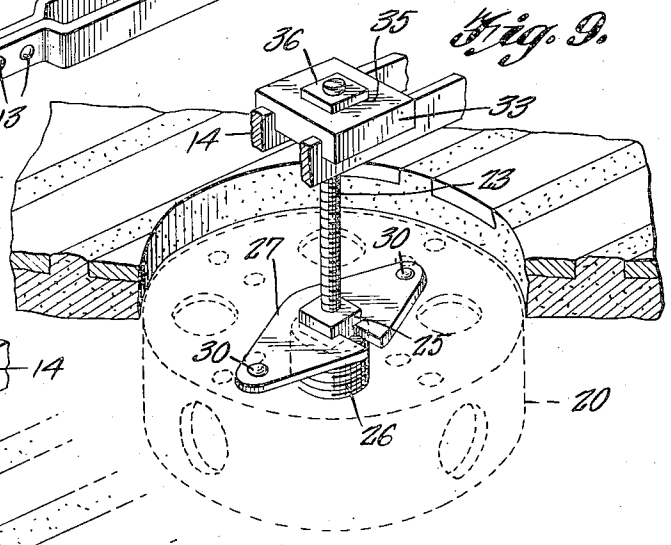


Fig. 9.



John A. Wever,
INVENTOR

BY Victor J. Evans
ATTORNEY

WITNESS

Patented Jan. 13, 1931 1,789,124

UNITED STATES PATENT OFFICE

JOHN A. WEVER, OF BALTIMORE, MARYLAND

OUTLET-BOX SUPPORT

Application filed April 1, 1929. Serial No. 351,677.

This invention relates to means for supporting lighting fixtures and is an improvement upon the invention disclosed in application Serial No. 254,002, filed by me February 13, 1928, the invention just referred to being chiefly designed for use in completed buildings, or old work (as it is known to the trade) where it is impossible or impractical to open a pocket in the flooring above the position of the outlet box, such for example as hardwood floors, or on the upper floor of a building where the outlet is covered by a roof.

The present invention is intended to be used in completed buildings where it is possible to open a pocket above the outlet, or where joists or studs are already exposed, such for instance, as in unfinished attics. It is also adapted for use in buildings under construction or alteration, and known to the trade as new work, and in which electrical work is done before the ceiling or flooring are completed and while the joists or studs are exposed.

In the application above referred to, use is made of a supporting bar which is positioned within the ceiling and rests upon the laths. The present invention also contemplates the use of a supporting bar which however does not rest upon the laths but is secured to the joists so that the weight of the fixture is hung from the joists instead of the laths.

With the above and other objects in view, the invention provides a bar or novel construction whose length may be conveniently regulated in accordance with the space between the joists to which the bar is attached, and at the same time, the bar may be attached to the joists at three points, so as to provide rigid attachment and insure stability of the lighting fixture.

Another object of the invention is the provision of means for attaching an outlet box to the bar so that the box may be properly positioned for passage through an opening provided in the ceiling or wall of a building, and the attaching means conveniently adjusted to prevent accidental displacement of the box.

With the above and other objects in view, the invention further includes the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claims.

In the drawings:—

Figure 1 is a plan view showing the invention suspended between a pair of joists with the flooring removed.

Figure 2 is a section taken substantially on the line 2—2 of Figure 1.

Figure 3 is an enlarged detail section on the line 3—3 of Figure 1.

Figure 4 is a detail perspective view of the supporting bar with parts broken away, the dotted lines illustrating the formation of attaching legs at one end of the bar.

Figure 5 is a detail perspective view of the bridge block.

Figure 6 is a like view of the locking plate.

Figure 7 is a detail perspective view of the coupling member.

Figure 8 is a fragmentary perspective illustrating the initial operation of installing the invention.

Figure 9 is a like view illustrating the outlet box installed, the box being shown by dotted lines.

Referring to the drawings in detail wherein like characters of reference denote corresponding parts, the supporting bar which is indicated at 10 and shown in detail in Figure 4 of the drawings, is formed of a pair of complemental members. These members are preferably formed of strips of bendable strap iron and are offset intermediate their ends as shown at 11, the members being connected adjacent each end of the offset portions as shown at 12 and 13. By reference to Figures 1 and 4 of the drawings it will be clearly seen that the offset portions 11 provide a longitudinally disposed slot 14, whose purpose will be presently explained.

The members of which the supporting bar is formed are provided at one end with oppositely extending apertured legs 15 for attachment to a joist 16, while the opposite end of the bar is formed to provide relatively long attaching legs 17.

Before installation, the legs 17 are pref-

erably parallel as shown by the full lines in Figure 4 of the drawings. During installation these legs are bent relatively outward as shown at 18 in Figure 1 of the drawings and their extremities are bent to provide outwardly extending apertured legs 19. A three point suspension is thus provided for the supporting bar.

By reason of the character of the legs 17, the length of the bar may be regulated in accordance with the space between the joists 16 so that the bar may be secured to the opposed faces of adjacent joists. The legs 17 are provided with spaced openings 19′ to provide for the passage of attaching devices in conformity with the length of the legs.

The reference character 20 indicates an ordinary outlet box, while 21 indicates a coupling member of the character disclosed in my above mentioned application. This coupling member is preferably formed of cast malleable iron and is cored as at 22 for the accommodation of a screw or bolt 23. The coupling is externally threaded as indicated at 24 for engagement with a fixture and is provided with a squared or rectangular portion 25, and a shoulder 26.

Use is also made of a locking plate 27 which is shown in detail in Figure 6 of the drawings and which is provided with a rectangular opening 28 to receive the rectangular portion 25 of the fixture coupling. A slot 29 extends through the plate from the opening so as to permit of the passage of the screw or bolt 23. The plate 27 is provided with spaced extensions 30 which are adapted to be received in openings 31 provided in the outlet box 20 so as to hold this plate against rotation as the outlet box is being positioned.

The screw or bolt 23 which extends through the fixture coupling 21 also extends through the slot 14 provided in the bar. In addition, this screw or bolt extends through an opening 32 provided in a bridge block 33 and the latter is formed with spaced parallel grooves 34 which receive the edges of the bar forming members as shown in Figure 3 of the drawings. The bridge block is further provided with a socket 35 which surrounds the opening 32 and which is adapted to receive a nut 36 mounted upon the screw or bolt 23.

Assuming that the opening for the outlet box has been provided in the ceiling, the supporting bar is attached to the joists 16 with the fixture coupling 21 and the bridge block 33 attached to the bar. The fixture coupling is of course suspended from the bolt 23. The outlet box with the cables attached is then positioned within the opening so that the fixture coupling 21 extends through the opening 37 provided in the box. The locking plate is then positioned so as to engage the shoulder 26 of the fixture coupling with the extensions 30 arranged within the openings 31. The screw or bolt 23 which is already engaged with the nut 36 is then adjusted, and as the nut contacts the walls of the socket 35, the nut will be held against rotation. The fixture coupling is also held against rotation through engagement of the squared portion 25 with the walls of the opening 28 and the opposed walls of the slot 14 and supporting bar. Adjustment of the screw or bolt 23 through the nut 36 will thus clamp the parts securely in position.

From the foregoing description it is apparent that the invention provides a bar formed of two members permanently connected, the bar being adjustable and providing a three point support so as to give exceptional rigidity with the use of relatively light supporting members when the installation is completed.

The invention is susceptible of various changes in its form, proportions and minor details of construction and the right is herein reserved to make such changes as properly fall within the scope of the appended claims.

Having described the invention what is claimed is:—

1. A supporting bar comprising a pair of complemental bendable members offset intermediate their ends, means connecting said members adjacent the ends of the offset portions to provide an elongated slot, rightangularly disposed attaching lugs at one end of the bar, and relatively long attaching legs at the other end of the bar.

2. A supporting bar comprising a pair of complemental bendable members offset intermediate their ends, means connecting said members adjacent the ends of the offset portions to provide an elongated slot, rightangularly disposed attaching lugs at one end of the bar, and laterally spaced relatively long attaching legs at the other end of said bar.

3. A supporting bar comprising a pair of rigidly connected members, and means at opposite ends of the bar to provide for a three point connection with a supporting structure.

4. A supporting bar comprising a pair of complemental members shaped to provide an elongated slot when the members are connected, means to rigidly connect said members, means at one end of the bar for attachment to a support, and relatively adjustable attaching legs at the other end of said bar.

5. A supporting bar comprising a pair of complemental members, each of said members comprising a bar section having an offset portion intermediate its ends, means connecting said sections at opposite ends of the offset portions with the latter in opposed relation to form a slot, and attaching legs at opposite ends of the bar.

6. A supporting bar comprising a pair of complemental members, each of said mem-

bers comprising a bar section having an offset portion intermediate its ends, means connecting said sections at opposite ends of the offset portions with the latter in opposed relation to form a slot, and laterally adjustable attaching legs for at least one end of the bar.

7. A supporting bar formed of separate strips of bendable material offset intermediate their ends, means to connect the strips at opposite ends of the offset portions to provide a slotted bar, and bendable legs extending from at least one end of the slotted bar.

In testimony whereof I affix my signature.

JOHN A. WEVER.