A. C. McWILLIAMS.

FIXTURE SUPPORT.

APPLICATION FILED MAR. 6, 1913.

1,121,568.

Patented Dec. 15, 1914.

Fig. 4.

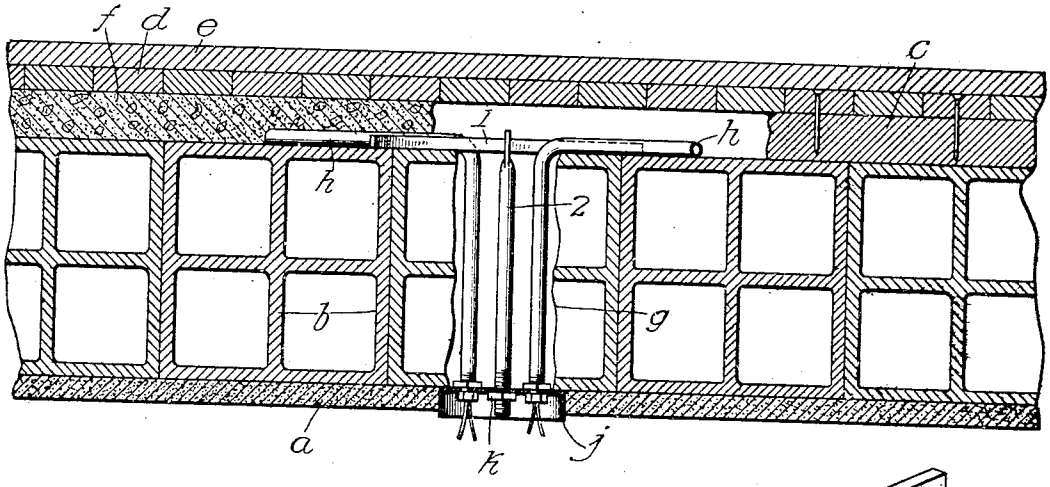
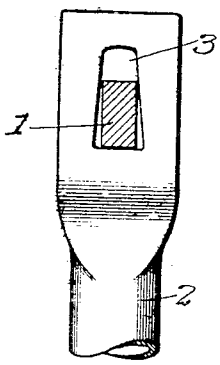


Fig. 2.



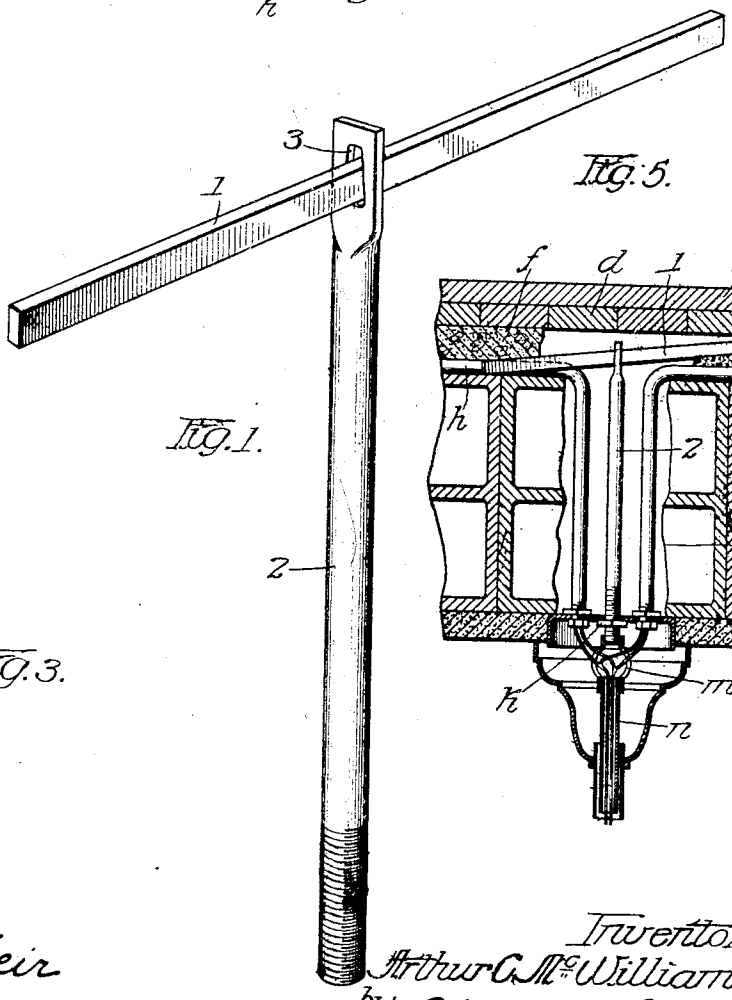


Fig. 1.

Fig. 5.

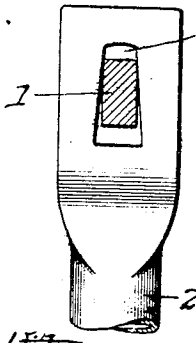


Fig. 3.

Witnesses:
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UNITED STATES PATENT OFFICE.

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FIXTURE-SUPPORT.

1,121,568. Specification of Letters Patent. Patented Dec. 15, 1914.

Application filed March 6, 1913. Serial No. 752,363.

To all whom it may concern:

Be it known that I, ARTHUR C. McWILLIAMS, a citizen of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented a certain new and useful Improvement in Fixture-Supports, of which the following is a specification.

My invention relates to fixture supports, such for example as are adapted to support electric lighting and other fixtures.

While my device may be used in different situations, it is especially applicable to interior lighting work.

It will be understood by those skilled in the art that it is common in present day building practice to run electric wires in conduits laid in the walls and ceiling. In overhead work in fireproof floors the conduits run between the tile ceiling of one room and the rough wood floor of the room above. These conduits terminate in outlet boxes, securely fastened against the tile ceiling.

The purpose of my invention is to provide a support for such outlet boxes and for the fixtures associated therewith.

Ancillary to the main purpose of my invention it is my object to provide a device of this character which may be conveniently carried in stock and quickly assembled when delivered to the place of use; also to provide a fixture of simple form and great mechanical strength and so formed that when the parts are assembled the depending element will rigidly grip the cross bar and prevent it from slipping.

It is also an object to provide a construction by which inequalities in the supporting structure will be automatically compensated for.

I obtain my objects by the device illustrated in the accompanying drawings in which—

Figure 1 is a perspective view of the assembled fixture support. Fig. 2 is a detail showing the parts during the process of being assembled. Fig. 3 is similar to Fig. 2 except that the cross bar is shown wedged in final position. Fig. 4 is a vertical section of a typical ceiling construction showing my fixture support in position therein. Fig. 5 is similar to Fig. 4 but shows the cross bar supported with one end higher than the other due to the inequalities in the ceiling structure.

Similar numerals refer to similar parts throughout the several views.

My device consists of two parts, the cross bar 1 and the depending element 2 which is formed preferably of a pipe threaded at its lower end and flattened at its upper end by drop forging or otherwise. Passing through this flattened upper end of the pipe is an aperture 3 the sides whereof converge slightly as they rise, for the purpose of tightly gripping the sides of the bar 1. At the lower end said aperture is wide enough to permit the bar to be freely inserted. The cross bar is preferably rectangular in cross section and lies with its greatest cross sectional dimensions vertical when in place.

To illustrate the manner of use, I have shown in Fig. 4 a typical building construction in which *a* is the ceiling plaster, *b* the tiling above it, *c* the nailing strips above the tiling, *d* the rough flooring upon the nailing strips, *e* the top flooring and *f* the filling of concrete between the tile and the rough flooring. In the process of building, the tiles are first put in place, supported upon the beams in the well known manner. After the tiles are in place an opening *g* is formed therein at the point where the lighting fixture is to hang. Conduits *h* are then laid upon the tiles and the ends brought down through the opening in the tiling as shown. The slotted pipe 2 of my fixture support is then dropped through the opening until the cross bar 1 rests upon the top of the tiling. The apertured outlet box *j* is then clamped against the bottom of the tile by a clamping nut *k* which draws the parts firmly together, forcing the cross bar to a firm bed upon the tiling, forcing the slotted pipe into secure engagement with the cross bar, and holding the outlet box tightly against the bottom of the tiling. The construction is thus exceedingly rigid. The lower ends of the conduits are also fastened to the outlet box as a result of which still greater security and rigidity is obtained. After the conduit, fixture support and outlet box are in place, the concrete filling and flooring may be laid and the plaster *a* applied to the under surface of the tiling in the usual manner. The lighting fixture may then be hung as illustrated for example in Fig. 5, where the nipple *m*

which supports the fixture pipe *n* is screwed directly on to the lower end of the solid pipe 2.

In the best form of my device the aperture 3 in the head of the depending element 2 is so narrow at the upper end that the depending element will seat upon the cross bar before the latter reaches the upper end of said aperture 3. As a result, the engagement is confined to the upper portion of the bar along the sides thereof and the gripping action will be set up whether the cross bar is exactly horizontal or not. In fact, the cross bar may depart considerably from the horizontal as shown in Fig. 5 without impairing the efficiency of the device. Another advantage in my construction is that the depending element always tends to hang truly vertical. Furthermore all machine work is dispensed with except the threading at the lower end of the depending element, for the formation at the upper end may be produced by forging or press work. This device consists of but two pieces, easily and cheaply made and quickly assembled.

While I prefer to use a cross bar of rectangular cross section as illustrated in the drawings, the bar may be round or any other desired cross section without destroying the efficiency of the device.

Although my device is especially adapted to electric conduit work it is evident that it may be utilized to support any kind of fixture and may be used in a great variety of situations.

What I claim as new and desire to secure by Letters Patent is:

A support for electric light fixtures comprising a cross bar and a hanging bar having a tapered aperture therein for receiving the cross bar, the aperture being narrower at the top than at the bottom, and narrower at the top than the top of the cross bar; whereby the hanging bar may be slid along the cross bar and is wedgingly held against sliding along the bar when weight is placed upon the hanging bar.

In witness whereof, I have hereunto subscribed my name in the presence of two witnesses.

ARTHUR C. McWILLIAMS.

Witnesses:
GEORGE A. CRANE,
E. L. SPENCER.