A. J. TIZLEY.

FIXTURE SUPPORT.

APPLICATION FILED APR. 19, 1917.

1,267,934.

Patented May 28, 1918.

2 SHEETS—SHEET 1.

Fig. 1.

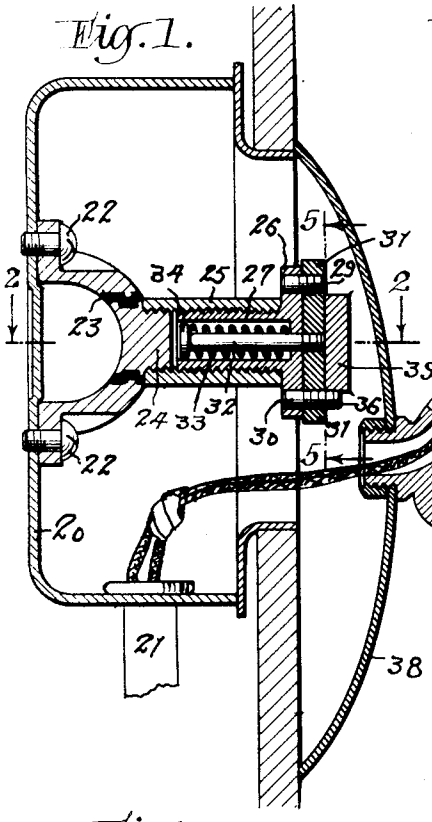


Fig. 4.

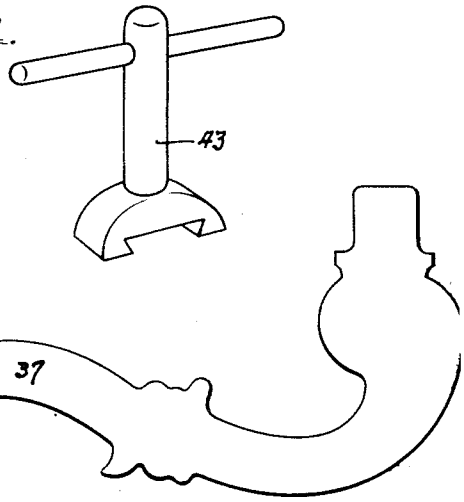


Fig. 3.

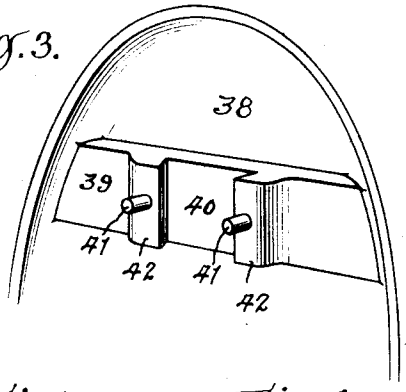


Fig. 2.

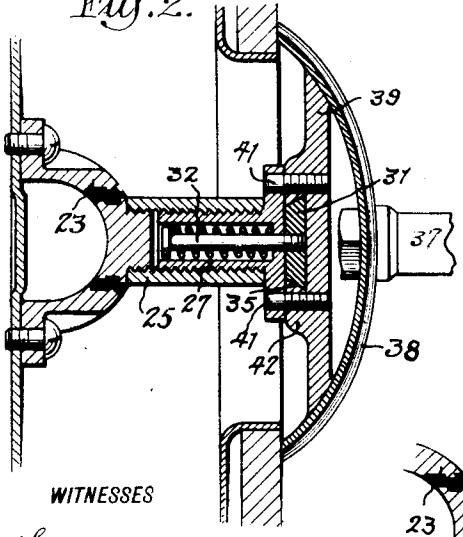


Fig. 5.

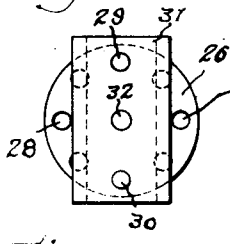


Fig. 6.

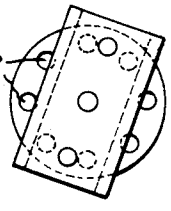
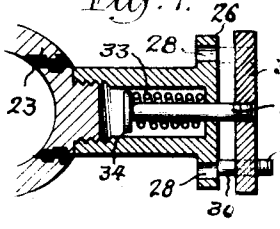


Fig. 7.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 8.

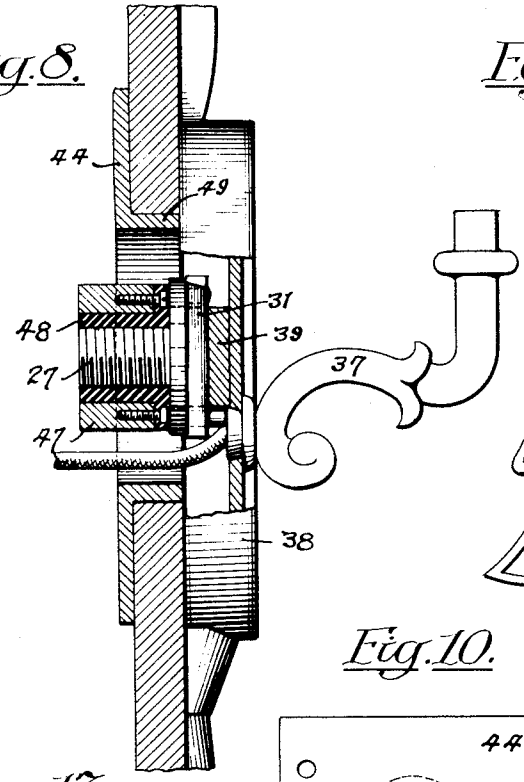


Fig. 9.

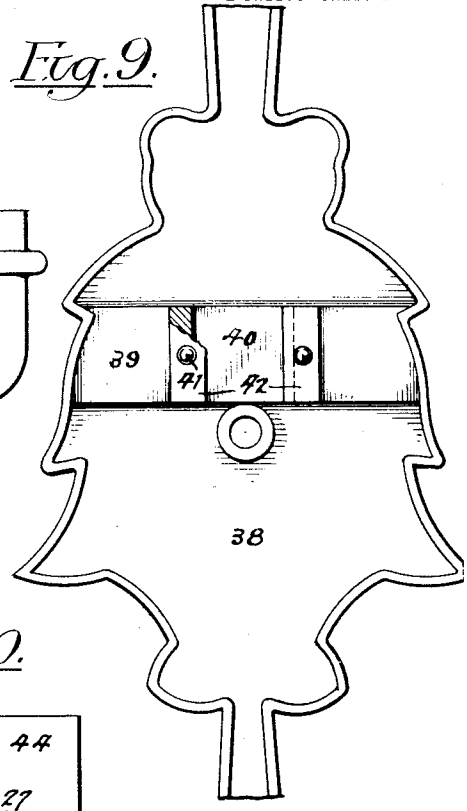


Fig. 10.

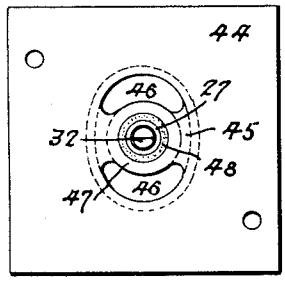


Fig. 13.

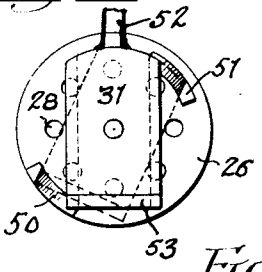


Fig. 14.

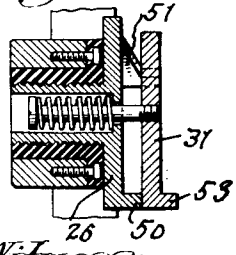


Fig. 11.

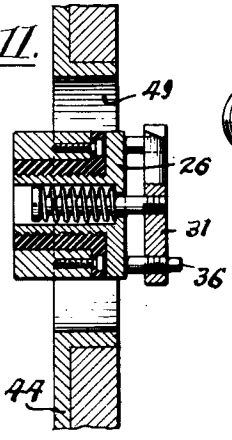
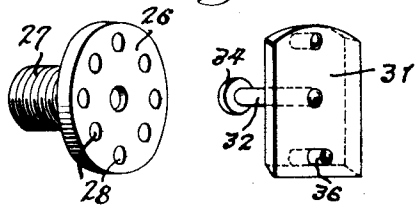


Fig. 12.



Witness:

Edwin Krone.

Inventor

ARTHUR J. TIZLEY

by his Attorneys

Howson and Howson

UNITED STATES PATENT OFFICE.

ARTHUR J. TIZLEY, OF BROOKLYN, NEW YORK, ASSIGNOR TO EDWARD F. CALDWELL & COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

FIXTURE-SUPPORT.

1,267,934. Specification of Letters Patent. Patented May 28, 1918.

Application filed April 19, 1917. Serial No. 163,317.

To all whom it may concern:

Be it known that I, ARTHUR J. TIZLEY, a subject of the King of Great Britain, and residing in the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Fixture-Supports, of which the following is a specification.

My invention relates to fixture supports and particularly to supports of the type adapted to carry electric lighting fixtures, the object of my invention being to provide a simple and relatively inexpensive device which affords a rigid and secure attachment by which lighting fixtures or the like may be mounted upon a wall without marring the latter by use of hooks, screws, nails or other disfiguring support.

Referring to the accompanying drawings,

Figure 1 is a vertical section through an outlet box in which my supporting device is installed, and showing a lighting fixture supported thereon;

Fig. 2 is a cross section on the line 2—2, Fig. 1;

Fig. 3 is a perspective of the base shield of a lighting fixture showing the supporting bar therefor;

Fig. 4 is a perspective of an operating wrench for use with the present device;

Figs. 5 and 6 are elevations of the co-operating elements of the device in different positions;

Fig. 7 is a partial section through the stem of the supporting device showing the carrier drawn out into position to receive the lighting fixture;

Fig. 8 is a vertical section through a modified arrangement with fixture attached;

Fig. 9 is a rear elevation of the fixture showing its supporting bar;

Fig. 10 is a rear elevation of the supporting device;

Fig. 11 is a vertical section through the latter;

Fig. 12 is a detached perspective of certain of its parts;

Fig. 13 is a plan of the latter in a modified construction; and

Fig. 14 is a side elevation of the same.

The present invention relates to devices for supporting lighting fixtures and particularly to a device which may be installed in an ordinary electric outlet box through which the lead wires emerge to the fitting, or upon a wall plate, and by means of which the lighting fixture may be mounted in position at the wire outlet far more securely and readily than has hitherto been the practice and without marring in any way the general appearance of the fitting, or the wall upon which it is mounted.

Referring to the accompanying drawings, I have shown in Figs. 1 and 2 an outlet box 20 of common type into which the wires leading to the lighting fixture are conducted in any suitable way, as through a conduit 21. To the base of the outlet box I secure by screws 22 a fixture support comprising an insulating base 23 with threaded nipple 24. An internally threaded post 25, screwed on to the nipple 24, carries a locking plate 26 having a hollow threaded stem 27 which is screwed into the post 25 and maintains a normally fixed position with relation to the latter. Locking plate 26 is provided with a series of apertures 28 (see Figs. 5 and 6) into which take the studs 29 and 30 on the inner face of a key 31. From the latter, a headed bolt 32 extends into the stem 27 and has coiled thereon a spring 33 interposed between the plate 26 and the head 34 of the bolt 32 and tending constantly to draw the key plate 31 down against the locking plate 26. The longitudinal margins of the key plate 31 are under-cut as at 35 and a stop pin 36, which may be in one with the stud 30, projects from its outer face.

To coöperate with this supporting device, the lighting fixture 37 has on the interior of its base shield 38, a bar 39 having an under-cut groove or key way 40 adapted to effect a sliding engagement with the key plate 31 and have also locking pins or studs 41 projecting from the ribs 42 which form the key way 40. These studs are so spaced that they take into the holes 28 in the locking plate 26, when the parts are in fully assembled position.

To effect an engagement between the bar 39 on the fixture 37, and the key plate 31, the latter is drawn away from the locking plate 26 against the action of spring 33, by any suitable means, for instance, by a specially formed wrench 43, (Fig. 4), and turned slightly so as to permit the studs 29 and 30 to rest upon the outer face of the locking plate 26 thus spacing the plate 31 therefrom. (See Figs. 6 and 7). The

fixture bar 39 is then slid into engagement with the key plate 31 until it is halted against the stop pin 36. The latter is so positioned with relation to the studs 41 in bar 39 that when the fixture 37 is turned back into position the studs 41 on the bar 39 come into register with the holes 28 in the key plate 26 and the spring 33 thereupon draws the fixture 37 and the key plate 31 down into engagement with the plate thereby locking the parts securely in position.

In the modified construction shown in Figs. 8, etc., the supporting device is carried by a plate 44 which may be either a cover plate for an outlet box or simply a wall plate. This plate 44 is provided with a web 45 separating a pair of wire holes 46 and carries a tapped hub 47 within which is screwed an insulating bushing 48 tapped to receive stem 27 of the locking plate 26. The locking plate 26 and key plate 31 are similar in construction to that above described. A collar 49 is provided on the plate 44 surrounding the wire holes 46, to fit into a recess in the wall.

The main function of the studs 29—30 on the key plate 31 is to hold the latter spaced from the locking plate 26 during the engagement of the fixture with the key plate, and while these studs do reinforce the engagement between the parts in locked relation, their function for this purpose is really unnecessary in view of the sufficiency of the studs 41 on the fixture to accomplish the same end.

In the modification Figs. 13 and 14 I have omitted the studs on the key plate and substituted as spacing members a pair of cams 50—51 on opposite sides of the locking plate 26. On rotation of the key plate 31, the latter now runs up the cams and rests thereon spaced from the locking plate, so that the fixture may be applied thereto with equal facility as if the studs 29—30 were employed. Since it is not necessary to lift these studs out of the holes 28 in the locking plate, the tool 43 may be dispensed with, and the end of the key plate extended as at 52 to afford a handle which gives sufficient leverage to swing the key plate up the cam inclines against the action of the spring 33.

The wiring of the fixture may be accomplished in various ways. The usual practice would be to attach the wires emerging from the fixture to lead wires at the outlet box after the key plate 35 has been drawn away from the locking plate 26 and prior to the mounting of the fixture upon the key plate 31 so that the least possible bunching of the wires in the outlet box or at the plate 44 results when the fixture is assembled and drawn down into locked position by a spring 33.

The base 23 for the post 25 (Figs. 1 and 2) may be of any suitable construction, preferably however an insulating joint of well-known type which need not be here described or shown in detail. The support afforded by the engagement of the fixture cross bar 39, key plate 31 and locking plate 26 is self-contained and free from any clamping action the security of which is dependent upon the drawing of the base shield 38 against the surface of the wall. The engagement between the fixture bar 39 and the locking plate 26 is direct, through the entry of pins 41 into holes 28, and it is impossible for the fixture to turn with relation to the locking plate. In any case it is completely insulated either through the base 23 or through the bushing 48 so that there is no danger of the fixture pipe or piece coming into contact with electric conductors which may charge the outlet box or plate 44.

Various modifications of construction and arrangement will readily occur to those skilled in the art which do not depart from what I claim as my invention.

I claim:—

1. A supporting device comprising an apertured locking plate, a key plate, and spring means tending to hold said key plate normally against the locking plate, in combination with a fixture having means to engage said key plate and having stud means to engage the apertured locking plate to hold the fixture against displacement with relation to the locking plate in the normal position of the parts.

2. A supporting device comprising an apertured locking plate, a key plate longitudinally and rotatably displaceable with relation thereto, spring means for maintaining said parts normally together, in combination with a fixture having means for engaging said key plate when the latter is spaced from the locking plate and additional means for engaging the locking plate to hold said fixture and locking plate against relative displacement when the normal relation of the key and locking plates is reëstablished, for the purpose specified.

3. A supporting device comprising a stationary locking plate and a fixture supporting plate movable with relation thereto, in combination with a fixture engageable upon said supporting plate when the latter is moved in relation to the locking plate and means on said fixture engaging the locking plate and serving to prevent the relative rotary movement of said parts when the supporting plate is returned to its normal position with relation to the locking plate.

In testimony whereof I have signed my name to this specification.

ARTHUR J. TIZLEY.