G. W. GOODRIDGE.

ATTACHMENT PLUG FITTING.

APPLICATION FILED DEC. 23, 1914.

1,143,536.

Patented June 15 1915.

Fig. 5.

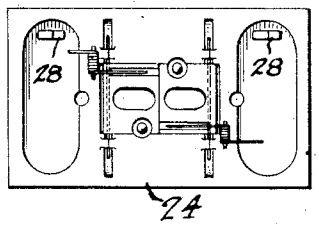


Fig. 1.

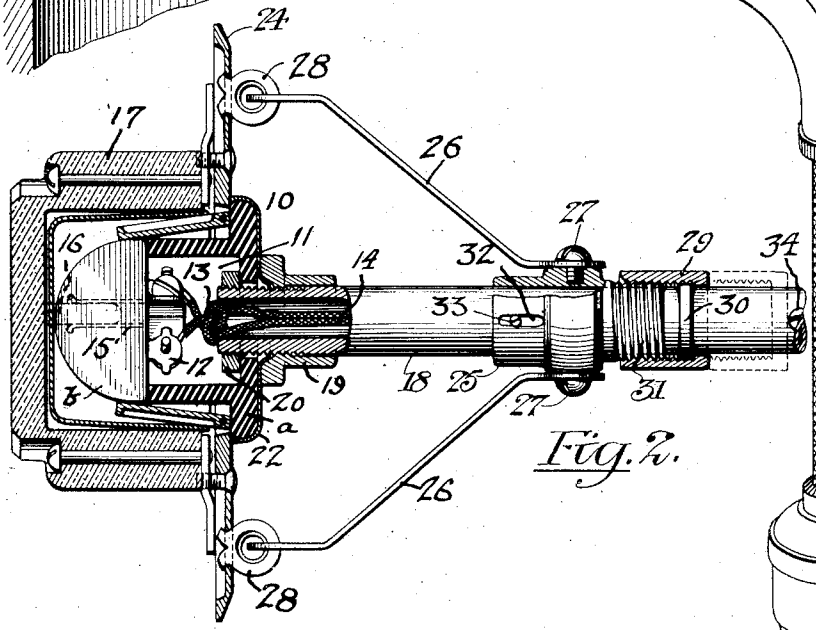


Fig. 2.

Fig. 3.

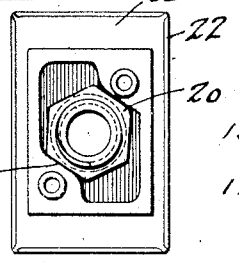
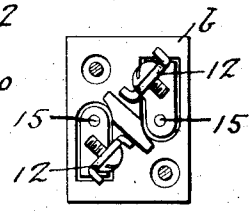
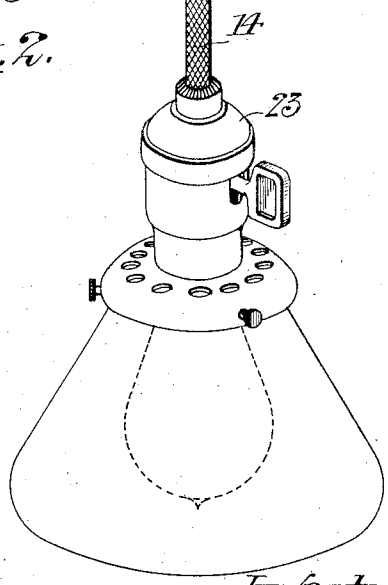


Fig. 4.





Witnesses:
Titus K. Imes.
L. H. Grote

Inventor
Gilbert W. Goodridge.
by his Attorneys
Howson and Howson

UNITED STATES PATENT OFFICE.

GILBERT W. GOODRIDGE, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE BRYANT ELECTRIC COMPANY, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

ATTACHMENT-PLUG FITTING.

1,143,536. Specification of Letters Patent. Patented June 15, 1915.

Application filed December 23, 1914. Serial No. 878,794.

To all whom it may concern:

Be it known that I, GILBERT W. GOODRIDGE, a citizen of the United States of America, and residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented a certain new and Improved Attachment-Plug Fitting, of which the following is a specification.

The present invention relates to attachment plug fittings and the special object of my invention is to provide a lighting fixture combined with an attachment plug by means of which the fitting may be detachably mounted in a standard plug receptacle together with means for firmly supporting the fitting in adjusted position.

In the accompanying drawings, Figure 1 is a perspective of a device embodying the present invention in one form and illustrated in installed position; Fig. 2 is a broken section through a standard receptacle showing portion of the present attachment plug fitting installed therein; Fig. 3 is an interior plan of the outer button of the attachment plug shown in Figs. 1 and 2; Fig. 4 is a plan of the coöperating button showing the position of the wire terminals thereon; and Fig. 5 is an inverted plan of the receptacle cover.

The present invention is here shown embodied in an attachment plug 10 of known type and comprising an outer insulating button *a* and an inner insulating button *b*. The outer button *a* is recessed to afford a chamber 11 into which the wire terminals 12, carried by the inner button *b*, project and within which may be arranged any suitable strain-relieving means, such as a knot 13 in the wire cable 14. The plugging terminals 15 are connected to the bases of the wire terminals 12 and coöperate in known manner with the jacks 16 of the receptacle 17.

A metallic tube 18 forming a guide for the wire cable and opening to the chamber 11, extends from the outer end of the plug and is made fast to the latter by means of an exterior nut 19 and a coöperating nut 20, lying within the chamber 11. This chamber being of non-circular contour it is possible to form a nut 20 of hexagonal form, the sides of which engage between the walls 21 (Fig. 3) of the chamber and thus hold the nut against rotation. A metallic cap 22 is preferably crimped over the outer face of the button *a* so that the turning down of the nut 19 thereon does not tend to injure or deface the exposed surface of the plug.

The wire cable 14 passes out through the guide arm 18 and supports a lighting fixture 23 of any desired character. While the guide arm 18 is rigid with the plug, the engagement of the latter in its receptacle, might, under certain conditions, be sufficient to withstand the strain incident to the support of the light without danger of detaching the plug from its receptacle or straining its connections, I prefer to provide an anchoring device by means of which not only is the plug held securely in the receptacle, but the strain incident to the support of the light is removed from the attachment plug proper and transferred to a fixed member, such as the cover plate 24 for the receptacle. To this end a sleeve 25 is slipped over the guide arm 18 and provided with a pair of hook arms 26, pivoted thereto on opposite sides at 27 and adapted at their free ends to take into eyes 28 rigid with the receptacle cover plate 24. The latter is rigid with the outlet box (not shown) through the yoke piece of the receptacle in well known manner.

The sleeve and hook arms combined form as it were a supporting bracket intermediate the attachment plug and the light, relieving the plug and receptacle terminals from the strain incident to the support of the drop-light. In order to make this bracket support firm, I employ a draw-up nut 29 which engages a shoulder 30 on the tube 18 and which is internally threaded to screw on the threaded portion 31 of the sleeve 25. Obviously the rotation of the draw-up nut 29, after the hooks 26 have been engaged in the eyes 28, results in forcing the attachment plug firmly home in the receptacle and in establishing a firm engagement between the arm 18 and cover plate 24 which relieves the attachment plug and receptacle terminals from any supporting strain.

In order to maintain the sleeve 25 in proper position for the engagement of the hook arms 26 with the eyes 28, I prefer to provide a slot 32 therein in which engages a stop pin 33 which may be threaded into a hole in the tubing 18 after the sleeve has been placed in proper position. To prevent the escape of the draw-up nut 29 and to hold it conveniently adjacent the sleeve 27,

I insert a stop pin 34 at a suitable distance from the nut on the tube 18.

The manner in which the hook eyes 28 are secured to the cover plate 24 is immaterial. I have here shown these eyes as punched apertures in a short strap of sheet metal, the slotted attaching end of which is inserted in an aperture in the cover plate and spread over opposite edges of the aperture in well understood manner.

The manner in which the fitting is installed is easily understood. Assuming the draw-up nut 29 to be detached from the sleeve 25, the attachment plug is inserted in the receptacle and pushed home. The sleeve 25 is moved into such position that the hook arms 26 may be freely engaged in the eyes 28. The draw-up nut 29 is then engaged with the threaded end 31 of the sleeve 25 and rotated until the latter has been moved along the tubular arm 18 a sufficient distance to tighten the engagement of the arms 26 with the eyes 28. The fitting as a whole is thereby rendered rigid with the cover plate 24 and the latter takes the strain of the pendent fitting 23 as well as of the guide arm 18.

While the invention is shown applied to a particular type of plug in common use, it is obviously equally applicable to attachment plugs of various other constructions, and I do not limit my invention to the particular embodiment shown. While a pair of supporting arms 26 is preferred, the number may be varied to suit the needs of particular installation and various changes in the details of the draw-up mechanism will readily suggest themselves.

I claim as my invention:—

1. An attachment plug fitting comprising an attachment plug, a guide arm rigid with the outer end of the plug and serving to support the leading-in wires for the latter, and a bracket device on said guide arm, said bracket device comprising a pivoted arm having at its free end means to engage a supporting element at the plug receptacle, together with draw-up means for said bracket device operative after said engagement has been effected.

2. An attachment plug fitting comprising an attachment plug, a guide arm rigid with the outer end of the plug and serving to support the leading-in wires for the latter, and a bracket device on said guide arm, said bracket device comprising a sleeve slidably mounted on said guide arm and an arm pivoted on said sleeve and adapted at its free end to engage a supporting element at the plug receptacle, together with a draw-up device for displacing said sleeve after said engagement has been effected.

3. An attachment plug fitting comprising an attachment plug, a guide arm rigid with the outer end of the plug and serving to support the leading-in wires for the latter, and a bracket device on said guide arm, said bracket device comprising a threaded sleeve slidably mounted on said guide arm, means on said sleeve to engage a rigid support at the plug receptacle and a draw-up nut on the guide arm adapted to engage the threaded portion of the bracket sleeve and displace the same, for the purpose specified.

4. An attachment plug fitting comprising an attachment plug, a guide arm rigid with the outer end of the plug and serving to support the leading-in wires for the latter, and a bracket device on said guide arm, said bracket device comprising a threaded sleeve slidably mounted on said guide arm, means on said sleeve to engage a rigid support at the plug receptacle and a draw-up nut on the guide arm adapted to engage the threaded portion of the bracket sleeve and displace the same, together with means to prevent the rotation of said sleeve during the operation of the draw-up nut.

5. A fitting of the type described comprising an attachment plug internally recessed to afford a chamber of non-circular contour at least in part and adapted to receive strain relief means, in combination with a rigid tubular wire guide arm having a threaded end opening into said chamber and extending outwardly from the outer end of the plug, in combination with a nut seated in the non-circular portion of said chamber and held against rotation by the walls thereof, said nut engaging the threaded end of the guide arm to hold the same against withdrawal.

6. In a fitting of the type described, an attachment plug having a rigid wire guide arm extending outwardly therefrom, a supporting bracket mounted thereon and having a pivoted hook, in combination with a receptacle cover plate having rigid therewith an eye adapted to receive said hook, substantially as described.

7. In a fitting of the type described, an attachment plug having a rigid wire guide arm extending outwardly therefrom, a supporting bracket mounted thereon and having on opposite sides a pair of hooks, in combination with a receptacle cover plate having adjacent its opposite ends a pair of eyes to receive said hooks.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses.

GILBERT W. GOODRIDGE.

Witnesses:
H. M. WICHERT,
H. W. BADEAU.