W. H. VIBBER.

BOX CONNECTOR FOR ELECTRIC INSTALLATION.

APPLICATION FILED JAN. 15, 1914.

1,134,565. Patented Apr. 6, 1915.

Fig. 1.

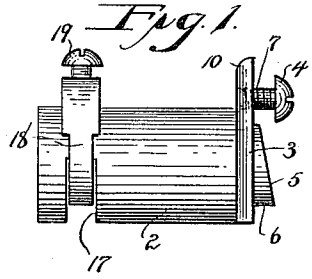


Fig. 2.

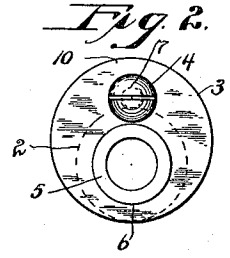


Fig. 4.

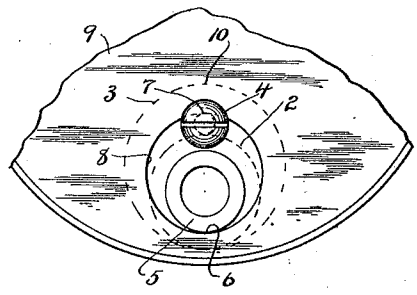


Fig. 3.

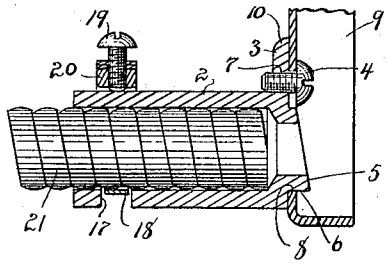


Fig. 6.

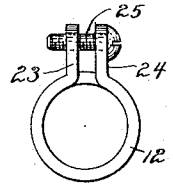
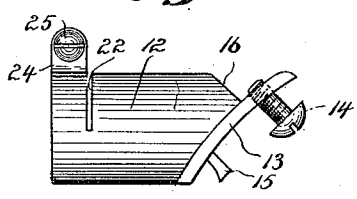


Fig. 5.



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UNITED STATES PATENT OFFICE.

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BOX-CONNECTOR FOR ELECTRIC INSTALLATION.

1,134,565. Specification of Letters Patent. Patented Apr. 6, 1915.

Application filed January 15, 1914. Serial No. 812,220.

To all whom it may concern:

Be it known that I, WHEELER H. VIBBER, a citizen of the United States, residing at New London, in the county of New London and State of Connecticut, have invented a new and useful Improvement in Box-Connectors for Electric Installation; and I do hereby declare the following, when taken in connection with the accompanying drawings and the characters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this application, and represent, in—

Figure 1 a view in side elevation of a box-connector for electric installation, constructed in accordance with my invention. Fig. 2 a view thereof in end elevation, looking toward its coupling end. Fig. 3 a broken view thereof in longitudinal section, showing its application to an outlet box. Fig. 4 a broken view of the outlet box in inside elevation showing my improved box-connector coupled thereto. Fig. 5 a detached view in side elevation of one of the modified forms which my improved box-connector may assume. Fig. 6 a view of the outer end thereof.

My invention relates to an improved box-connector for use in electric installation, the object being to provide a simple, durable and effective box-connector constructed with particular reference to ease of application to the box.

With these ends in view, my invention consists in a box-connector for use in electric installation, having certain details of construction as will be hereinafter described and pointed out in the claims.

In carrying out my invention as herein shown, I employ what, for want of a better term, I shall call a bushing 2 formed at its inner or coupling end with an eccentric circular bearing-flange 3 carrying a coupling-screw 4 extending from rear to front and coacting with an abutment consisting, as shown, of a concentric beveled shoulder 5 pitched directly toward the screw 4 so as to clear the head of the screw when the same is turned down into its coupling position as shown in Fig. 3. The said abutment shoulder 5 and screw 4 are respectively located on opposite sides of the opening in the inner or coupling-end of the bushing and proportioned and positioned so that the distance between the abutment point 6 of the shoulder and the outer face 7 of the shank of the screw is a trifle less than the diameter of the holes in standard boxes. Thus the distance between the points 6 and 7 is a little less than the diameter of the hole 8 in the outlet-box 9. The flange 3 because of its eccentric position forms a fulcrum point 10 which assists in preventing the flange as a whole, from rocking on the box.

To couple my improved box-connector with an outlet-box, whatever the character of the same may be, the screw is reversed into its clearance position after which the box-connector is tilted with respect to the plane of the box, and the screw 4 and abutment shoulder 5 maneuvered, so to speak, into the opening 8. Then when the bearing-flange 3 has been brought to a bearing upon the outside of the box, the screw 4 is turned home as shown in Fig. 3, whereby the box-connector is solidly coupled with the box. In turning the screw home it tends to jam the abutment at the point 6 against the edge of the hole 8 at a point diametrically opposite the screw.

The flange 3 carrying the screw 4 may be located at any desired angle with respect to the axis of the bushing. Thus, in the modified form shown in Figs. 5 and 6, the flange 13 is located at an angle of 45° with respect to the axis of the bushing 12, the said flange being furnished with a coupling screw 14 and the bushing with an abutment lug 15 to which some "rake" is given to increase its grip upon the edge of the hole in the box. In this modified form of my device, the bushing 10 is cut away as at 16 to adapt it to be more readily maneuvered into the hole in the box.

As shown in Figs. 1 to 4 inclusive, the outer or clamping end of the bushing is formed with a transverse slot 17 receiving a binding-strap 18 of a clamp the ends of which are perforated for the reception of a clamping-screw 19 carrying a nut 20, whereby the strap 18 is bound upon the armor 21 which incloses the wires which are not shown. It will be observed by reference to Fig. 3 that the central passage of the bushing is reduced in diameter at its inner end and that the armor 21 does not pass through the bushing but stops therein, being entered thereinto and secured in place by a clamp applied to the outer or clamping-end of the

bushing, whereby the armor is firmly attached to the bushing and through the medium of the bushing to the outlet-box 9. This is true whether the armor is made of metal as shown in Fig. 3, or consists of a fibrous envelop such as a woven tube of any character.

In the construction shown in Figs. 5 and 6, the outer end of the box-connector is formed with a slot 22 resulting in the production of two integral clamping arms 23 and 24 carrying a binding-screw 25.

I claim:—

1. A box-connector for use in electric installation, consisting of a bushing having its inner or coupling-end provided with an abutment and with a lateral flange carrying a coupling-screw acting in opposition to the said abutment, the said abutment and screw being respectively located on opposite sides of the opening in the inner or coupling-end of the bushing and proportioned in their separation to the size of the hole or holes in the outlet box and the outer or clamping-end of the bushing being provided with a clamp for gripping the protecting envelop which is entered into, but does not itself pass through the bushing which serves to connect the said envelop to the outlet box while the conductor passes through the bushing.

2. A box-connector for use in electric installation, consisting of a bushing having its inner or coupling-end provided with a lateral flange carrying a coupling-screw and having an annular abutment projecting beyond the face of the flange and beveled for the clearance of the head of the screw, the active point of the abutment and the shank of the screw being respectively located on opposite sides of the opening in the inner or coupling-end of the bushing and proportioned in their separation to the size of the hole or holes in the outlet box.

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

WHEELER H. VIBBER.

Witnesses:
GEO. E. DOUTON,
EDNA R. MAYNARD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."