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T. BRIEGEL

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ELECTRICAL SLIP-IN CONNECTOR.

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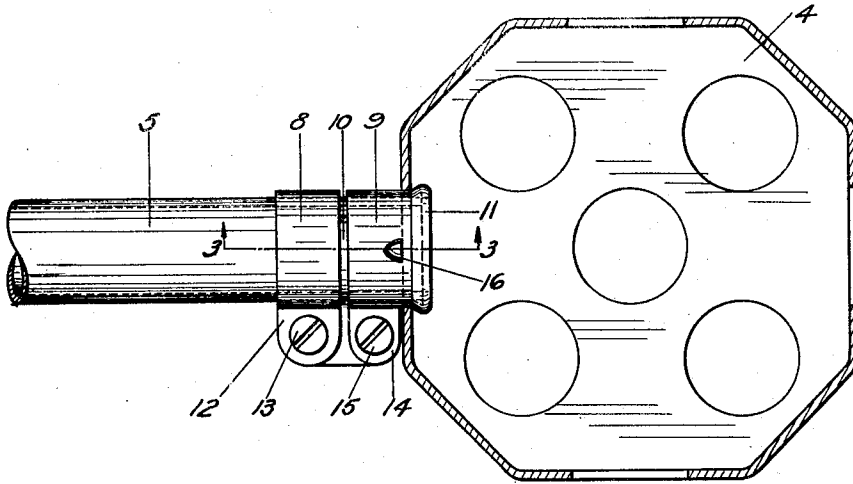


FIG-1

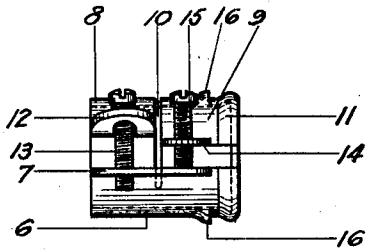


FIG-2

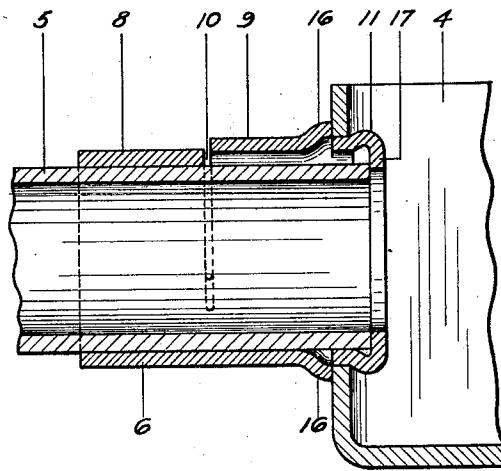


FIG-3

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ELECTRICAL SLIP-IN CONNECTER

Application filed December 3, 1928. Serial No. 323,306.

My invention has reference to a slip-in connector for electrical devices, and has for its purpose to increase the efficiency of such connecting devices and the ease of attachment thereof. The connectors referred to are of the type which are employed for uniting the end of a tube or conduit for electrical wires with a box or casing into which the wires lead, and which has generally been accomplished by means of a collar or short section of pipe attached to the conduit on the outside of the box and having a threaded end extending through an opening in the box, and provided on said end with a nut and lock-nut. The positioning of these on the inside of a box is not an easy operation, and calls for the use of pliers or a wrench, or both.

The chief purpose of the present invention is to provide a coupling device which can be manipulated entirely from the outside of the box, and with the help of a small screw-driver. A rigid connection with the box is formed, and the fastening parts are self-locking, so that they can not be accidentally displaced.

Another feature of the invention consists in the provision of a stop for the end of the conduit, to prevent the same from protruding into the box.

If the occasion requires, the connector can be quickly disconnected from the box in which it is held, or from the end of the tubing.

The above-named, and other features and advantages of the invention will more fully appear from the following specification, reference being had to the accompanying drawings, in which:

Fig. 1 is a plan view of the invention, as it appears when in use.

Fig. 2 is a front view thereof, detached.

Fig. 3 is a longitudinal section on the line 3—3 of Fig. 1.

The reference number 4 indicates a casing, or "knock-out box", such as are used for enclosing switches or other electrical devices, and which is or may be provided with openings to receive the end of a tube or conduit for electric wires, such as is shown at 5. These tubes are usually of a flexible character, and

are frequently fitted with the wiring, as in the case of such devices which are known to the trade as "B. X." and "Romex". The connector consists of a body 6, of semi-tubular form, provided at its edge with an outstanding flange 7. Projected from the part 6 are semi-circular sections 8 and 9, separated by a slit 10, extending to the body portion 6. The outer end of the section 9 is provided with a rolled portion 11, forming a slight enlargement of the end of the section. The edge of the section 8 is formed into a lip 12, perforated to permit the free passage of a screw 13, the end of which is engaged by a threaded opening in the flange 7. The edge of the section 9 is similarly formed into a lip 14, having a threaded opening to receive a screw 15, the end of which bears against the flange 7.

The connector is preferably formed of malleable iron or steel, and when ready for use the part having the rolled end 11 is contracted until it will readily enter an opening in the wall of the box 4. Said part is then expanded by turning the screw 15 in a direction to separate the lip 14 and flange 7, until the rolled end 11 engages the inner face of the box 4, as shown in Figs. 1 and 3. The end of the tube 5 is then inserted in the connector, and the ring 9 caused to engage such tube tightly by turning the screw 13 in a direction to draw the parts 7 and 12 toward each other. The end of the tube is then held tightly from release. Stops 16 are provided by striking portions of the section 9 outwardly, which stops limit the movement of the connector into the opening in the box. It will be observed that the expansion of the end 9 and contraction of the end 8 can be accomplished with the use of a screw-driver, as hereinbefore mentioned, and at points convenient to reach with such screw-driver. When the part 9 is expanded the tension upon the screw 15 will be such as to act as a nut-lock, and prevent the accidental turning thereof. The same is true of the parts holding the screw 13, when the same are clamped upon the conduit.

In Fig. 3 the rolled end 11 of the connector is shown turned inwardly into a flange 17,

against which the end of the conduit 5 abuts, preventing further entrance of the conduit into the box 4.

It will be evident that other forms of de-  
5 tents can be used on the end of the part 9, in  
place of the rolled edge 11, and other changes  
can be made in the form and arrangement of  
the invention without departing from the  
spirit thereof. In case it is desired to discon-  
10 nect the conduit from the box, this can be  
quickly done by turning the screw 15 out-  
wardly, and reducing the diameter of the sec-  
tion 9 until the end 11 can be withdrawn  
through the opening in the box. By loosen-  
15 ing the screw 13 the connector can be released  
from the conduit.

What I claim, and desire to secure by Let-  
ters Patent, is:

An electrical connector, comprising a clamp  
20 section and means for clamping the same on  
an electrical conduit, an expansible section  
integral with said clamp section and pro-  
vided at its outer end with an enlarged por-  
tion turned inwardly to form a stop for the  
25 end of such conduit, and means for expand-  
ing said expansible section after being po-  
sitioned in the opening in a box.

In testimony whereof I affix my signature.  
THEODORE BRIEGEL.

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