

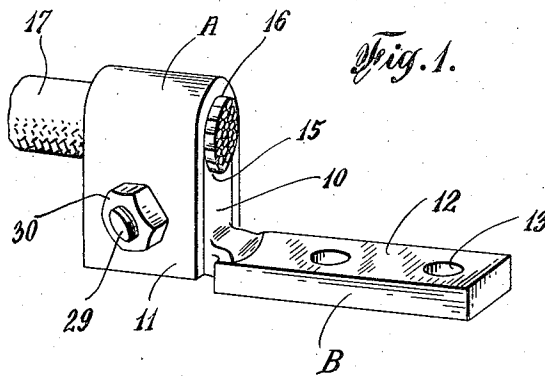
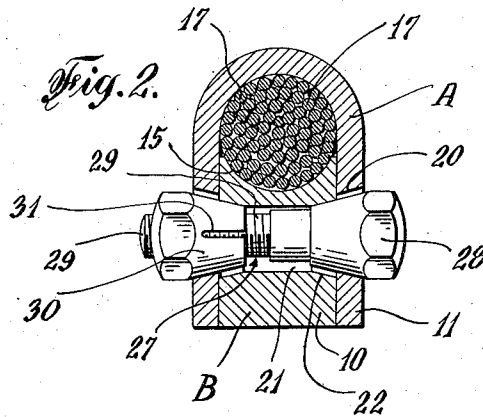
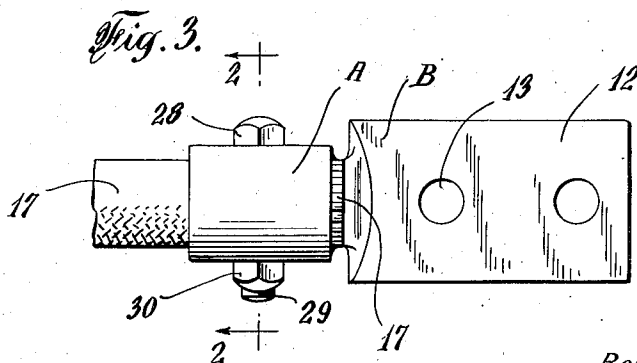
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2,163,677

CONNECTOR

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2,163,677

CONNECTOR

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1 Claim. (Cl. 173-269)

This invention relates to connecting means and particularly to devices for forming a firm electrical connection between cables or other conductors.

In my co-pending application, Serial No. 668,487, now Patent No. 2,093,372, granted September 7, 1937, of which this is a division, I disclose a form of connector of this character wherein a body member and a yoke member are adapted to be drawn into clamping engagement with the conductor by means of a tapered bolt or nut which engage tapered openings in the yoke and body member. In accordance with the present invention, provision is made whereby one of the members, such as the body member, is formed as a lug to which a conductor may be bolted or riveted or attached in any appropriate manner.

Among the objects and advantages of my invention are, to provide a device of this character which is composed of few parts all of which are simple in construction and economical to manufacture and also to provide a device of this character which is strong and durable in use and which may be readily applied to and removed from a conductor.

Other objects of my invention will appear from the following description taken in connection with the accompanying drawing, wherein:

Figure 1 is a perspective view of a connector embodying one form of my invention;

Figure 2 is a sectional view taken on the line 2-2 of Figure 1; and

Figure 3 is a top plan view of the connector.

Referring to the drawing, A represents a yoke member adapted to embrace a body or lug member B. The body member B, as shown in Figure 1, is substantially L-shaped in cross section and comprises an upright portion 10 adapted to be received between the sides 11 of the yoke member A and extended portion 12, formed with openings 13 for the reception of bolts or other means for attachment thereto of a conducting bar such as a busbar. It will be seen from the drawing that the lug portion 12 is wider than the upright portion 10 and where the metal of the lug is narrowed to join the upright portion, it is thickened outside the yoke to provide the proper current carrying capacity. The body member 10 is formed with a recess or jaw 15 approximately semi-cylindrical in section, between which end the corresponding recess or jaw 16, formed inside the bend of the yoke member A, the conductor 17 is clamped. The sides 11 of the yoke member A are each formed with a tapered opening 20, these openings being in

alignment, and the body portion B is formed with an opening 21 therethrough, the ends of which are tapered inwardly at 22.

Adapted to extend through the openings 20 and 21 is a bolt 27 having a tapered head 28 and a straight screw-threaded shank 29 adapted to be engaged by a tapered nut 30. The nut is slotted from its inner end as shown at 31 in Figure 2.

To apply the device to the conductor, the yoke is placed over the conductor, the portion 10 of the body member B inserted between the sides of the yoke, the bolt 27 inserted through the side opening 20 and central opening 21 and the nut 30 is applied and tightened. The tapered faces of the nut and bolt head engage respectively one side of the openings 21 and the opposite side of the opening 20, as shown in Figure 2 and tightening of the bolt draws the jaws 15 and 16 toward one another and clamp the conductor between the jaw 16 of the yoke and the opposite jaw 15 of the body member, the jaws clamping tightly into the metal of the conductor.

It will be noted that in clamping the conductor, the clamping pressure is exerted against opposite sides of the nut and the stress produced by this pressure is shearing rather than bending. It will also be noted from Figure 2, which shows the parts in clamped position, that the shank of the bolt is free in the opening 21 and the shank is not subject to any bending stress. Due to the split form of the nut 30 and its angle of taper, the friction of the nut against the walls of the openings 20 and 21 is greater than the friction of the nut on the screw threads of the bolt. The result of this is that the bolt may be tightened or loosened by application of a wrench to the bolt head without the necessity of holding the nut or vice versa.

The slidable yokes will usually be made of brass or some other hard alloy of copper, the bolt and nut of steel or high strength non-ferrous metal and the body portion, which forms a direct connection between the conductors, of copper or copper alloy.

It will be seen that the parts of the device are extremely simple. The yoke is of uniform cross section and the parts may advantageously be made by extrusion, although, if desired, they may be cast and machined to dimension.

While my invention has certain distinctive advantages as applied to the coupling together of electrical conductors, it will be clear that features of my invention may be applied to the cou-

pling of pipes or structural units, such as rods, bars and the like.

Having now described my invention, what I claim and desire to secure by Letters Patent is:

5 The combination with a pair of members slidable with respect to one another, one of said members being formed as a yoke of flat metal and the other as an L shaped body member comprising an upright portion of rectangular section and substantially the width of the yoke
10 members and a wide lug extension, the material

of the extension outside said yoke being narrowed and thickened as it joins the upright portion, said yoke having aligned inwardly tapered openings at opposite sides thereof and said upright portion having an inwardly tapering opening therethrough and screw wedge means extending through said openings and adapted to move the body and yoke member relative to one another to clamp a conductor between them. 5

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