April 17, 1951 J. F. CONRAD 2,549,665

ELECTRIC CABLE CONNECTOR OF THE CLAMPING TYPE

Filed Dec. 1, 1948

Fig. 1.

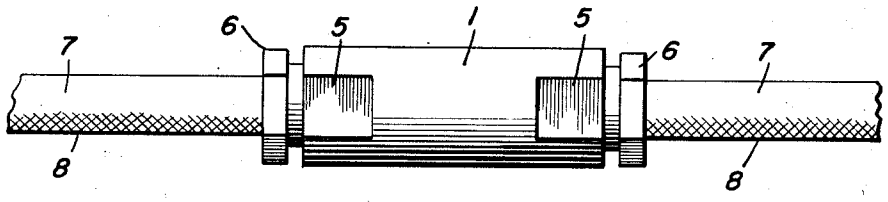



Fig. 2.

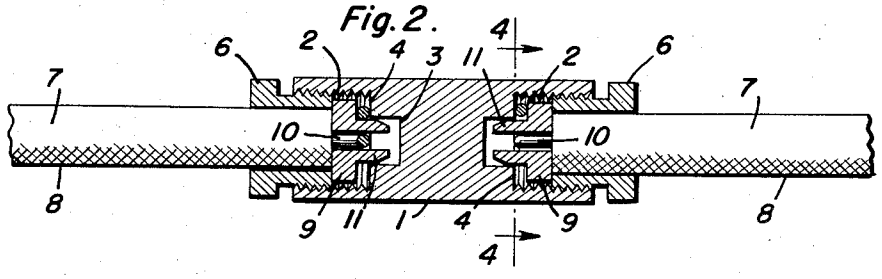



Fig. 3.

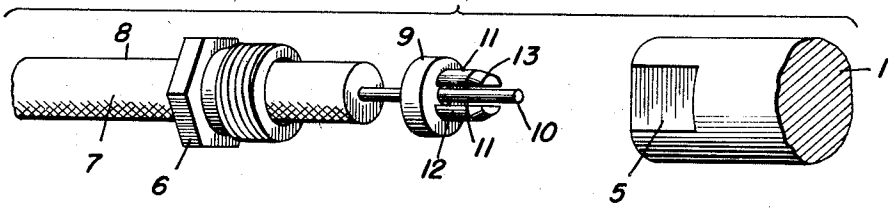
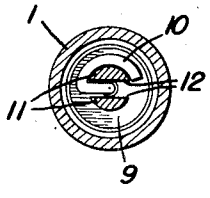



Fig. 4.




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## ELECTRIC CABLE CONNECTOR OF THE CLAMPING TYPE

John F. Conrad, Ebensburg, Pa.

Application December 1, 1948, Serial No. 62,898

2 Claims. (Cl. 174—84)

1

My invention relates to improvements in electric cable connectors for the ends of electric cables, and the like.

The primary object of my invention is to provide a mechanical connector for use in a cable line to clamp cable ends tightly inside the connector in spaced apart relation, either single or multiple strand cables, so as to make a tight direct connection between the cable ends reducing to a minimum resistance to flow of electric current from one cable end to the other.

Another object is to provide a connector of the type and for the purpose indicated which is adapted for clampingly connecting in spaced apart relation the ends of cables of different sizes, within given limits, without altering the size of the parts of the connector and without twisting the cable ends during connection of the same.

Still another object is to provide an electric connector for achieving the above objectives which is simple in construction and designed for manufacture without the use of special jigs, or fixtures, thereby reducing the cost of manufacture of the connector.

Other and subordinate objects, within the purview of my invention, together with the precise nature of my improvements will become readily apparent when the succeeding description and claims are read with reference to the drawing accompanying and forming part of this specification.

In said drawing:

Figure 1 is a fragmentary view in side elevation of my improved electric cable connector in the preferred embodiment thereof;

Figure 2 is a view in longitudinal section;

Figure 3 is a fragmentary composite view of parts of the connector disassembled;

Figure 4 is a view in transverse section taken on the line 4—4 of Figure 2.

Referring to the drawing by numerals, my electric cable connector, as shown, comprises, as its basic component, a cylindrical socket member 1 of conductive material, preferably brass, provided with internally threaded end sockets 2 counterbored to provide axial, reduced diameter, bottom recesses 3 therein forming with said bottoms flat, annular clamping seats 4 around said recesses 3. Diametrically opposite end facets 5 on said socket member 1 provide wrench holds at opposite ends of said member.

A pair of gland nuts 6 of a suitable internal diameter for passing the sheaths 7 of cable ends 8 therethrough are provided for turning into the sockets 2.

2

A pair of annular, flat faced, clamping members 9, of washer form, are slidably interposed, in the sockets 2 between the gland nuts 6 and the annular seats 4 for clamping coaction, at one side thereof, with said seats 4, under turning of said nuts 6 into the sockets 2, whereby to clamp between said members 9 and the seats 4 the projecting wire strands 10 of the cable ends 8, or strands of said cable, if the latter be of the multiple wire strand type.

The annular, flat faced, clamping members 9 are each formed on the clamping side thereof with a pair of outstanding posts 11 at diametrically opposite sides of the bore of the member and which are spaced apart to fit into the recesses 3 and are preferably segmental in cross section with flat side faces 12 opposed in the pairs. The posts 11 are preferably beveled at the outer ends thereof, as at 13, to facilitate entering the same into the recesses 3. The pairs of posts 11 provide anchoring means, in the form of split cores, on said members 9 about which the wire strands 10 may be wound, either partly as shown, or otherwise, with the strands 10 extending out from between the pairs of posts 11 laterally, as shown in Figure 4. As will be noted, the pairs of posts 11 fit in the recesses 3 so that when the strands 10 are wound thereon, as described, and when the gland nuts 6 are turned tight in the sockets 2, the wound terminals of the strands 10 will be clamped tight and flat between the seats 4 and said members 9 to make a good, secure, connection between the cable ends 8.

In applying the described cable connector, the gland nuts 6 are sleeved onto the sheaths 7, as shown for instance in Figure 3, and the clamping members 9 sleeved onto the projecting wire strands 10, also as shown in said figure, which are then wound on the pairs of posts 11, as described. With the socket member 1 held stationary, by a wrench, or the like, the clamping members 9 are inserted into the sockets 2 and the gland nuts 6 then turned tight in said sockets and along the cable sheaths 8. Thus, the cable ends 8 are not twisted by rotation thereof, nor the cable strands 10. The gland nuts 6, obviously, should be turned in opposite directions to that in which the cable strands 10 are wound on the pairs of posts 11 to prevent any tendency of said strands to become unwound by frictional engagement with said members 9 and the seats 4.

The foregoing will, it is believed, suffice to impart a clear understanding of my invention, without further explanation.

Manifestly, the invention, as described, is sus-

ceptible of modification, without departing from the inventive concept, and right is herein reserved to such modifications as fall within the scope of the appended claims.

Having described my invention, what is claimed as new is:

1. An electric connector for the wire strands of sheathed cable ends comprising an elongated socket member of conductive material provided with threaded end sockets, annular members in the bottoms of said sockets sleeved over said strands and having means thereon about which said strands are adapted to be wound between said bottoms and members, and gland nuts sleeved over said sheaths and threaded into said sockets with inner ends bearing against one side of said members, said members and the bottoms of said sockets clamping the wound strands therebetween, said means comprising split cores with parallel sides and out of which said strands are extended laterally for winding about the same, said sockets having bottom reduced recesses therein in which said cores fit.

2. An electric connector for the wire strands of sheathed cable ends comprising an elongated socket member of conductive material provided with threaded end sockets, annular members in the bottoms of said sockets sleeved over said strands and having means thereon about which said strands are adapted to be wound between said bottoms and members, and gland nuts sleeved over said sheaths and threaded into said sockets with inner ends bearing against one side of said members to clamp the wound strands between said bottoms and members, said means comprising split cores with parallel sides and out of which said strands are extended laterally for winding about the same, said sockets having bottom recesses therein in which said cores fit, said recesses forming with said bottoms annular bottom seats in the sockets against which the wound strands are clamped by said members.

JOHN F. CONRAD.




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