July 3, 1934. A. ALSAKER ET AL 1,964,803

DISTRIBUTION CONNECTER

Filed Aug. 16, 1929

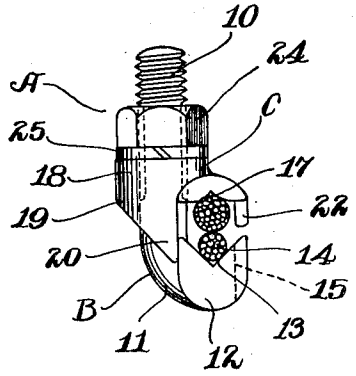


Fig. 1

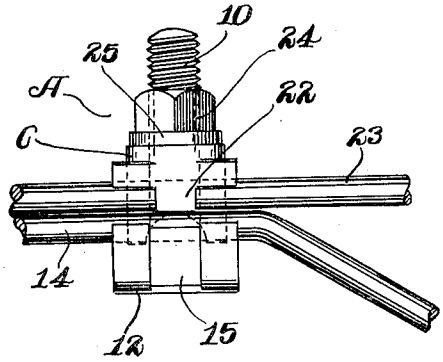


Fig. 2

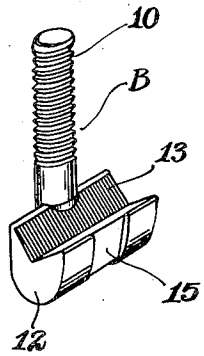


Fig. 3

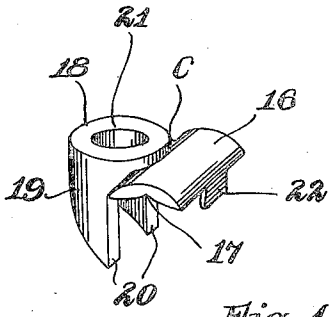


Fig. 4

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DISTRIBUTION CONNECTER

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2 Claims. (Cl. 173—263)

Our invention relates to a distribution connecter for electrical solderless connections between two or more electrical conductors. The simplicity of the connecter is a feature which provides a means of connecting several wires together at a low cost with a compact connecter having a structure which is adapted to bring two or more multi-sized conductors in intimate pressure contact with each other and thereby reduce the actual current carried by the device to a minimum.

It is also a feature of our invention that the conductor may be constructed of a low conductivity material and with high mechanical strength wherein a single nut may be employed to draw the parts together in completing the connection by the conductor. The compact structure of the conductor permits the same to be easily taped over when desired to insulate the same.

The connecter includes a J-shaped bolt structure having an engaging groove for connecting with the conductor together with the follower clamp portion which is grooved to engage with the conductor and which is formed with a back apron adapted to fit around the bolt and having projections to engage with the head of the J clamping bolt to prevent turning of the clamping plate member while a tongue is projected from the other side of the clamp plate member which fits in a groove in the J bolt head to guide the plate in its clamping relation with the J-bolt clamping head. The distribution connecter can be made of any suitable material, such as steel forging, bronze forgings or castings as may be desired, and its structural nature is such as to provide a strong clamp having small dimensions whereby electrical conductors may be securely connected together with strong pressure contact and thereby provide a good and substantial electrical connection between the parts.

Other features, details and objects of the invention will be more fully and clearly set forth throughout the specification and claims.

In the drawing forming part of this specification:

Figure 1 illustrates our distribution connecter in operative position and from the end thereof.

Figure 2 illustrates our distribution connecter from the front, showing its use in connecting electrical conductors together.

Figure 3 illustrates a perspective view of our J-bolt connecter.

Figure 4 illustrates a perspective of the clamping plate of our connecter removed from the bolt.

Our connecter A is formed with a J-bolt portion B, illustrated separately in Figure 3, and which is formed with the threaded bolt portion 10 having an arcuated formation 11 which connects into the clamping head 12 of the J-bolt B.

The head 12 of the bolt B is formed with a longitudinal V-shaped channel 13 so as to receive an electric cable or connecter, such as 14. The threaded bolt portion 10 is projected from the head 12 to one side of the channel 13, as illustrated in Figures 1 and 3, so that the channel 13 may be free to engage over a wire or electrical cable in making a connection. The blending of the bolt B into the head 12 by the arcuated formation 11 is important as it forms a J-shaped bolt B wherein the construction is strong and sturdy and yet where the lines of the same are blended together so as to form a particular type of connecter for purposes which will be more clearly hereinafter set forth. In the side of the channel head 12 opposite to the threaded bolt portion 10 we provide a recess or groove 15 which extends virtually at right angles to the channel 13.

We provide a follow clamping plate C for the connecter A which is formed with a clamping plate portion 16 having a V-shaped clamping groove 17. This plate C is formed with a flange portion projecting from one side which provide a collar-like portion 18 having an apron portion 19 which projects with beveled guide ends 20 which are adapted to project on either side of the bolt B forming guides to assist in holding the plate C with its clamping channel 17 in alinement with the clamping channel 13. The apron portion 19 also provides a means of preventing the clamping or follower plate C from cantilevering into the bolt by means of the apron and guide lug portion 20. The collar 18 is provided with the opening 21 through which the bolt B is adapted to freely pass.

Oppositely disposed to the collar 18 we provide a lug or tongue 22 which follows in line with the groove 15 in the head 12 and engages therein when the follower clamping plate C comes near the head 12 and also which forms a lug to hold the electrical cable such as 23 from slipping out of the groove 17 while it is being clamped to the cable 14 as illustrated in Figures 1 and 2.

The follower plate and clamping member C is drawn toward the clamping head 12 by the nut 24 which engages with the threaded portion 10 of the bolt B and by means of a lock washer 25 the nut 24 is held in place.

The connecter A is simple in structure and it will be noted that the parts are formed so as

to taper from the clamping portions 12 and 16 toward the bolt B so that in using this clamping device A for electrical connecters the parts are formed strong and durable and so that they can be drawn tightly over electrical cables by a single nut, yet they are so shaped as to be small and compact and have a smaller conductivity than if they were large and bulky in formation. Therefore, our connecter A is very desirable, it being of such a nature that it can be easily taped and the parts are held in alinement with each other. The longer lugs 20 on the apron 19 hold the clamping plate C in alinement with the head 12 of the J-bolt B and the short tongue 22 forms a shoulder to keep the electrical cable in the recess 17 and may also act as a guide when the parts of the clamp are brought more closely together. Our clamp and connecter A provides a means of connecting electrical cables such as 14 and 23 together without requiring soldering and yet holding them so firmly together as to make a good and firm connection through which electricity may be passed without material loss, thereby accomplishing a desirable result in an economical manner which may be used readily in connecting electrical cables.

In accordance with the patent statutes we have described the features and construction of our electrical distribution connecter and while we have endeavored to set forth certain pre-eminent features of the same and shown certain distinctive formations we desire to have it understood that the same are only suggestive of a means of carrying out the features and advantages of our connecter and these may be varied within the scope of the following claims.

We claim:

1. A connecter for electrical cables including, a clamping head, a longitudinal groove extending through said head, a groove formed in the front of said head at right angles to the longitudinal groove in said head, a bolt projecting from the side of said first named groove, a nut for engaging said bolt, a follower clamping plate having a longitudinal groove of a complemental nature to the groove in said clamping head, a tongue substantially at right angles to said plate on the side of said clamping plate adapted to engage in said front groove in said clamping head, and an apron and lug portion formed on the other side of said follower clamping plate adapted to extend about a portion of said bolt and to engage the back of said clamping head to prevent rotation of said follower clamping plate.

2. An electric cable connecter including, a channel shaped clamping head, a bolt projecting from one edge of the channel in said head and integrally connected therewith, a channel groove formed virtually at right angles to the clamping groove in said head in the opposite side thereof to said bolt, a clamping plate, an apron having a beveled edge to form lugs on either side thereof adapted to engage on either side of said bolt at the point of connection with said head to form a guide for said plate to prevent the same from turning, and a lug at right angles to said head on the opposite side of said clamping plate adapted to engage in said groove formed at right angles to the clamping groove.

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