H. W. CHENEY.

CABLE CONNECTOR.

APPLICATION FILED NOV. 30, 1906.

925,293. Patented June 15, 1909.

Fig. 1.

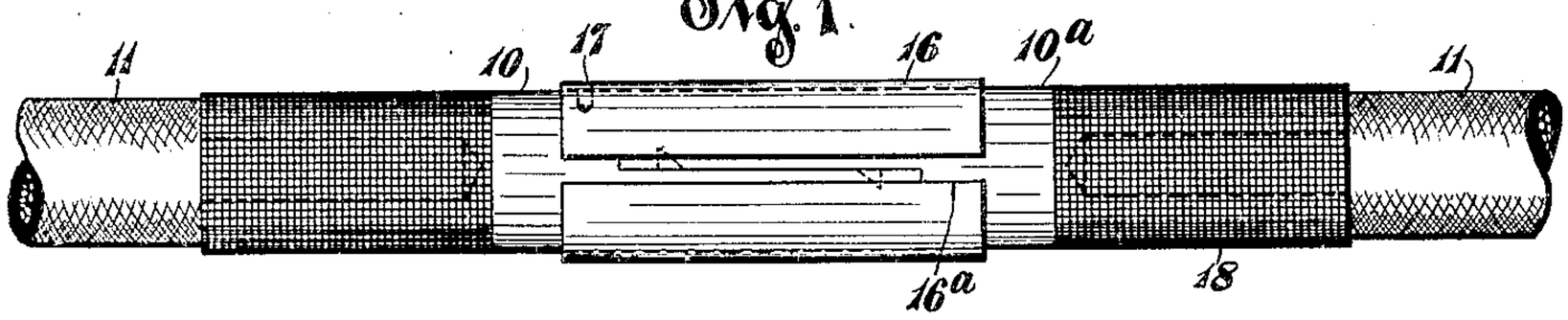


Fig. 2.

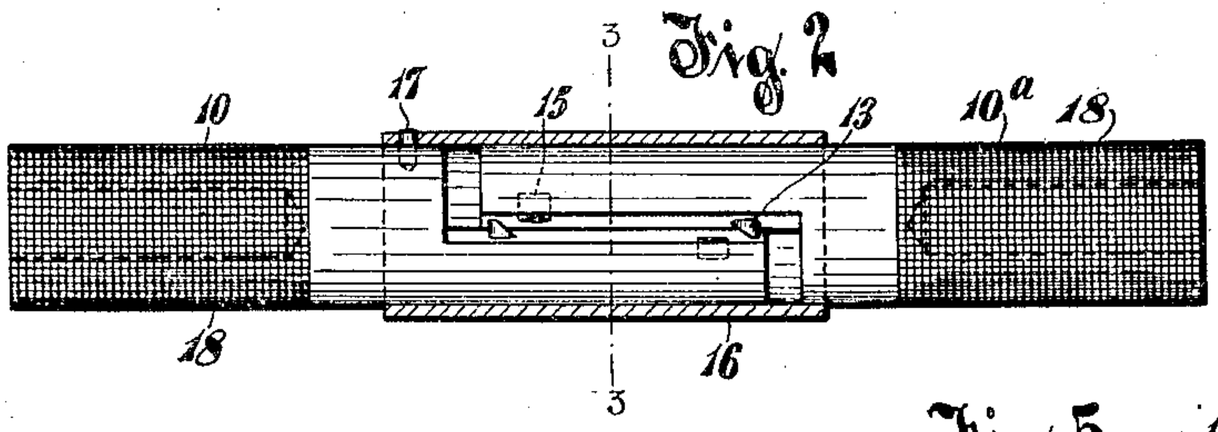


Fig. 3.

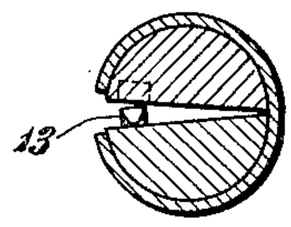


Fig. 5.

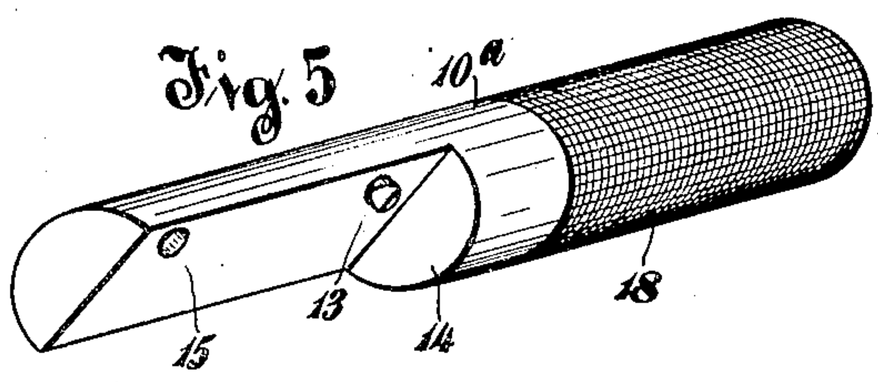


Fig. 4.

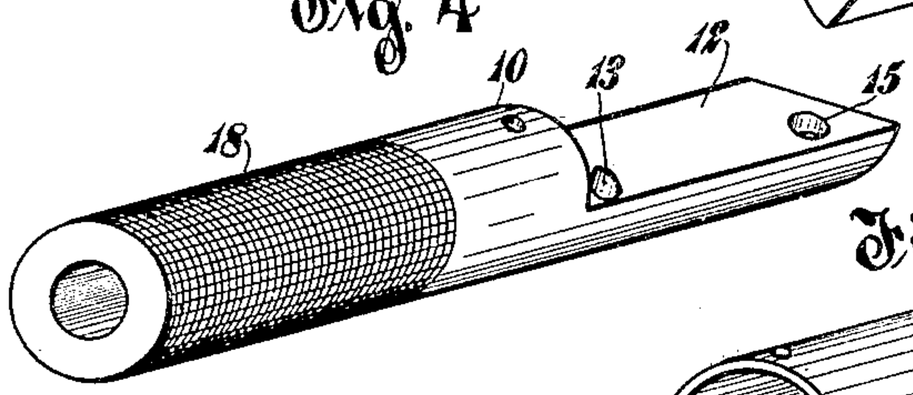


Fig. 6.

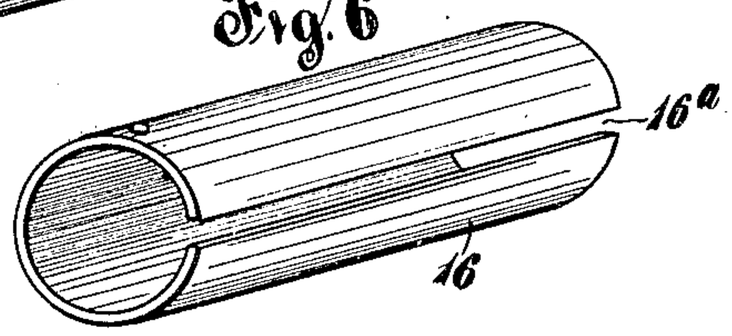
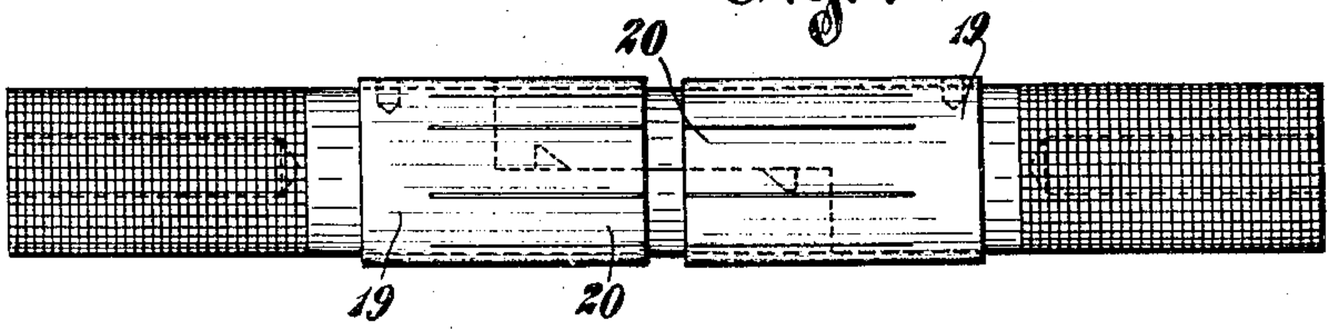


Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

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CABLE-CONNECTOR.

No. 925,293. Specification of Letters Patent. Patented June 15, 1909.

Application filed November 30, 1906. Serial No. 345,610.

To all whom it may concern:

Be it known that I, HERBERT W. CHENEY, citizen of the United States, residing at Norwood, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Cable-Connectors, of which the following is a full, clear, and exact specification.

My invention relates to connectors or couplers for electric conductors or cables.

One of the objects of my invention is to provide a connector or coupler consisting of few parts which can be easily and cheaply made.

A further object is to provide a connector or coupler consisting of parts which can be easily and quickly connected or disconnected.

With these ends in view I provide a connector comprising two terminal members having overlapping parts which are held together by a yieldable or spring clamping device.

Considering my improved connector more in detail, it consists chiefly of two terminal members having interfitting or overlapping parts which are held together by one or more dowel pins and a split, spring-clamping sleeve.

My invention further consists in certain novel details of construction and combinations and arrangements of parts described in the specification and set forth in the appended claims.

For a better understanding of my invention, reference is had to the accompanying drawings in which—

Figure 1 is an elevation of my improved connector in the best form now known by me; Fig. 2 is a partial sectional elevation of the same, the parts being partially closed; Fig. 3 is a section of the same along the line 3—3 of Fig. 2; Figs. 4, 5 and 6 are isometric views of the two terminal members and the clamping sleeve of the connector; and Fig. 7 is an elevation of a connector showing a slightly modified form of my invention.

Referring now to the figures of the drawing and first to Figs. 1 and 6, I have shown at 10 to 10[a] two terminal members of my improved connector or coupler. Each terminal member is made from a cylindrical piece of good conducting material such as copper, and is provided at one end with a socket to receive the end of a cable 11, and at the opposite end with a notched or recessed portion 12 adapted to engage the similarly notched end of the other terminal member. In forming the notched portions the terminals are preferably cut away to the center so as to form semi-cylindrical portions, and are cut back a sufficient amount to provide ample contact surfaces. As is shown the notched portion of each terminal member is provided with a dowel pin 13, which extends outward a short distance from the flat contact surface and in this case is adjacent the shoulder 14, and with an opening or socket 15 to receive the dowel pin 13 of the other terminal member, the opening 15 being near the outer end of the terminal member and in line with the pin 13. As is shown the dowel pin 13 and the opening 15 are at one side of the center line of the terminal member. In this case each dowel pin is beveled, the beveled portion facing the outer end of the terminal member. The purpose of the bevel will appear later. The terminal members so far described are exact duplicates of each other.

At 16 is shown a yieldable clamping device, in this case a split, spring sleeve, for pressing the terminal members tightly together. The sleeve is preferably secured to one of the terminal members, in this case to terminal member 10, by some means such as a pin 17. As is shown the split or open portion 16[a] of the sleeve is opposite the edge of the flat contact surface of the terminal member adjacent the pin 13 and socket 15.

To connect the parts of the connector, the semi-cylindrical part of terminal member 10[a] is first inserted within the sleeve with the two flat contact faces in engagement, and two terminal members are then slid together longitudinally of the sleeve. When the outer ends of the terminal members reach the dowel pins 13, each terminal member rides up over the beveled surface of the pin of the opposite terminal member and when the ends of the terminal members reach the shoulders 14 the two terminal members snap together with the dowel-pin of each in the corresponding socket of the other. When the terminal members are moved up onto the beveled dowel-pins, the sleeve 16 is slightly spread or opened up. It is seen that the dowel-pins position the terminal members and prevent their being pulled apart, and that the clamping sleeve holds the terminal members

tightly together so that the resistance of the connector is practically negligible. The clamping sleeve is preferably made of good conducting material so as to carry part of the current passing from one terminal to the other. To disconnect the parts, the two terminal members are grasped and twisted in opposite directions so that they turn about the edge of the flat contact surfaces opposite the longitudinal split portion of the clamping sleeve (see Fig. 3) until the pins 13 are drawn out of the openings or sockets 15. As soon as the pins are free from the openings or sockets, the two terminal members can be pulled apart. To facilitate disconnecting the terminals the cylindrical portions thereof are preferably knurled as shown at 18.

It is seen that my improved connector is very simple in construction and that the terminal members can be quickly connected or disconnected. Also the parts are so constructed and tightly clamped together that the resistance of the connector is very small.

In Fig. 7 I have shown a slight modification of my invention. In this case I employ two sleeves 19, each of which is fastened to one of the terminal members. The sleeves are split at a number of places inward from one end so as to form a number of spring fingers 20. By thus splitting the sleeves they will yield a sufficient amount to permit the terminals to be connected and disconnected as with the split clamping sleeve first described. With this construction the two halves of the connector or coupler are exact duplicates or are interchangeable.

To insure the pressure of the clamping sleeve being exerted on the overlapping portions of the terminal members, the latter may be notched to a little less depth than shown in the drawings so that when the terminal members are together, the thickness of the overlapping portions measured at right angles to the flat contact surfaces will be greater than the diameter of the cylindrical portion. Also if desired instead of beveling the dowel pins to facilitate the connecting of the terminal members, the outer ends of the latter may be slightly inclined so that they will ride up over the dowel-pins when forced toward each other. It is not necessary that either the pins or terminals be inclined for this purpose, in which case it will be necessary to twist and spread the terminals as shown in Figs. 2 and 3 to permit the ends of the terminals to be moved past the pins.

I do not wish to be confined to the exact details shown but aim in my claims to cover all modifications which do not involve a departure from the spirit and scope of my invention.

What I claim as new and desire to secure by Letters Patent is:—

1. In a connector or coupler, a pair of overlapping terminal members, and a spring-clamping sleeve surrounding the overlapping portions and fixed relatively to one of the terminal members.

2. In a connector or coupler, a pair of overlapping terminal members, and a split or divided spring-clamping sleeve fastened to one of the members and surrounding the overlapping portions.

3. In a connector or coupler, a pair of interfitting metallic terminal members, and means for holding said members together comprising one or more dowel-pins and a spring-clamping sleeve fixed relatively to one of said members.

4. In a connector or coupler, a pair of overlapping terminal members, and means for holding said members in intimate contact comprising a plurality of dowel pins and a split spring-clamping sleeve, the latter being fastened to one of the members.

5. In a connector or coupler, a pair of interfitting metallic terminal members, a sleeve surrounding the interfitting portions of the terminal members, and means for preventing said terminal members from being pulled apart comprising a pin or projection on one member extending into a socket or opening of the other.

6. In a connector or coupler, the combination of a pair of metal terminals having the ends notched to fit each other, and a split spring ring fastened to one of said terminals and surrounding and pressing together the two ends of the respective terminals when they are together.

7. In a connector or coupler, a pair of interfitting metallic terminal members, and a spring clamping sleeve of conducting material surrounding the interfitting portions of the terminal members and engaging both of said members and holding them together.

8. In a connector or coupler, a pair of overlapping terminal members of conducting material, and a split sleeve of spring conducting material fastened to one of said members and surrounding and engaging the overlapping portions of one of said members.

In testimony whereof I affix my signature, in the presence of two witnesses.

HERBERT W. CHENEY.

Witnesses:

A. F. KWIS,

FRED J. KINSEY.