No. 852,148. PATENTED APR. 30, 1907.

J. S. TUCKER.

WIRE CONNECTOR.

APPLICATION FILED FEB. 13, 1905.

Fig. 1.

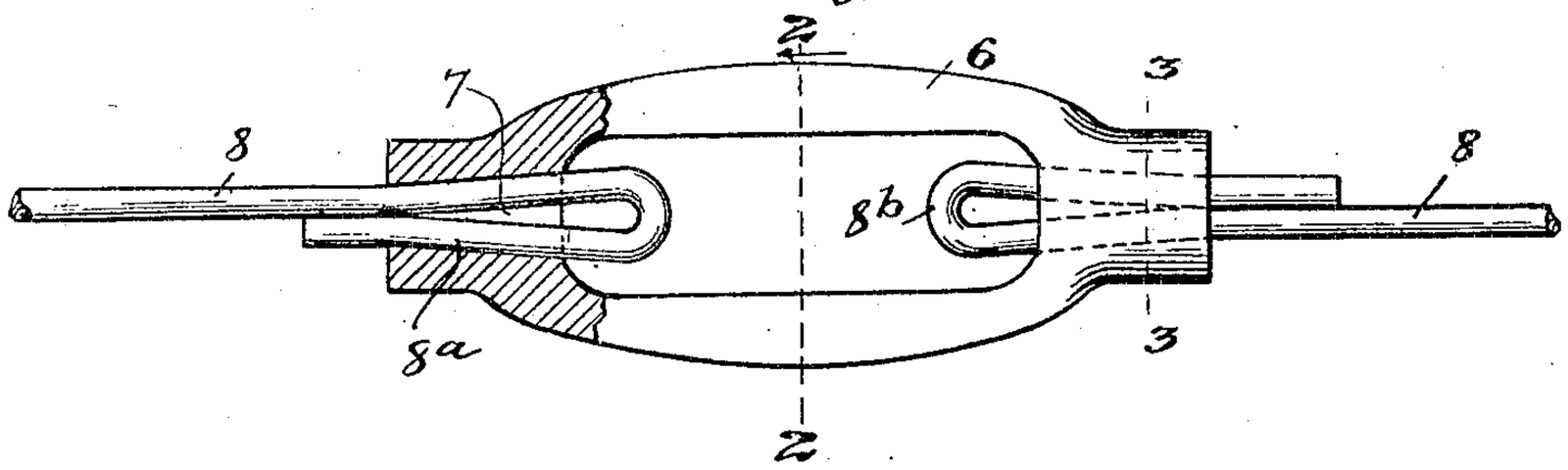


Fig. 2.

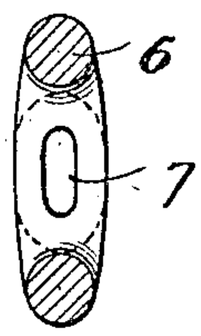


Fig. 3

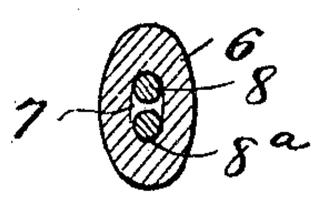


Fig. 4.

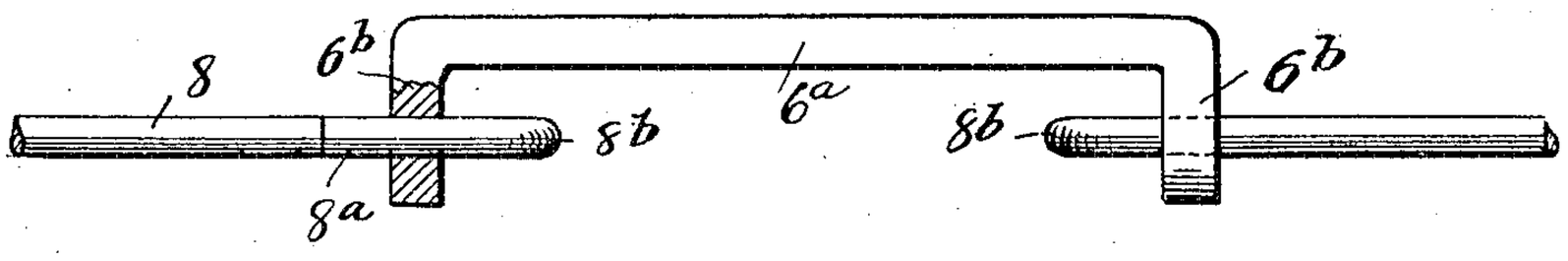
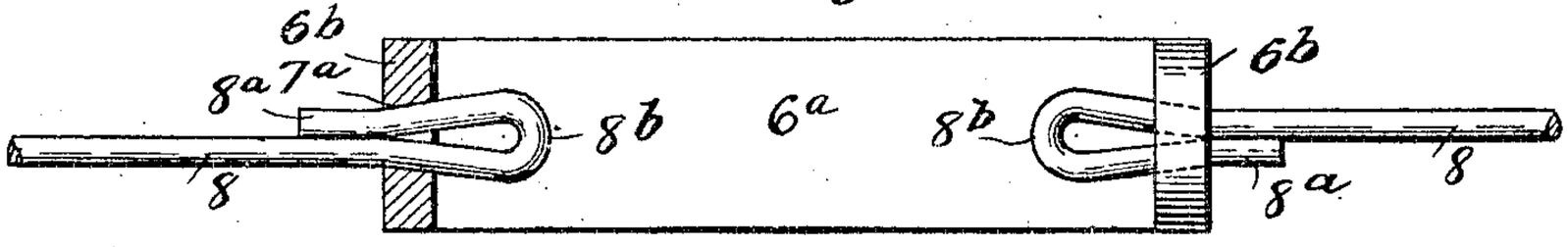


Fig. 5.



Witnesses
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WIRE-CONNECTOR.

No. 852,148. Specification of Letters Patent. Patented April 30, 1907.

Application filed February 13, 1905. Serial No. 245,551.

To all whom it may concern:

Be it known that I, JOSEPH S. TUCKER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Wire-Connectors, of which the following is a specification.

My invention relates to devices for connecting and uniting the meeting ends of wires, wire cables, and the like.

In the principal application thereof the invention is designed as a mechanical connecting device for use in connection with guy-wires, wire cables, and the like.

The main object of the invention is to provide a device wherein the meeting ends of one or more wires may be securely united in an expeditious manner and with a minimum manipulation of the wires themselves.

To this end the invention consists of a connector having the peculiarities of structure and mode of manipulation substantially as hereinafter described and pointed out in the claims.

Referring to the drawings,—Figure 1 is a side elevational view, partly broken away, illustrating the preferred form of my connector; Fig. 2 is a cross-sectional view on the line 2—2 of Fig. 1, the bent end of the wire being omitted; Fig. 3 is a cross-sectional view on the line 3—3 of Fig. 1; and Figs. 4 and 5 are, respectively, plan and elevational views of a slightly modified form of connecting link.

Referring to the drawing, 6 designates the principal element of the device, herein shown as a connection-piece or link having preferably the general oblong loop-shaped form of a turn-buckle, in the ends of which and longitudinally whereof are formed bores 7. These bores, as shown in Figs. 2 and 3, are preferably oblong or oval in cross-section and uniformly tapered from end to end, and have a transverse dimension throughout not less than twice the diameter of the wire so as to avoid offering any end thrust or resistance to the bent over end.

8 designates each of a pair of wires, the meeting ends of which are to be united by the link 6. To effect this union, the ends of the wires 8 are drawn inwardly through the longitudinal bores 7 of the link, and are then bent over and doubled back on themselves, the wires being then drawn outwardly, whereby the bent over portions 8^a are drawn into the bores 7 alongside the main longitudinal portions; but, on account of the formation of transversely enlarged wedge-shaped portions or heads 8^b at the acute bends of the wire, the latter cannot and will not pull through the bores 7, but will wedge tightly therein in such a manner that the greater the tensional strain, the more intimate will be the contact between the engaging surfaces of the wires and the link, and the more secure will be the bond between the wires.

In Figs. 4 and 5 I have shown a modified form of link, consisting of a strip or plate 6^a having projecting laterally of its ends lugs 6^b which contain bores 7^a, similar to the bores 7 and preferably in longitudinal alinement, adapted to co-operate with the bent-over portions 8^a and bends 8^b of the wires 8, in the manner already described. Of course, the particular form of the connecting link is immaterial, so long as it provides at longitudinally separated points thereof openings or bores of sufficient size to enable the meeting ends of the wires to be entered from the outer ends therethrough, bent back, and then retracted to carry the bent-back portions into the bores and wedge the enlarged portions formed at the bends therein.

From the foregoing it will be seen that the device is extremely simple and easy of application. No twisting together of the wires is required;—simply the bending back of the end portions (which may be effected by an ordinary pair of pliers) and their retraction into the apertures of the link, thus affording the double advantage of automatically providing such an enlarged head as will not and cannot pull through the hole and at the same time locking the bent-over end of the wire against any possibility of bending back.

While I have shown and described the connection-piece as engaging wire ends in the manner described at both its ends, it will be seen that the principle of the invention in its simplest form is complete in the engagement at one end, since the other end might be similarly or otherwise connected to the wire.

My invention is particularly adapted for connecting guy-wires and wires such, for instance, as those employed to support trolley wires from opposite sides of the street or where overlying curved portions of track. It is also evident that, by making the inter-

mediate link element of electrical conducting material, such as copper, the device constitutes a simple, cheap and convenient conducting connector for electrical conducting wires.

I claim:

1. The combination with a wire having its end portion bent over and doubled back on said wire, of a connection-piece having a tapered unobstructed bore extending therethrough and entirely surrounded by metal, the smaller end of said bore having a maximum diameter not exceeding twice the diameter of said wire, said bore receiving said wire and its bent-over end with the latter extending entirely through said bore, whereby a lateral compressive action is exerted upon said wire and its bent-over end under a pulling strain on said wire, substantially as described.

2. The combination with a pair of wires having the adjacent end portions thereof bent over and doubled back to form wedge-shaped terminals, of a connection-piece having formed in its opposite ends tapered unobstructed bores extending therethrough and entirely surrounded by metal, the outer ends of said bores having a maximum diameter not exceeding twice the diameter of said wire, said bores engaging said wedge-shaped terminals with said bent-over ends extending entirely therethrough, whereby said terminals are wedged tightly into said bores under a pulling strain on one or both of said wires, substantially as described.

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