

A. SCHMIDT.
WIRE CONNECTOR.

APPLICATION FILED JULY 20, 1907.

915,046.

Patented Mar. 9, 1909.

Fig. 1.

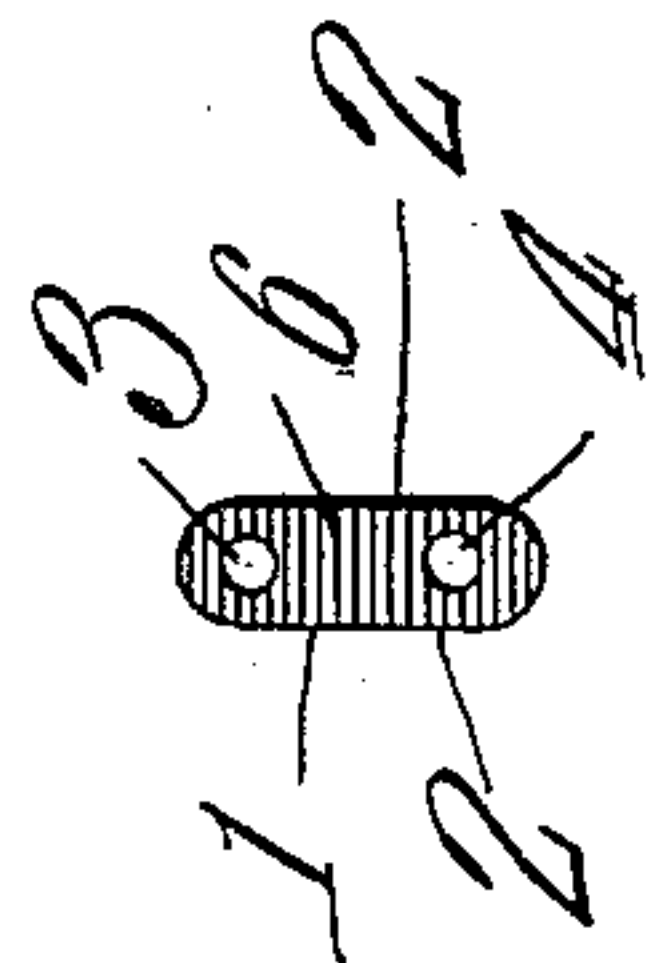
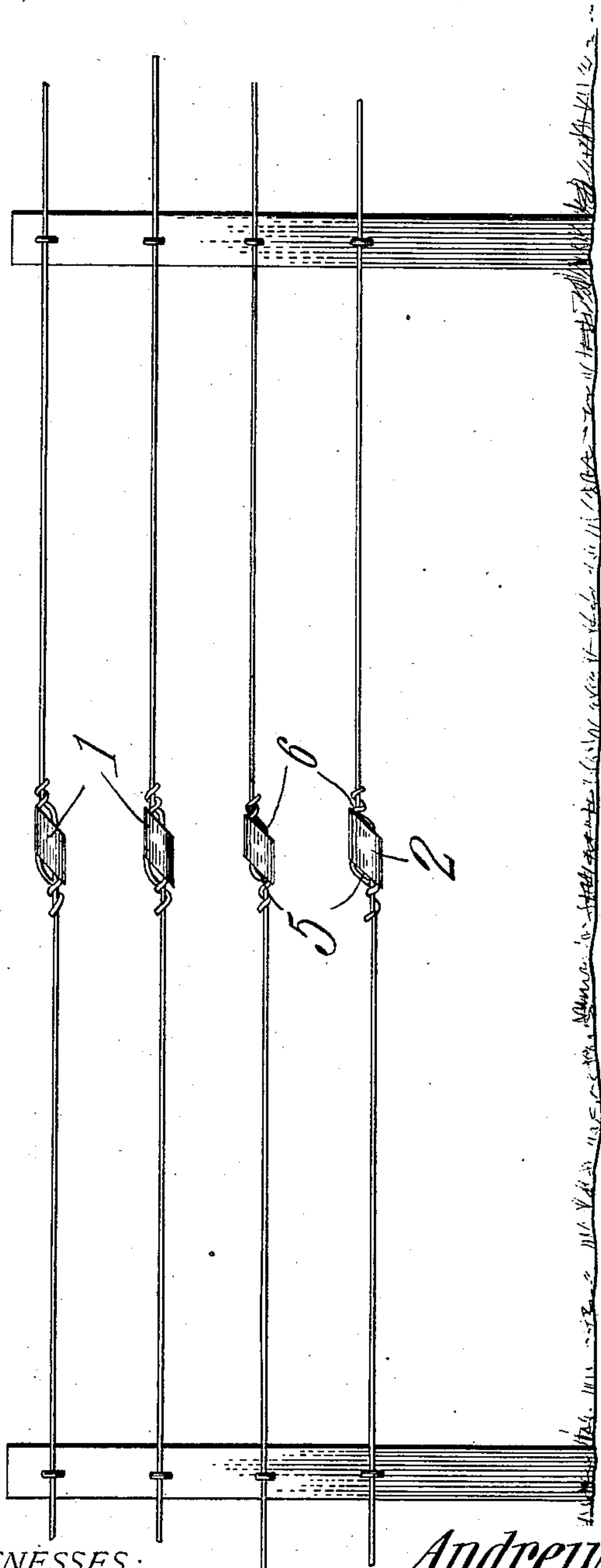


Fig. 3.

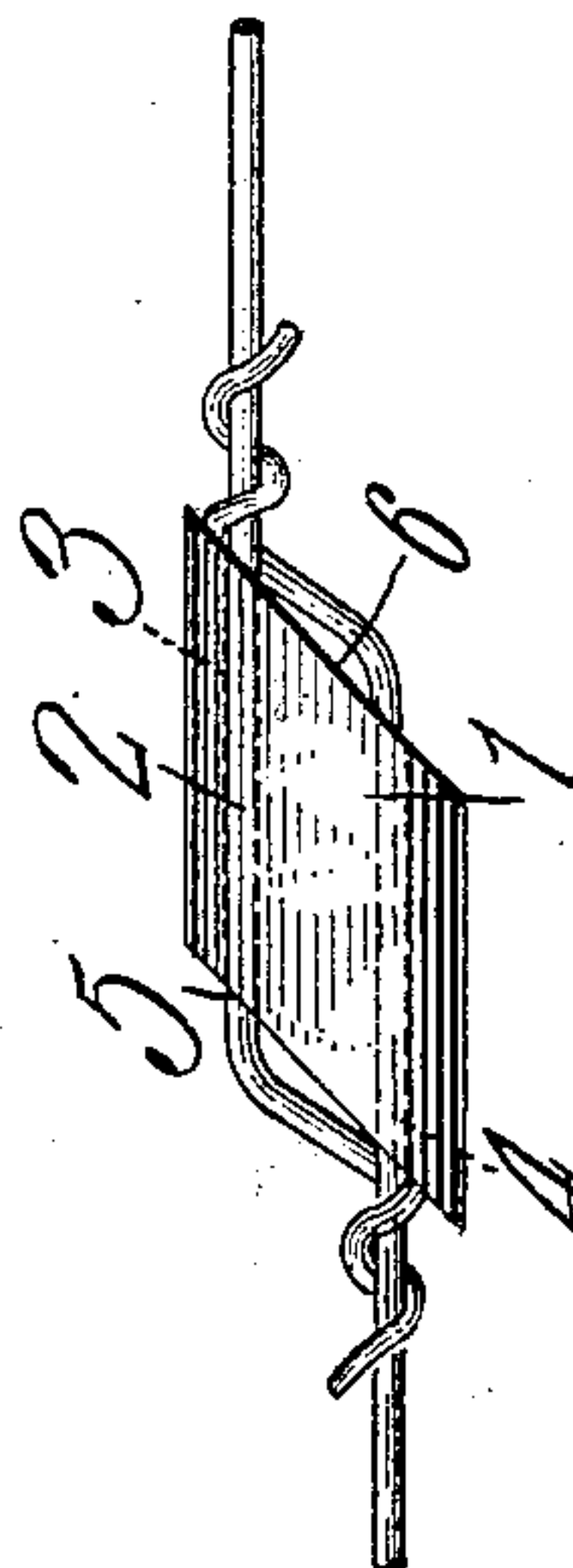


Fig. 2.

WITNESSES:

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UNITED STATES PATENT OFFICE.

ANDREW SCHMIDT, OF PADUCAH, KENTUCKY, ASSIGNOR TO EDWARD K. BONDS,
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WIRE-CONNECTOR.

No. 915,046.

Specification of Letters Patent.

Patented March 9, 1909.

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To all whom it may concern:

Be it known that I, ANDREW SCHMIDT, a citizen of the United States, residing at Paducah, in the county of McCracken and State of Kentucky, have invented a new and useful Wire-Connector, of which the following is a specification.

My present invention relates to improvements in devices for connecting wires, such as those used in telephone and telegraph, trolley systems, wire fencing, and in various other places wherein it is desirable to join wires quickly and effectually, and it has for its object to provide an improved device of this character that may be made to sell cheaply, and which, in practice, is capable of joining the abutting ends of wires without the necessity of bending them sharply and thus weakening them, although it obtains a firm grip on the wires when the latter are under tension.

Another object of the invention is to provide an improved device of this character that engages the wire ends in such a way that it forms a good electrical contact, so that the device is useful as a mechanical connector, and as an electrical connector as well.

To these and other ends, the invention comprises the various novel features of construction and combination and arrangement of parts, which will be hereinafter more fully described and pointed out particularly in the accompanying drawings.

In the drawings, Figure 1 is an elevation of a section of a wire fence showing its strands united by connectors constructed in accordance with the present invention. Fig. 2 is a detail view of a connector and the abutting wire ends, and Fig. 3 is a perspective view of the connector.

Corresponding parts in the several figures are indicated throughout by similar characters of reference.

As previously stated, the connector is capable of use generally in coupling wires that are employed for various purposes, the device being capable of providing an efficient electrical, as well as a mechanical, connection between the wire ends, and it will be understood that the connector is shown employed for the purpose of joining the strands of a wire fence merely to show one application of the invention.

The connector shown in the present embodiment of the invention comprises gener-

ally a coupling piece 1 which may be composed of a casting or a stamping of a suitable metal which is preferably flat in cross section in order that it may be firmly gripped by the hand and thus held from rotation while the wire ends are being wrapped or coiled, and it also provides parallel surfaces 2 to receive a wrench when the connector is employed with wire of large gages. The coupling is provided with a pair of wire receiving apertures 3 and 4 which extend longitudinally through the coupling, the apertures being spaced a distance sufficient to enable the end of one wire to be extended to and wrapped about the other wire without causing short bends in either wire. The opposite ends of the coupling are perforated by the wire receiving apertures, and they extend at angles other than right angles relatively to the longitudinal edges of the coupling in order to provide a pair of surfaces 5 and 6 which lie in planes arranged at obtuse angles relatively to the length of the wires, and these surfaces each form an obtuse angle relatively to one of the longitudinal edges of the coupling, and an acute angle relatively to the other longitudinal edge thereof.

In applying the coupling, the wire ends to be connected are introduced into the opposite ends of the respective wire receiving apertures preferably at those corners of the coupling at which the acute angles are formed between the ends and the longitudinal edges of the coupling. The ends of the respective wires are then bent laterally in a direction toward the adjacent wire and coiled one or more times around the same, said coiled ends bearing against the inclined surfaces at the ends of the coupling, thus insuring an obtuse bend in the end of each wire. The connection thus formed prevents bending of the wire at such angles as would materially reduce its tensile strength, and is generally preferable, as the tension on the wires will cause their ends to slip slightly relatively to coupling and thereby cause a binding action between the convolutions of the wire ends and the cooperating wires, and also a similar action between the wire ends at the points where the angular ends of the coupling form obtuse angles with the walls of the apertures, the binding action being thereby distributed in such proportion that the wire is not unduly strained at one point. However, in using

some kinds of wire, a positive locking joint could be obtained by reversing the mode of applying the wires to the coupling, that is to say, by inserting the wire ends into the wire receiving apertures at the obtuse corners of the coupling, and then bending the protruding wire ends parallel to the respective surfaces at the ends of the coupling, acute angles will be formed in the wire ends which will positively prevent relative longitudinal movement between the wires and the coupling, the ends of the wires being coiled, as previously described.

Importance is attached to the fact that the ends of the connector are beveled as shown because they permit a straighter pull upon each wire than does an ordinary connector of rectangular outline. Moreover, when the connector is used with stiff or highly tempered wire said wire will not become broken because of the fact that it is not necessary to bend it at a right angle to make the necessary connection. This is particularly true of fencing wire.

A wire connector constructed in accordance with my present invention is capable of being readily applied, and serves to effectually secure the wire ends without the necessity of bending the wire to such an

extent as would impair its tensile strength, and it may be manufactured cheaply and presents a neat appearance. Moreover, it is especially efficient when employed for the purpose of joining the strands of fencing, for the reason that each connection so made will stretch uniformly, and, consequently, all the strands of the fence will be under equal tension.

What is claimed is:—

A wire connector comprising a flat metal block of rhomboid outline having two longitudinal openings therethrough parallel to the base of said rhomboid block through which openings the wires to be connected are passed in opposite directions so that their ends project from the ends of the block nearest the obtuse angles thereof, the inclined ends of said block forming a bearing surface for the obtusely bent ends of said wire when they are turned up and coiled around the strands of the opposite wires.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ANDREW SCHMIDT.

Witnesses:

ADDISON Y. CLAY,
JOS. R. GROGAN.