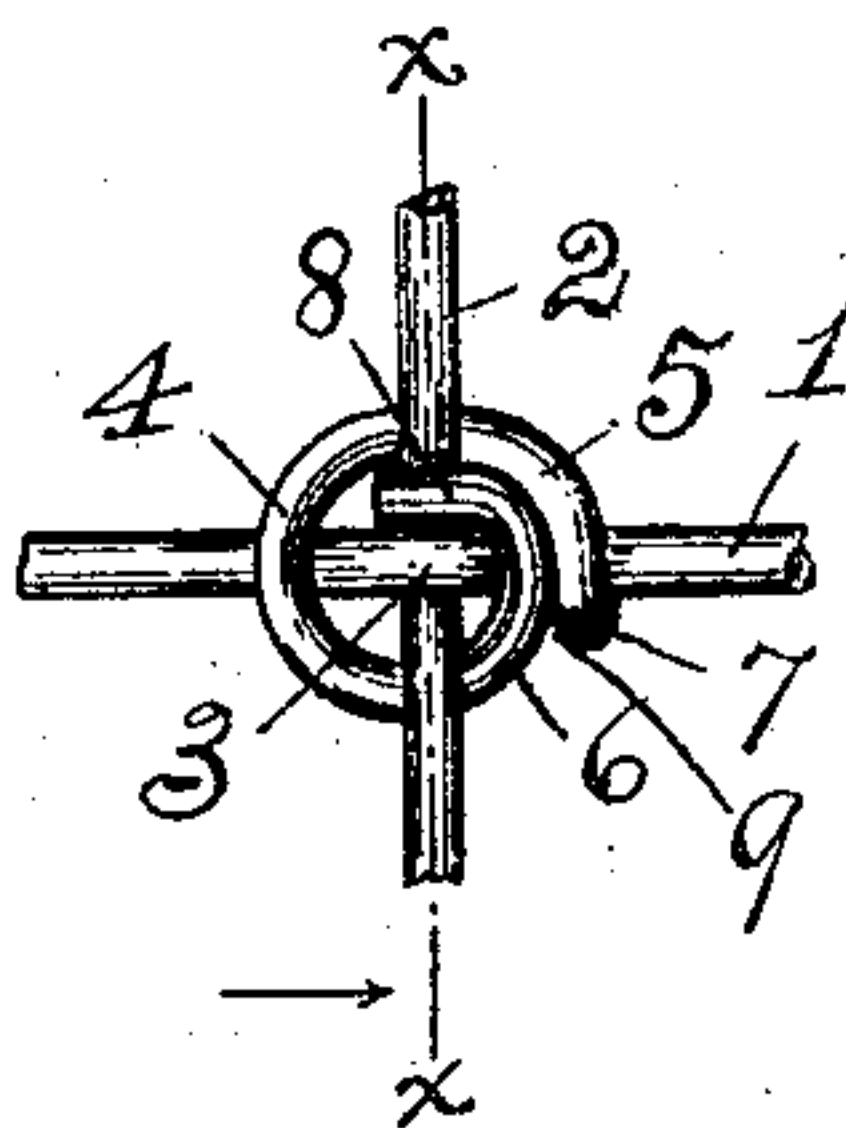


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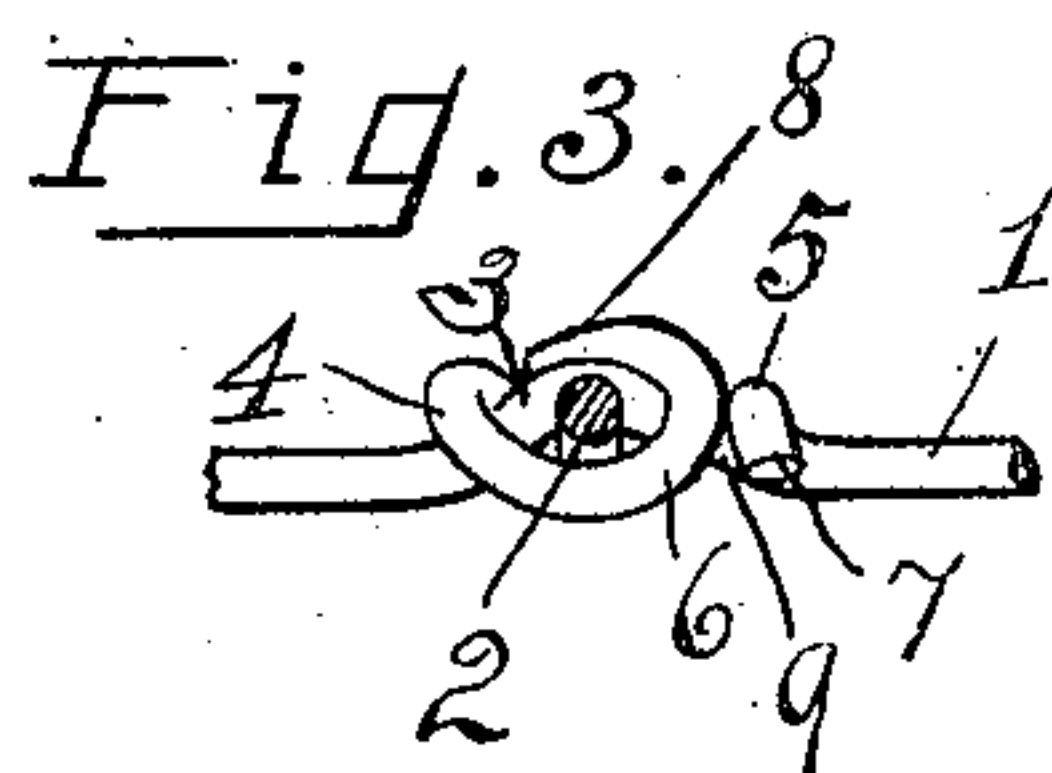
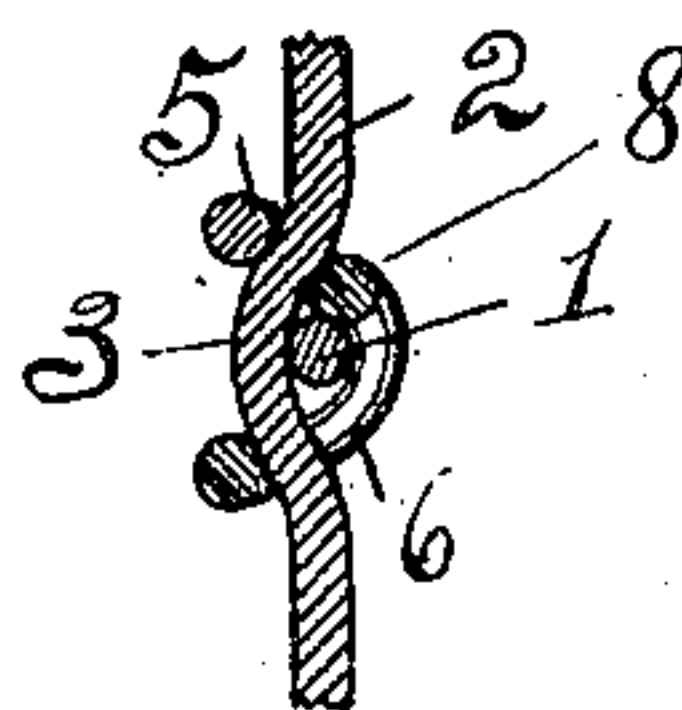
PATENTED FEB. 19, 1907.

C. T. COLLAR.  
TIE FOR WIRE FENCING.  
APPLICATION FILED MAY 14, 1906.

*Fig. 1.*



*Fig. 2.*



WITNESSES:

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*By Owen & Owen,*  
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# UNITED STATES PATENT OFFICE.

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## TIE FOR WIRE FENCING.

No. 845,032.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed May 14, 1906. Serial No. 316,730.

*To all whom it may concern:*

Be it known that I, CHARLES T. COLLAR, a citizen of the United States, and a resident of Adrian, in the county of Lenawee and State of Michigan, have invented certain new and useful Ties for Wire Fencing; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to 10 which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

15 My invention relates to ties for locking the stay or vertical wires of woven-wire fencing to the horizontal or line wires thereof, whereby to hold said wires in rigid relation to each other; and it consists in the peculiar construction hereinafter fully set forth, and particularly pointed out in the claim.

20 The object of the invention is the provision of a simple and compact tie of this class which requires but a comparatively small amount of wire in its formation, thus reducing the cost of material to a minimum, and which has its terminals so disposed relative to the crossing wires as to effectually lock them against independent movements.

30 The invention is fully described in the following specification and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the tie embodying my invention mounted upon and uniting two crossing wires of a fabric. Fig. 2 is a section taken on the dotted line *x x* in Fig. 1, and Fig. 3 is a side view of the same.

Referring to the drawings, 1 indicates a horizontal or line wire, and 2 a vertical or stay wire of a woven fence or fabric. These wires at their point of crossing are each provided with the usual crimp or bend 3, which cause their major portions to lie in a common plane and assists in maintaining them in 45 place in a manner to prevent slipping.

50 The tie comprising my invention is of the die-driven staple type and is driven over the line or horizontal wire 1 from the side thereof opposite to that on which the stay-wire 2 is disposed with its loop or body portion 4 co-acting with the contiguous shoulder of the crimp or bend 3 of the line-wire and its legs 5 and 6, which are substantially of equal length, passing to the rear of the stay-wire on oppo-

site sides of the line-wire and each in contact 55 with the contiguous shoulder of the crimp or bend 3 of the stay-wire, as shown in Fig. 2. After crossing to the rear of the stay-wire the legs of the staple bend forward in converging curves and cross the face or outer side of the 60 line-wire, the leg 5 crossing at a point more remote from the stay-wire than the leg 6, but in contact with the base of the contiguous shoulder of the crimp 3 of the line-wire, as shown in Figs. 1 and 3, and having its termi- 65 nal passing slightly downwardly and outwardly, as shown at 7. It will be noted that both legs cross the line-wire at substantially right angles thereto and in parallelism with each other for a portion of their lengths and 70 that the leg 6 after crossing the line-wire takes a reëntrant bend slightly more decided than the curve it was following. This reëntrant portion (shown at 8) is disposed in substantial parallelism with the side of the line- 75 wire and has its terminal lying in the crimp 3 of the stay-wire in lateral contact with both the stay-wire and the side of the line-wire. It will be apparent that this manner of position- 80 ing the terminal of the leg 6 materially enhances the value of the staple or tie for the purpose for which it is intended—namely, to unite the two crossing wires together and prevent a slipping of one on the other. The wedging of the terminal 8 within the crimp at 85 the side of the line-wire between the contiguous portions of both crossing wires provides a much more rigid and stronger lock than would otherwise be the case and tends materially to prevent a sliding of the line-wire 90 upon the stay-wire.

The turning of the leg-terminal 7 outwardly from the stay-wire, as shown, facilitates the driving of the staple, as otherwise the end of the leg 6 would have a tendency to 95 enter the die-channel of the leg 5 at the point 9. By turning the terminal 7 outwardly a partition or shoulder is provided in the die at that point, thus causing the end of the leg 6 to continue in its course instead of diverting 100 therefrom into the channel of the leg 5.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination with the crossing wires 1 105 2 crimped at their crossing-points, of a loop-retaining tie having its bail portion passing over the wire 1 at the base of the crimp there-



in and its legs passing under the wire 2 at each side of the crimp therein and at the base of the same, one of the legs having a continuation passing over the wire 1 at the base of  
5 the crimp opposite the bail and the other leg having a continuation passing over the wire 1 and terminating in an end portion which crosses the wire 2 and has contact with the latter within the concavity of the crimp por-

tion thereof and with the side of the wire 1, so substantially as described.

In testimony whereof I have hereunto signed my name to this specification in the presence of two subscribing witnesses.

CHARLES T. COLLAR.

Witnesses:

CHARLES S. WHITNEY,  
L. K. WALKER.