

No. 680,201.

Patented Aug. 6, 1901.

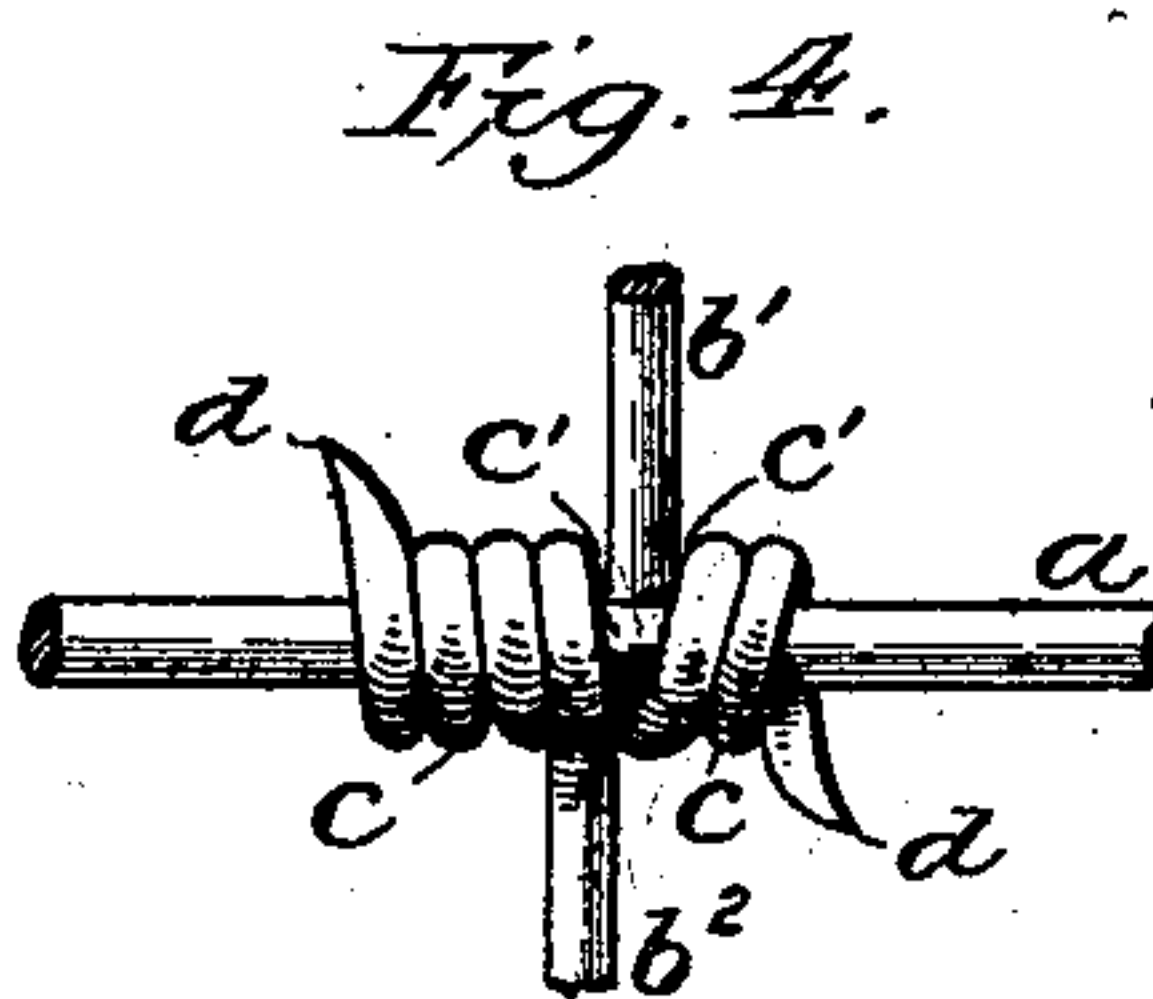
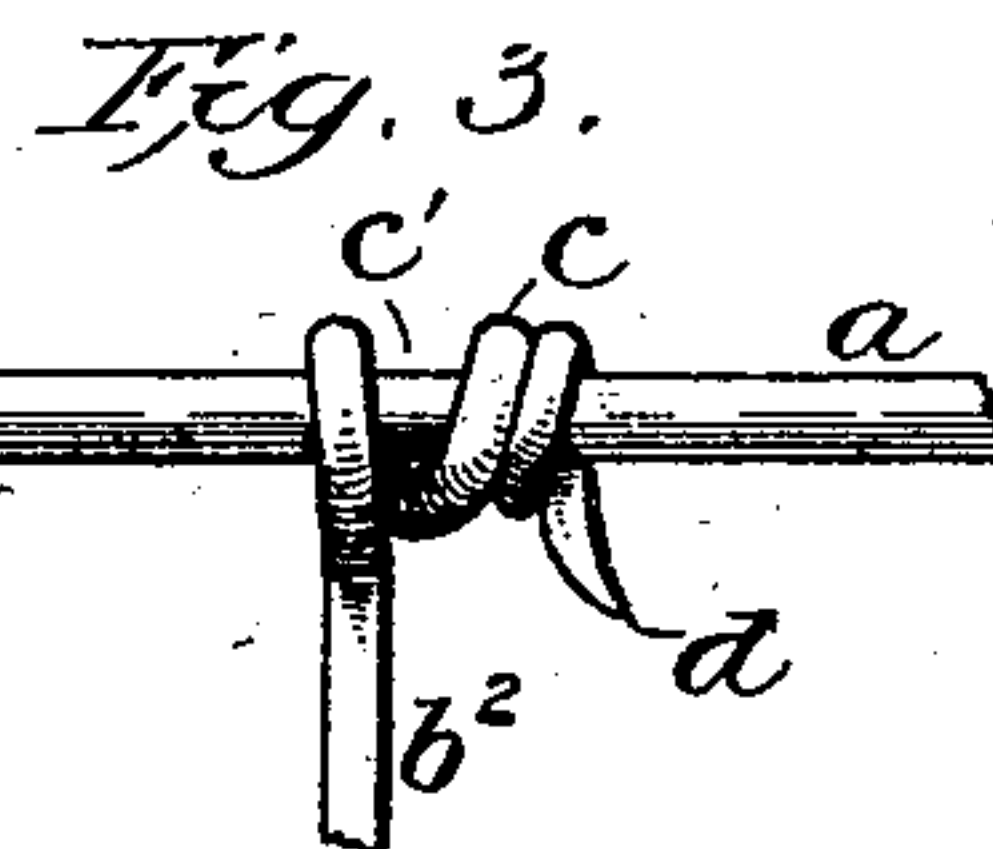
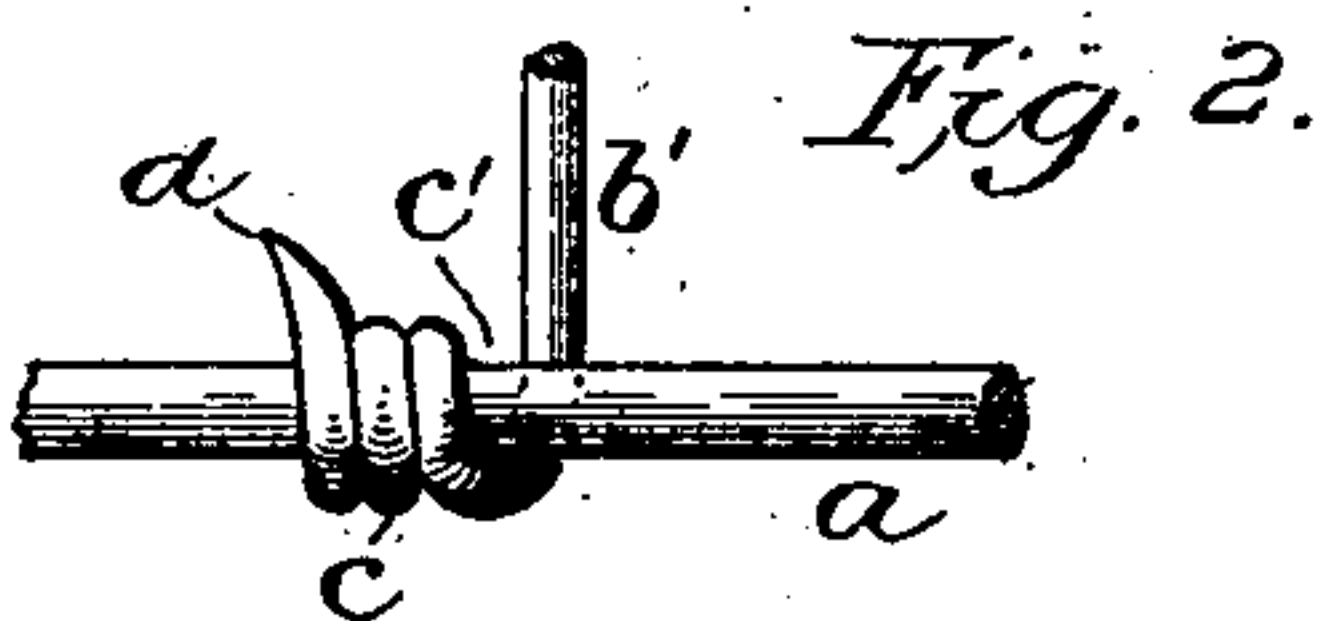
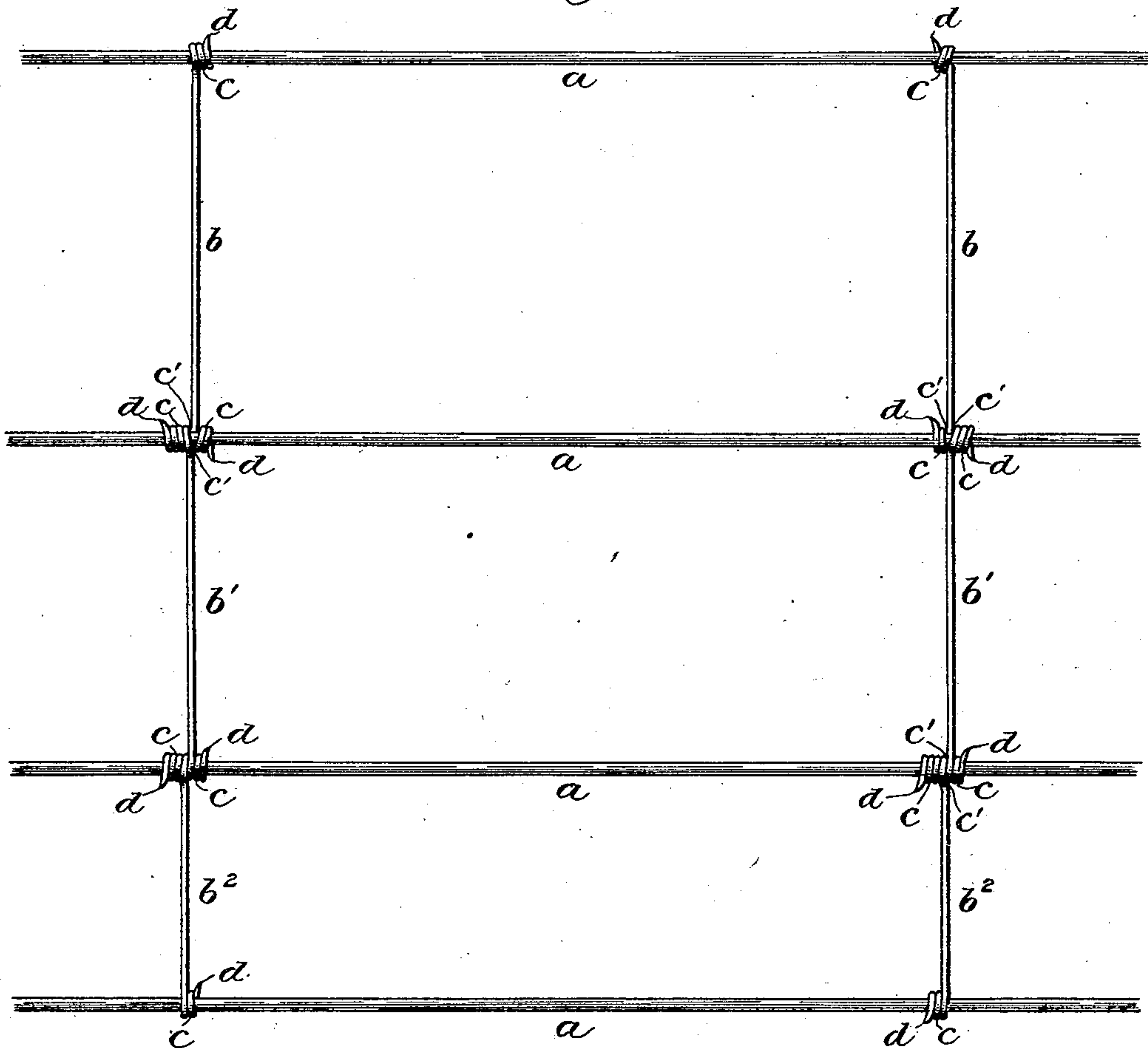
J. E. FREDRICK.

WIRE FENCE.

(Application filed Apr. 10, 1901.)

(No Model.)

Fig. 1.



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## WIRE FENCE.

SPECIFICATION forming part of Letters Patent No. 680,201, dated August 6, 1901.

Application filed April 10, 1901. Serial No. 55,208. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN E. FREDRICK, a citizen of the United States, residing at Kokomo, in the county of Howard and State of Indiana, have invented a certain new and useful Improvement in Wire Fences, of which the following is a specification.

The object of the present invention is to construct a wire fence having embodied therein the repellent feature of a barb-wire fence without the danger attending the use of such fences in injuring animals arising by the possibility of the animal getting its leg over a wire and in attempting to withdraw the leg having the barb tear and injure the animal to a greater or less extent; and the invention consists in the features of construction and the combination of parts hereinafter described and claimed.

In the drawings, Figure 1 is an elevation of a section or panel of my improved fence, showing only the longitudinal or strand wires and the vertical stay-wires; Fig. 2, a detail showing the manner of coiling and securing the end of one section of a stay-wire to a horizontal or strand wire; Fig. 3, a similar view to Fig. 2, showing the manner of coiling and securing to the strand or horizontal wire the opposing end of the section of a vertical stay or connecting wire adjacent to the section of such wire shown in Fig. 2; and Fig. 4, a detail showing the manner of interlocking two opposing stay-wire sections to each other and to the strand-wires.

The fence is to be constructed with as many horizontal or strand wires as desired, and, as shown, four horizontal or strand wires  $a$  are employed, which wires are of the usual construction and are to be secured to the posts of the fence in any well known or suitable manner. The vertical stay or connecting wires are formed in as many sections as there are divisions between the horizontal or strand wires—that is, with a four horizontal or strand wire fence the vertical stay or connecting wire in each instance will be in three sections, the first section formed of a wire  $b$  extending between the top horizontal or strand wire and the second horizontal or strand wire, the second section formed of a wire  $b'$ , extending between the second and third horizontal

or strand wires, and the third section formed of a wire  $b^2$ , extending between the third and lower horizontal or strand wires. Each wire  $b$ ,  $b'$ , and  $b^2$  is coiled at its end and wrapped around a strand-wire, so as to furnish a coil  $c$ , with a projecting end forming a barb  $d$ . The coil  $c$  for the upper end of the first wire  $b$  and the lower end of the last wire  $b^2$  is a closely-woven or solid coil, while the coil  $c$  for the opposing ends of the wire  $b'$  with the wires  $b$  and  $b^2$  is spaced from the body of the stay to which it belongs, so as to leave a space  $c'$  between the body of the wire and the first wrap of the coil, as is shown clearly in Figs. 2 and 3, and into this space the body of the opposing wire is entered and the coil of the opposing wire is wrapped around the strand on the opposite side of the body of the first wire, so that the two opposing wires will lie between their respective coils in the open spaces  $c'$ , as shown in Fig. 4—that is, the body of the wire  $b'$  will lie in the open space  $c'$  of the wire  $b^2$  and the body of the wire  $b^2$  will lie in the open space  $c'$  of the wire  $b'$ , and the coil of the wire  $b'$  will lie outside of the body of the wire  $b^2$ , while the coil of the wire  $b^2$  will lie outside of the body of the wire  $b'$ , thus forming an interlock for the two wires by means of their respective coils. This interlocking or interweaving of the opposing ends of the wires forming the vertical stay or connecting wire around the body of the horizontal or strand wire forms a lock between the opposing ends of the two wires and a lock of the ends of the two wires on the horizontal or strand wire, by which lateral movement of the vertical stay or connecting wire in the respective sections thereof is prevented and the fence is rendered firm and rigid as regards the support of the horizontal or strand wires by the vertical stay or connecting wires. This locking of the sections of the vertical stay or connecting wires at their opposing ends with each other and on the horizontal or strand wires dispenses with the necessity of bending or corrugating or otherwise providing means on the horizontal or strand wires to prevent lateral slipping of the vertical stay or connecting wires and leaves the horizontal or strand wires straight, rendering them more efficient as to strength. The locking of



the vertical stay or connecting wires to the horizontal or strand wires by interlocking or interweaving the coils of the opposing ends of the vertical stay or connecting wires, so as to have the coils of the ends oppositely projected, operates to prevent lateral slipping of the vertical stay or connecting wires on the horizontal or strand wires, and this result is attained by reason of the fact that a lateral pull on any one of the sections of the vertical stay or connecting wire will cause the end to act against the coil of the opposing end of the adjacent wire and force such coil to impinge tightly against and bite the horizontal or strand wire, rendering it impossible to slip the connecting-coil unless two adjacent wires of the vertical stay or connecting wire are moved at the same time, and even in this event there would be more or less impingement and bite of the coils onto the horizontal or strand wire, which would be sufficient to prevent lateral slipping of the vertical stay or connecting wire to any injurious extent. This feature of locking the opposing ends of the wires for the vertical stay or connecting wire to each other and to the horizontal or strand wires maintains the alinement of the wires and renders the fence as a whole very firm and rigid, and the strength of the fence is not impaired or destroyed.

The opposing ends of the wires for the vertical stay or connecting wire are preferably interlocked from opposite sides of the horizontal or strand wire, though this is not a necessity so far as concerns the benefit of the impingement and bite of the opposing coils on the horizontal or strand wire. The vertical stay or connecting wires are located at any desired distance apart, so as to form rectangular panels or openings between them and the horizontal or strand wires, and the barbs are located at the meeting-points of the sections of the vertical stay or connecting wire and preferably project on opposite sides of the horizontal or strand wire, and these barbs are arranged so as to project at right angles to the horizontal or strand wire for the best results, but may be deflected somewhat from a right-angle relation. The barbs are only located at the juncture-points of the vertical stay or connecting wires with the horizontal or strand wires, leaving the body of the horizontal or strand wires between two vertical stay or connecting wires without any barbs and perfectly smooth, by which arrangement if an animal puts a leg over a horizontal or strand wire in the opening between the vertical stay or connecting wires it can withdraw the leg without any liability of injurious effects by tearing the skin and flesh or otherwise, as the locations of the barbs are such as not to interfere with the withdrawal of an animal's leg without causing injury thereto.

It will thus be seen that with my construction of wire fence the repellent features of a barb are secured without liability of in-

jury to an animal, as in case an animal is caught with one leg over the horizontal or strand wires the withdrawal of the leg can be had without coming in contact with a barb, which makes the fence, so far as the repelling feature of the barb is concerned, just as effectual as any barb-wire fence, as an animal will not rub or lean against the fence, owing to the presence of the barbs. The horizontal or strand wires are maintained in alinement by the sectional vertical stay or connecting wires, and the vertical stay or connecting wires are each held against lateral slipping or movement by the locking together of the opposing ends of the wires and the locking of the opposing ends on the horizontal or strand wires by the oppositely-projected coils of the opposing ends of the wires which form the vertical stay or connecting wires. The fence is very simple in construction and at the same time strong and durable and will be found very efficient, taking the place of a barb-wire fence without any liability of causing injury to animals, as is the case with ordinary barb-wire fences.

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

1. A wire fence comprising a series of horizontal strand-wires and vertical stay-wires, each vertical stay-wire formed in sections and having the sections locked to each other and to the horizontal strand-wires by coils oppositely projected and interwoven one with the other at the opposing ends of adjacent sections of the vertical stay-wire, substantially as described.

2. A wire fence comprising a series of horizontal strand-wires and vertical stay-wires, each vertical stay-wire formed in sections and having the sections approach each other on opposite sides of the horizontal strand-wires and locked to each other and to the horizontal strand-wires by coils oppositely projected and interwoven one with the other at the opposing ends of adjacent sections of the vertical stay-wires, and barbs formed by extending the end of the coils of each section of the vertical stay-wire, substantially as described.

3. A wire fence comprising a series of horizontal strand-wires and vertical stay-wires, each vertical stay-wire formed in sections and having the sections approach each other on opposite sides of the horizontal strand-wires and locked to each other and to the horizontal strand-wires by coils oppositely projected and interwoven one with the other at the opposing ends of adjacent sections of the vertical stay-wires, and barbs formed by extending the end of the coils of each section of the vertical stay-wire for the extended end to stand in right-angle relation to the horizontal or strand wire, substantially as described.

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