No. 813,370. PATENTED FEB. 20, 1906.

B. L. ELWELL & W. GRIMM.

WIRE FENCE.

APPLICATION FILED APR. 4, 1904.

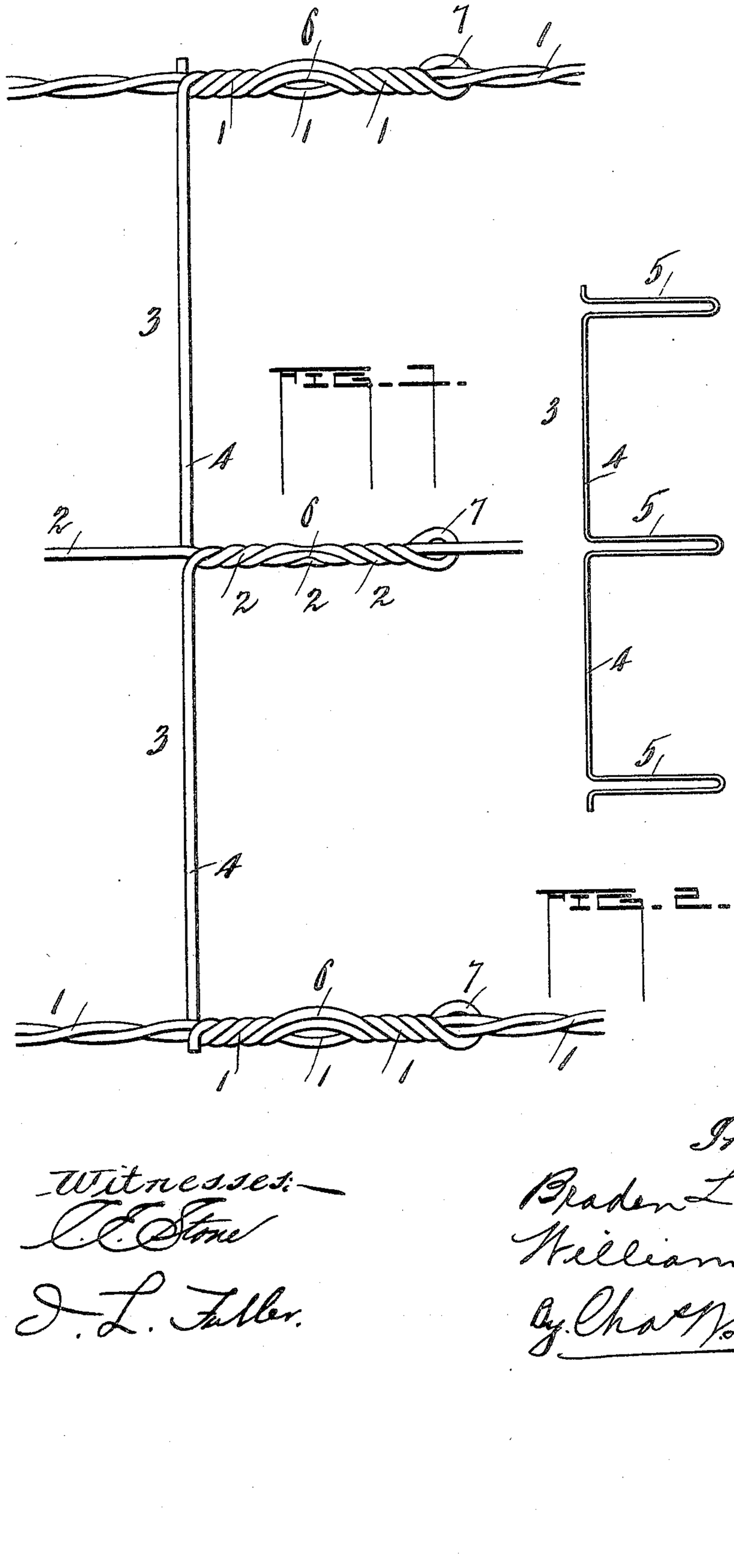

FIG. 1.

FIG. 2.

Witnesses:—
C. C. Stone
D. L. Fuller.

Inventors—
Braden L. Elwell
William Grimm.
By Chas. P. LaPorte, Atty.

UNITED STATES PATENT OFFICE.

BRADEN L. ELWELL AND WILLIAM GRIMM, OF MORTON, ILLINOIS, ASSIGNORS TO INTERLOCKING FENCE COMPANY, OF MORTON, ILLINOIS, A CORPORATION OF ILLINOIS.

WIRE FENCE.

No. 813,370. Specification of Letters Patent. Patented Feb. 20, 1906.

Application filed April 4, 1904. Serial No. 201,398.

To all whom it may concern:

Be it known that we, BRADEN L. ELWELL and WILLIAM GRIMM, citizens of the United States, residing at Morton, in the county of Tazewell and State of Illinois, have invented certain new and useful Improvements in Wire Fences; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention has reference to wire fencing, and relates particularly to a fence fabric having stay-wires extending transverse to the longitudinal or strand wires, and at the intersection of the strand-wires the stay-wires are intertwisted therewith by a right and left or a left and right intertwist.

The invention has for its further object a stay-wire provided in its length with a series of radially-extended looped portions adapted to be intertwisted by a right and left intertwist with strand-wires coinciding with such looped portions of the stay, that portion of the stay from which the loop is formed extending in opposite directions to have formed therein a loop and to be intertwisted in a right and left manner with adjacent strand-wires.

The invention consists in the novel features of construction hereinafter fully described and claimed, and illustrated by the accompanying drawings, in which—

Figure 1 is an elevation of a short section of fence embodying our invention. Fig. 2 is an elevation of a stay, reduced in size, showing the loops formed therein.

Like numerals of reference indicate corresponding parts throughout the figures.

In the drawings, 1 denotes the outside or selvage-wires of a fence fabric. They may be single strands of wire; but we prefer, as shown in the drawings, to employ a selvage-wire formed into a cable-strand by the intertwisting of two strands of wire, as shown in Fig. 1. The intermediate strands, longitudinal or body wires 2, are preferably single strands, as shown in the drawings, and while the fence shown in Fig. 1 consists of two selvage-wires and one intermediate strand-wire it is of course understood that the fence may be of any suitable height, using as many intermediate strands as is desirable, and make a fence having a graduated as well as a uniform mesh.

3 indicates stay-wires adapted to connect the selvage-wires 1 and the intermediate strand-wires 2 where they intersect. The stay-wires have the straight body portions 4 connecting the outside strand or body wires and the selvage-wires, and also the intermediate body-wires. The body of the stay-wires 3 are each provided with returned looped portions 5 extending transversely from the vertical bearing of the body of the stays and are disposed in the stays so as to coincide with the intermediate strand-wires and the selvage-wires, with which they are to be intertwisted.

In the operation of connecting the looped portions of the stays to the body and selvage wires the selvage and body wires are fed to twisters having slotted portions into which the body and selvage wires are dropped, and the stays are fed transverse to the longitudinal bearing of the body and selvage wires and the looped portions thereof dropped into the slotted portions of the twisters in like manner as the selvage and body wires. The arrangement of the twisters is such that they grip the selvage-wires and looped portions of the stays, also the body-wires and looped portions of the stays, at a point 6, and by actuating the twisters the looped portions of the stays and body-wires and selvage-wires are intertwisted in a right and left direction on opposite sides of the gripping portion 6, as indicated above, leaving a plain portion of the wires, as at 6, and the return loop or eye portion, as at 7, which may be disposed in the manner seen in Fig. 1 or in some other convenient manner.

In the drawings the intertwists of the line-wires with the looped portions of the stays are all measured in the same longitudinal direction and are shown twisted alike. However, in carrying out the invention it is possible to intertwist the alternate loop portions in opposite directions—that is, left and right or right and left, and the showing herein is the preferred form. In stating that the intertwists are right and left it is to be understood that they could be left and right, and the term "right and left" is employed for convenience, as the twisters which do the work for various reasons might be rotated in oppo-

site direction to which they are rotated for forming the intertwists shown in Fig. 1.

In twisting the loops of a stay with the selvage-wire formed of a cable the cable-wires may be formed at the time the looped portions are intertwisted therewith or a cable fed to the machine doing the twisting and intertwist the looped portions of the stay therewith.

We are aware that a stay having looped portions is old, also that the looped portions of a stay have been intertwisted by a continuous twist in one direction with longitudinal wires; but we are not aware that a stay has been used having looped or radial extensions which are intertwisted with longitudinal wires by a right and left intertwist.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent of the United States, is—

1. In a fence, the combination of a series of longitudinal wires, stay-wires having looped portions disposed at the intersection of the longitudinal wires, and the loops of the stays intertwisted with the longitudinal wires by a right and left intertwist, substantially as specified.

2. In a fence, the combination of cable selvage-strands intertwisted from a series of wire strands and intermediate body-wires of a single strand, stay-wires having radially-extended looped portions disposed at the intersection of the selvage and body wires, said looped portions of the stays intertwisted with the selvage and body wires by a right and left intertwist, substantially as specified.

3. In a fence, the combination of a longitudinal wire, a stay-wire having a returned loop portion coinciding with the longitudinal wire and with portions of the stay extending at right angles and in opposite directions to the longitudinal wire, the loop portion of the stay intertwisted with the longitudinal wire in reverse directions from a point 6 in the said loop, and having the eye portion 7, substantially as shown and specified.

In testimony whereof we affix our signatures in presence of two witnesses.

BRADEN L. ELWELL.
WILLIAM GRIMM.

Witnesses:
JOHN GETZ,
JOSEPH HAUTE, Jr.