

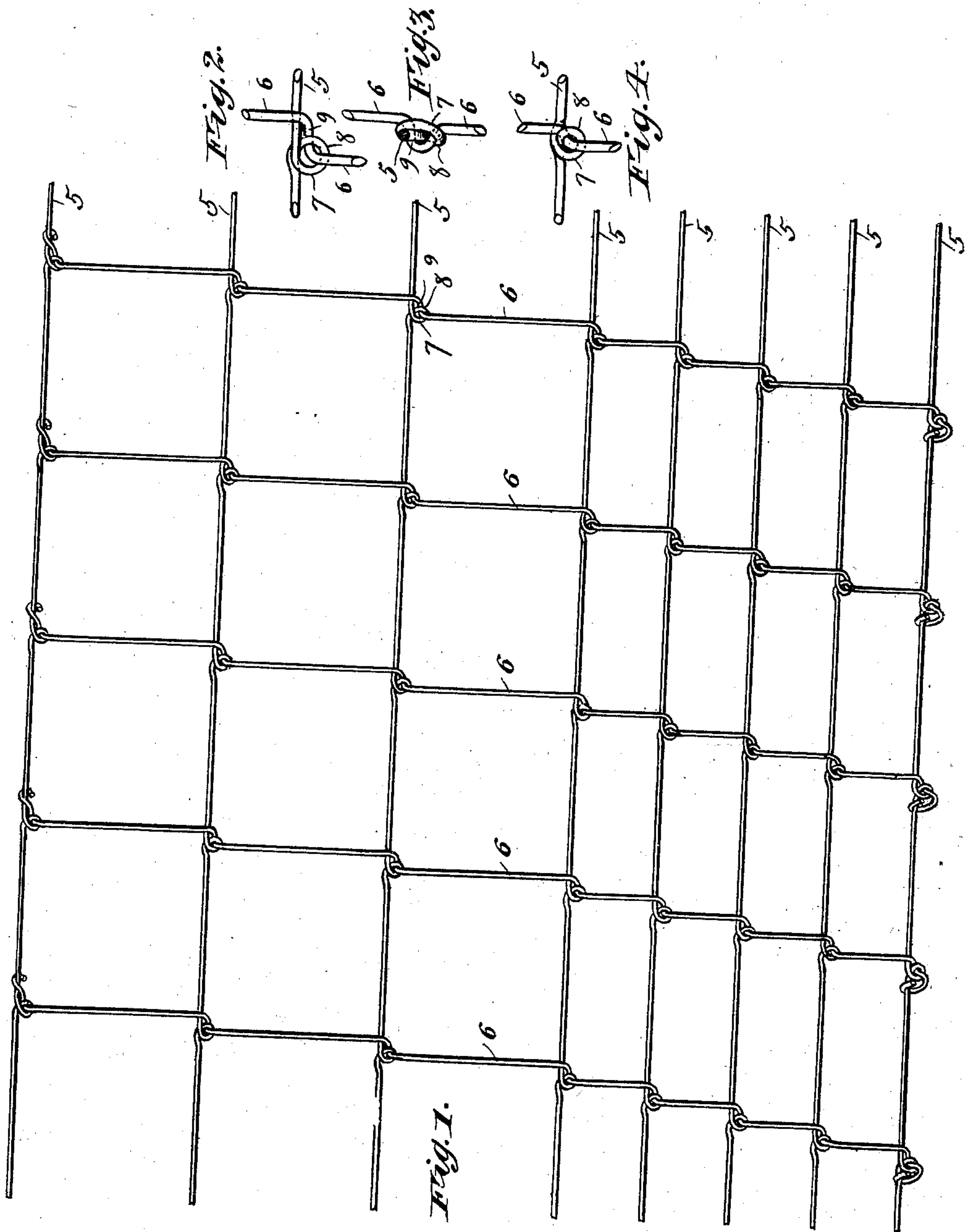
No. 671,151.

E. F. SHELLABERGER.
WIRE FENCING.

Patented Apr. 2, 1901.

(No Model.)

(Application filed July 9, 1900.)



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UNITED STATES PATENT OFFICE.

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WIRE FENCING.

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To all whom it may concern:

Be it known that I, EDWARD F. SHELLABERGER, of Dekalb, Illinois, have invented certain new and useful Improvements in Wire Fencing, of which the following is a specification.

My invention relates to the construction of wire fencing which is adapted to a wide variety of uses and can be embodied in almost any kind of a fabric from the lightest poultry-netting to heavy field-fencing, and is, moreover, composed of single-wire elements—that is to say, the longitudinal strands or runners are single wires and the vertical ties or stays, which are interlocked with the runner-strands, are also single wires.

My invention consists in the joint whereby the tie-wires are connected to the strand-wires, and this joint is of such a character as to prevent the movement of the strands and ties relatively to each other, except such movement as is necessary or desirable to accommodate expansion and contraction and for which purpose my peculiar joint makes provision.

There have been many attempts made to produce practical woven-wire fabrics whose elements are single wires. The difficulty has always been to interlock single wires together in such manner as to prevent their relative movement, and even the most laborious attempts have not succeeded in producing a wire fencing in which the strand and tie elements remain permanently interlocked. My lock is so constructed that it is impossible for the fence elements to slip or move upon each other so as to distort the fabric, and no strain which the wire itself will stand can accomplish the breaking of the lock or its separation.

In the accompanying drawings, Figure 1 shows a section of wire fencing embodying my improvements. Fig. 2 is an enlarged view of the lock; Fig. 3, an edge view of the same, taken in the plane of the fence; and Fig. 4, a side view of a modification.

In the drawings let 5 represent the longitudinal strands or runners, which are of single wire and which may be arranged parallel to each other and at suitable distances apart, depending upon the use to which the fencing is to be put. 6 represents the tie-

wires, which are also single wires. At the points of intersection with the tie-wires each of the strand-wires has formed therein complete loops or eyes, the members whereof are marked 7 8. The tie-wire passes through the eye or loop, and in the particular construction of fabric shown in the drawings it is intended that the tie-wires shall be fed in from that side of the fabric represented at the bottom of the view. This, however, is a matter of convenience only, and the ties might be fed in from either side of the fabric. As shown, the loops or eyes in the strand-wires project downwardly from the longitudinal wires and are arranged in the plane of the fabric. This, however, is not essential to the construction, as the loops might extend upwardly or they might extend out with their openings in a horizontal plane. The essential thing is that the tie-wires shall interlock with the strand-wires, and this is accomplished in the manner shown in the drawings by having the tie-wire pass through the eye or loop and thence over the base of the strand-wire adjacent to the eye or loop in such manner that the members of the loop shall be held in contact with each other and the loop prevented from uncoiling or drawing out. Thus in the drawings the tie-wire goes in from the front side of the loop, thence comes out behind the member 8 of the loop, and thence passes over the strand-wire 5 in front of that portion of the strand-wire which extends from the member 7 of the loop. Obviously if the tie-wire entered the eye or loop from the opposite side or what might be termed the "under" or "rear" side, as shown in the drawings, then it should pass over the member 7, thence behind the strand-wire near the base of the loop, and thence pass over that portion of the strand-wire which extends from the member 8 of the loop. In both instances the tie or stay wire is not only threaded through the eye or loop, but it partially encircles one member thereof, and then must pass over that portion of the strand-wire which extends from the other member of the eye or loop, so that it amounts to a key thrust through the eye or loop and having its ends extended in such manner as to absolutely prevent the eye or loop from straightening out.

As the mesh is practically square, the fab-

ric has sufficient flexibility to permit stretching up over uneven ground without bending or buckling.

As shown in Figs. 1, 2, and 3, the tie has an offset portion 9 adjacent to the eye, and this offset portion enables it to interlock with the strand-wire at one side of the eye or loop, and thereby produces a somewhat stiffer joint, and consequently a stiffer fabric. In Fig. 4 I have shown a modified construction wherein this offset or shoulder portion of the tie is practically eliminated, and this is done in a manner well known to those skilled in the art of weaving wire fabrics by holding the tie-wire in line with the eyes as it passes from one strand to the other.

In whatever manner the lock may be left—that is to say, whether the tie-wire be simply offset or whether it be coiled so as to produce an eye or loop within an eye or loop—the effect is to completely and absolutely interlock the single-wire strands and the single-wire ties.

The importance of the absolute interlocking of the fence elements is too well understood to require statement; but I have accomplished this object in a very simple manner and in a fabric which can be economically produced either by hand or by machinery. Another important feature of my construction is that this lock can be employed with all kinds of wire fabric, or rather with all sizes of wire. Thus I have found it practicable for poultry-netting and also for the heaviest field-fencing.

By providing the longitudinal elements of the fence with eyes at the points of intersection with the pickets full provision is made

for the necessary expansion and contraction occasioned by variations of temperature. These open loops or eyes of the runners afford all the necessary elasticity, and yet comprise an essential part of the lock, and while my fencing has all of the advantages so far as elasticity is concerned that is possessed by fencing having corrugated strands it is more economical, because the eyes or loops consume a minimum amount of material while providing for elasticity and interlocking.

I claim—

1. Wire fencing comprising single-wire runners arranged parallel to each other and single-wire ties arranged transversely to the runners and parallel to each other; each of the runner-strands having eyes or loops through which the ties pass and the body of the tie partially encircling one member of the loop and extending thence over the strand-wire proceeding from the other member of the loop, substantially as described.

2. Wire fencing comprising in combination single-wire runners and single-wire ties, the runners having complete loops or eyes and the ties being threaded through said loops or eyes, the tie-wire at the point of intersection partially encircling one member of the loop and passing over the strand-wire extending from the other member of the loop, whereby to prevent the straightening out of the eye or loop and to interlock the runner strands and ties, substantially as described.

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