

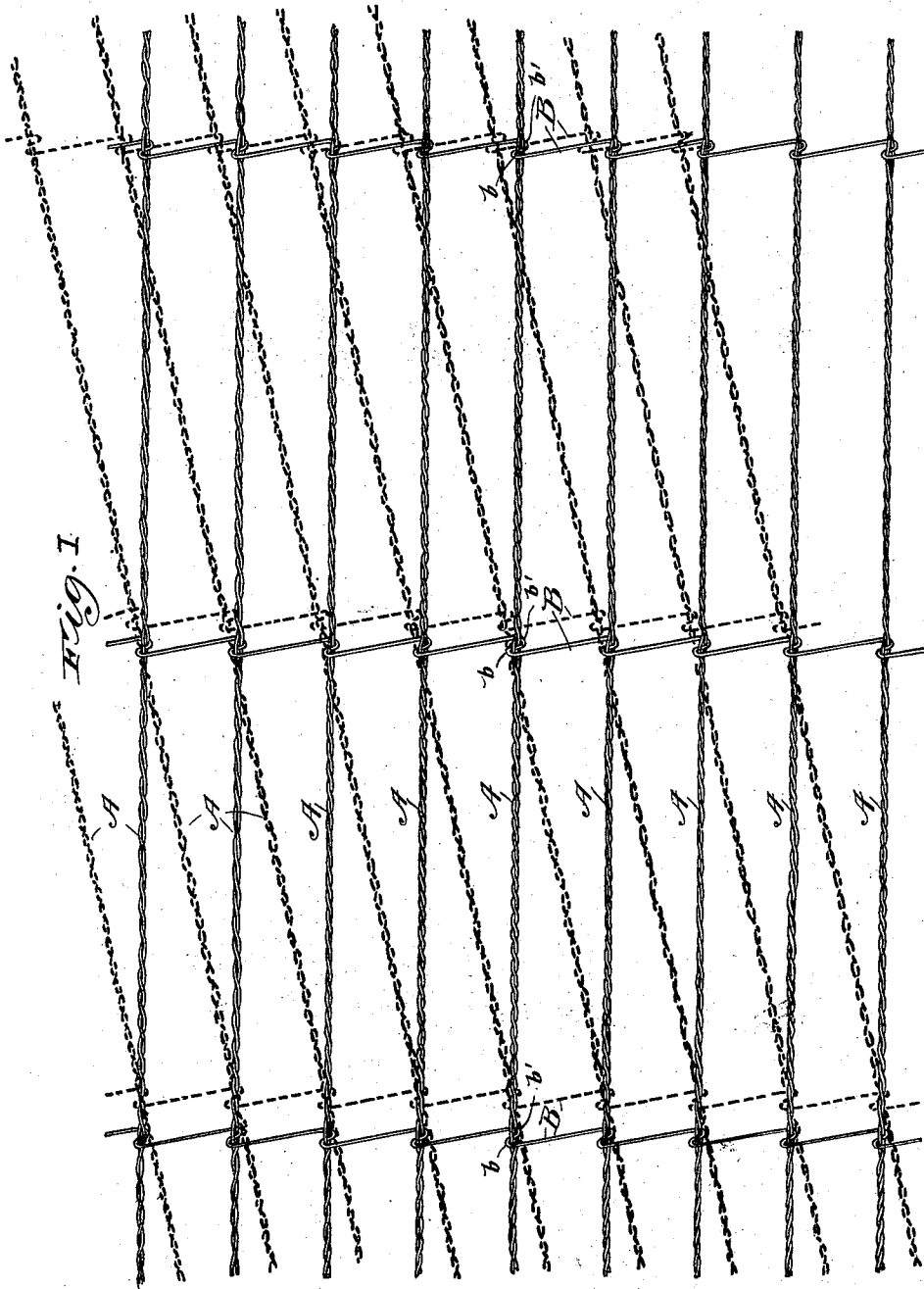
(No Model.)

2 Sheets—Sheet 1.

M. M. SHELLABERGER.
WIRE FENCE.

No. 506,378.

Patented Oct. 10, 1893.



Witnesses,
J. C. Mann,
F. C. Goodrum

Inventor,
Michael M. Shellabarger
By Offield Towle Lutherman
Attys.

(No Model.)

2 Sheets—Sheet 2.

M. M. SHELLABERGER.
WIRE FENCE.

No. 506,378.

Patented Oct. 10, 1893.

Fig. 2.

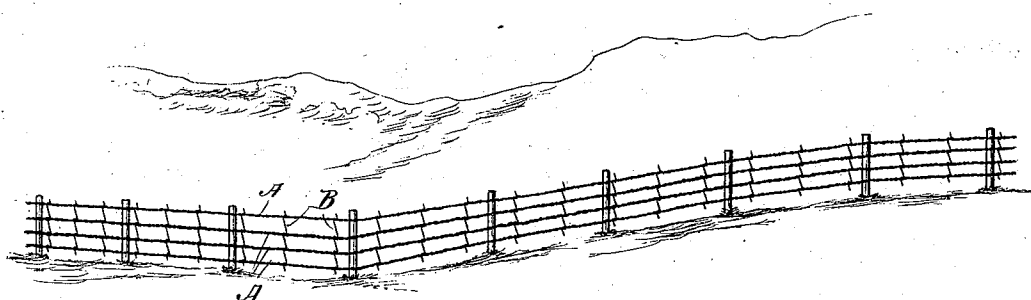


Fig. 3.

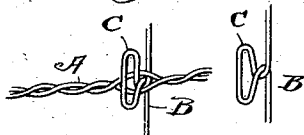


Fig. 4.

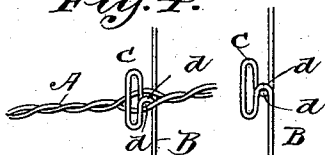


Fig. 5.

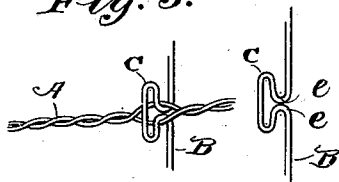
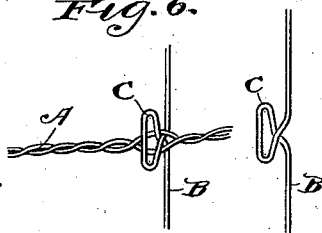


Fig. 6.



Witnesses,
D. J. Mann,
H. C. Goddard

Inventor,
Michael M. Shellaberger
By *Offield, Towles & Lathicum*
Attys.

UNITED STATES PATENT OFFICE.

MICHAEL M. SHELLABERGER, OF DE KALB, ILLINOIS.

WIRE FENCE.

SPECIFICATION forming part of Letters Patent No. 506,378, dated October 10, 1893.

Application filed June 23, 1893. Serial No. 478,635. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL M. SHELLABERGER, of De Kalb, Illinois, have invented certain new and useful Improvements in Wire Fences, of which the following is a specification.

My invention relates to a wire fence composed of a plurality of cable or strand wires connected by transverse tie or stay wires; and the object of the invention is to construct a fence of this character which is adapted to be stretched without buckling or bending the tie wires, and which is also capable of being stretched so that the distance between the strand wires may be varied at pleasure in order to produce a tight or open fence as desired.

In the accompanying drawings, Figure 1 is a view in side elevation of a section of the fence consisting of nine strand wires and three tie wires, the full lines showing the tie wires arranged at right angles to the strand wires, while the dotted lines show the tie wires oblique with reference to the strand wires, the latter being more closely drawn together in consequence. Fig. 2 shows an application of the fencing as in use where the line of fence extends over a rise in the ground; and Figs. 3 to 6 inclusive show modifications of the tie wire.

In the embodiment of the invention, which is illustrated in the drawings, there is employed a series of strand or cable wires A, which at suitable intervals are stayed or tied together by the stay or tie wires B. These tie wires consist of a single wire provided at the points where it engages the cable wires with kinks, bends or loops which are interwoven with the strands of the cable wires so as to form a loose or swivel joint so that the cable wires may be drawn more closely together while the distance between the stay wires is always preserved and that without buckling or bending either the stay or the cable wires. The construction is such that the stay wires cannot move longitudinally on the tie wires and the cable wires cannot move up or down on the tie wires. To accomplish this I prefer to provide the tie wires with the double bends *b, b'*, as shown in Fig. 1 of the drawings, each of said bends embracing in its loop one of the strands of the cable wire,

which strands being twisted on both sides of the tie wire loops prevent the movement of the latter along the cable wires and also prevent the movement of the latter up or down on the tie wires, and yet permit the loops to turn freely so that the fence may be stretched into the position shown by the dotted lines in Fig. 1, without altering the distance between the tie wires. The practical effect of this construction will be understood by reference to Fig. 2 of the drawings, wherein the fencing is applied to posts running over an elevation in the ground. It will be seen by reference to said figure that as the fence is stretched over this rise of ground, the tie wires retain their vertical position but assume an oblique position with reference to the cables and without changing the distance between the stay wires, while the cable wires are drawn slightly together but not sufficient however to change the effective height of the fence but enough to prevent the buckling or bending of the tie wires and cables.

The capability of varying the distance between the cable wires enables the user to adapt the fencing to different purposes. For example, where used to turn swine, the fencing may be so stretched as to bring the cable wires quite closely together, the stay wires assuming an oblique position as shown by the dotted lines in Fig. 1, and the same line of fencing may be adapted in different portions thereof to different uses; but the principal value of the invention will probably be found to consist in the capability of the fence for stretching over uneven ground without buckling or bending the tie wires.

While I have described and prefer a tie wire having double open loops formed in the same plane but on opposite sides of the body of the tie wire as seen in Fig. 1, it will be understood that the manner of connecting the tie wires with the cable wires may be considerably varied, as, for example, in Fig. 3 I have shown the tie wires provided with a single, complete, oblong loop C formed by bending the body of the stay wire to produce the oblong loop and then giving the loop a twist, the twisted portion being embraced by the cable wires. In Fig. 4 the same oblong loop is shown, but in this case the stem of the loop is not twisted but the two parts *d, d* thereof

simply pass by each other. As shown in Fig. 5 the parts *e, e* are simply in touching contact, while in Fig. 6 the loop is formed simply by giving the body of the stay wire a half twist. It will be understood that these methods of constructing the engaging loops, bends or kinks in the stay wire are selected only as illustrative of many ways in which the same result might be accomplished.

10 In constructing the fence the stay wires or the necks of their loops or kinks will be laid between the twisting cable wires at proper distances and the twisting of the cable wires with the bent or offset portions of the tie wires will bind the tie wires in place so as to prevent their movement along the cable wires, while permitting them to assume an oblique position with reference thereto when said cable wires are stretched.

20 While I have shown the strands as composed of two wires twisted together, I do not limit my invention thereto.

It will be seen that in the various forms of construction the body of the tie wire is disposed in a plane outside of a plane passing through the several cable wires, and the result of this construction is that as the cables are stretched in an oblique position, the bodies of the tie wires are free to assume an oblique position with reference to the cable wires and without binding. Thus, as shown in Fig. 1, the double loops formed of the S-shape or reverse curve in the tie wire dispose the straight portions of the tie wires outside of the plane of the cables, and that portion of the tie wires between two adjacent cables passes alternately from one side of the plane of the cables to the opposite side of said plane, and at the points of crossing are, as above stated, outside of the plane of the cable.

40 In the construction shown in Figs. 3 to 6 inclusive the bodies of the tie wires do not cross the plane of the cables but continue from top to bottom of the fence on the same side, the loops only intersecting such plane.

The construction shown in Fig 1 is simple, but that construction might be arranged so that the body of the tie wire would not cross the plane of the cable wire.

Without therefore limiting myself to precise details of construction, I claim—

1. Wire fencing comprising in combination a plurality of strand or cable wires arranged parallel to each other and transverse tie or stay wires interwoven with said strands and having portions adapted to loosely engage therewith, substantially as and for the purpose described.

2. A wire fencing comprising in combination a plurality of strands or cables each composed of a plurality of wires twisted together and stay or tie wires interwoven with the strand or cable wires and transversely thereof, said stay or tie wires having loops or bends to loosely engage the members of the cable wires whereby the distance between the cable wires and the position of the stay wires with reference thereto may be varied, substantially as described.

3. The herein-described fencing comprising in combination a series of continuous longitudinal cables each composed of a plurality of wires twisted together and transverse stay or tie wires having their bodies provided with loops adapted to embrace the members of the respective cables and loosely interwoven therewith, substantially as described.

4. Wire fencing comprising in combination a plurality of strand or cable wires arranged parallel to each other and transverse tie or stay wires having portions adapted to be interwoven with said strands, the body of the tie wire at the point of intersection being at one side of the plane of the cable wires, substantially as described.

MICHAEL M. SHELLABERGER.

Witnesses:

EBER LAKE,

WILLIAM CARTER.