

J. W. RAPPLEYE.

Wire-Fences.

No. 136,094

Patented Feb. 18, 1873.

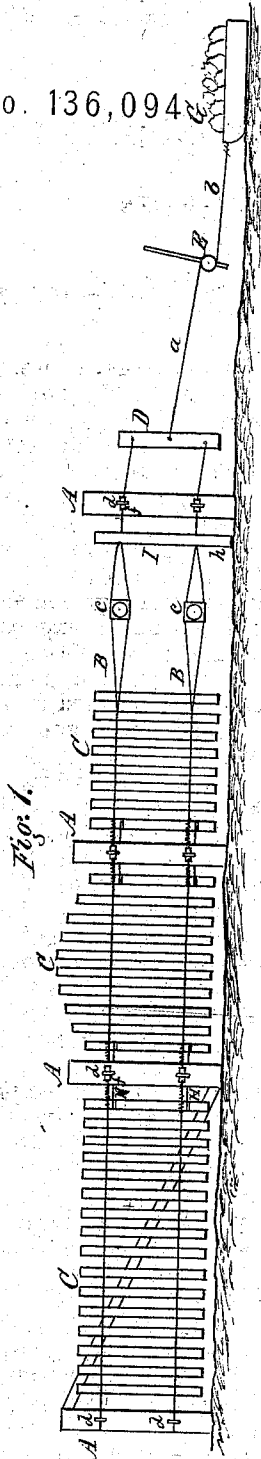


Fig. 1.

Fig. 4.

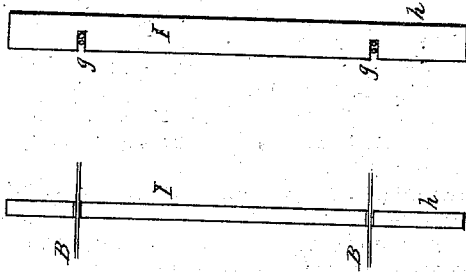


Fig. 2.



Fig. 5.

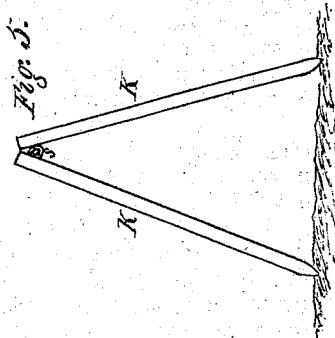
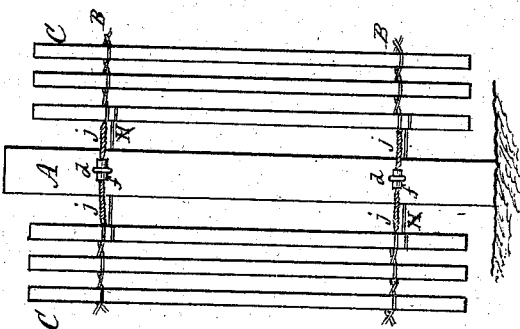


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

JOSHUA W. RAPPLEYE, OF FARMER VILLAGE, NEW YORK.

IMPROVEMENT IN WIRE FENCES.

Specification forming part of Letters Patent No. 136,094, dated February 18, 1873.

To all whom it may concern:

Be it known that I, JOSHUA W. RAPPLEYE, of Farmer Village, in the county of Seneca and State of New York, have invented a certain Improvement in Fences, of which the following is a specification:

This invention is an improvement on that patented to me July 4, 1871, No. 116,753. It consists in combining, with the pickets and wires, brace-wires which pass around the posts and attached to the end pickets of the sections, for the purpose hereinafter stated.

In the drawing, Figure 1 is an elevation; Fig. 2, a top view; Fig. 3, an elevation of Fig. 2; Fig. 4, views of the gage-bar; Fig. 5, a view of the stays.

In general construction the fence is the same as in my patent before referred to.

A A are the posts. B B are the strands of wires which hold the pickets. C C are the pickets. D is the evener. E is the windlass, and G is the stone-boat, or equivalent weight, by which the yielding tension is produced. The wires are attached at one end, then carried the length of the desired stretch of fence and the opposite ends attached to the double-tree or evener, as shown in Fig. 1, and as fast as the wires are taken up by the interweaving of the pickets the stone-boat or other weight is drawn up by the tension, thus always keeping the wires taut and straight. The connection between the evener and the windlass is made by chains or cords *a a*, and between the windlass and stone-boat by chains *b b*. The twisting of the wires to produce the interweaving of the pickets is accomplished by the hand-levers *c c*. The strands of wire are connected with the posts by means of staples or hooks *d d* and metallic sheaths *f f*, which allow a longitudinal free motion. Thus far the construction is the same as in my aforesaid patent.

The first feature of my improvement is as follows: On each side of the posts I make several twists, *j*, of the wires before inserting the pickets, so that when the first pickets are applied they stand some four or five inches, more or less, from the posts and cannot be driven any nearer, thus leaving end room for the main wires to pass through the sheaths under expansion or contraction. I then attach to the end picket, on one side and below

the main wires, a brace-wire, H, which is then drawn taut around the back side of the post, opposite from the staple or hook, and attached in a similar manner to the other end picket on the other side of the post. One of these brace-wires is passed around the post in connection with each set of the main wires.

The advantage of this arrangement is that while the main wires have freedom to move longitudinally through the sheaths and hooks under contraction or expansion, the brace-wires H make a connection around the post and bind the two end pickets together, by which means no outward or lateral strain can come on the sheaths and hooks to wear or chafe them, or to draw them out of place. In other words, the main wires are bound firmly to the faces of the posts, and yet can move longitudinally. This is of importance in resisting wind, thrust, and force of all kinds, which, in ordinary fence of this description, has a tendency to pull the hooks from place, or wear and chafe them out. In addition to the above the tightening of the brace-wires H around the posts draws the line of fence slightly inward from the line of the bearings of the main wires, as shown in Fig. 2, so that there is still less danger of outward thrust to force the hooks or staples from place. Another advantage is that a double connection comes at the posts where the greatest strain occurs, so that there is less danger of breakage of the main wires under longitudinal tension, and even should the line of fence be broken between any two posts by falling trees or otherwise it would not release the adjacent sections, for the reason that the brace-wires tie them in place. Another advantage is that the weight of the fence rests upon the end pickets, held as above described, and does not come in a great degree upon the bearings or hooks.

The second feature of my invention consists of stays K K, which stand at an angle to the fence on opposite sides, as shown in Fig. 5. At their upper ends they have staples or eyes *s s*, through which the main upper wires pass loosely and freely. They are used between the posts at suitable points, and only in those places where, from the condition of the ground, posts at regular intervals apart cannot be well set. They simply serve as stays where there

are long stretches of the wire between the posts, and as the main weight of the fence is held by the tension on the same these stays may be made light and in the form of stakes. Owing also to the tension on the fence the posts may be placed at long intervals apart where these stays are used. The staples or eyes in the stays allow the main wires to move endwise under contraction or expansion, and therefore they are not impediments. In this respect they differ from ordinary stakes. It would not do to make them fast to the wires, as the latter require a free action. The staples at the top allow such free action while they still hold the fence up.

The third feature of my improvement consists in the use of a gage-bar, I, which is slitted, as shown at *g g*, or equivalently arranged, to embrace and slide over the main wires. The slits or bearings which embrace the wires are made at a given distance apart, which is equal to the space between the sets of main wires. The end *h* also projects downward a sufficient distance to rest closely on the surface of the

ground. This device is for the purpose of keeping the main wires at uniform space at all times, and also to keep this uniformity of the wires in passing over uneven surfaces. In this case the bottom of the gage-bar, following the undulation of the ground, will give a corresponding undulation to the wires or make them follow the same course.

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

In combination with the main twisted wires B and the pickets C C, the brace-wires H attached to the end pickets of each panel so as to pass to the rear of the posts A opposite the attachments or bearings of the main wires, in the manner, and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

J. W. RAPPLEYE.

Witnesses:

R. F. OSGOOD,
ARCHIE BAINE.