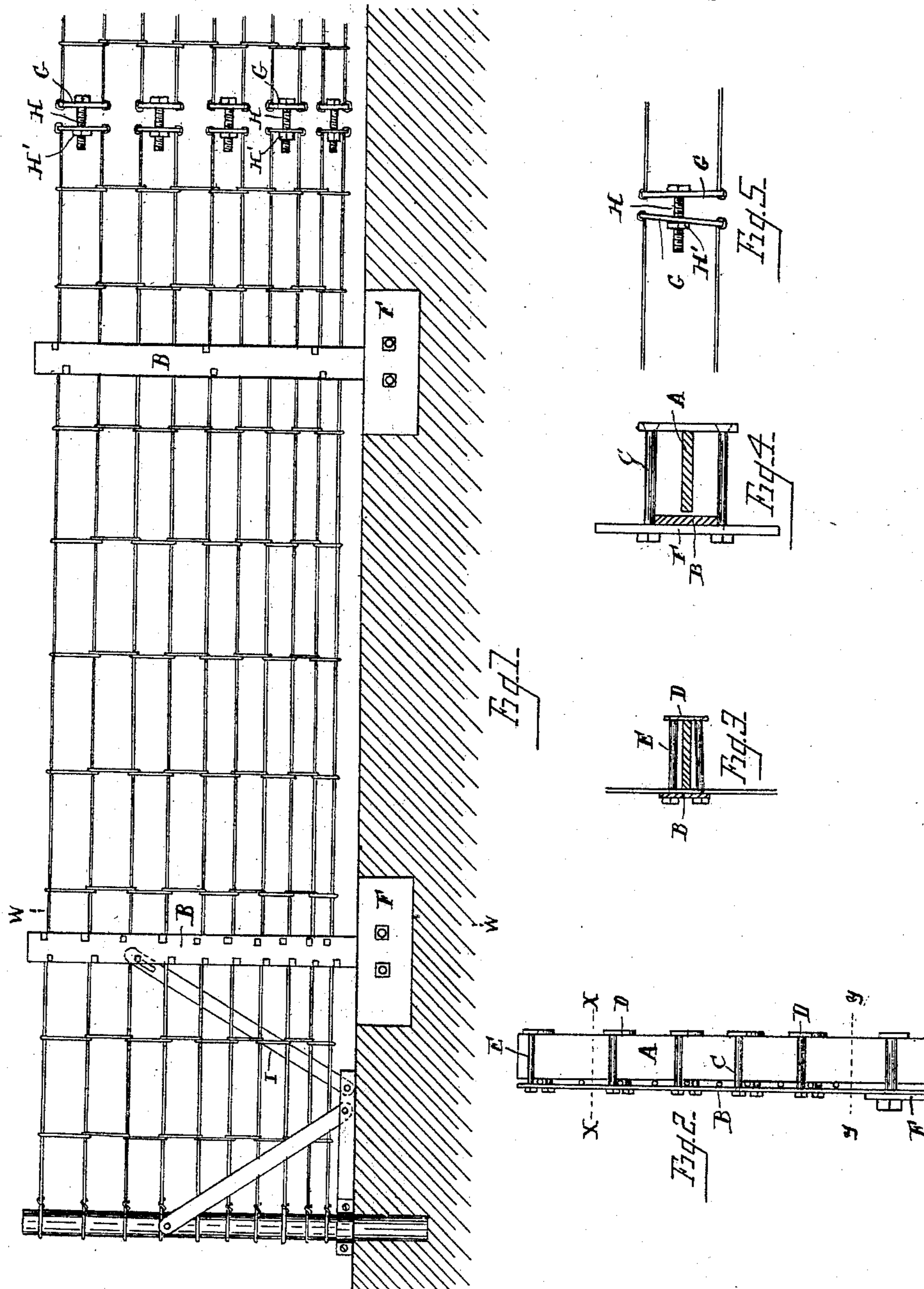


(No Model.)

P. MAST.
WIRE FENCE.

No. 426,623.

Patented Apr. 29. 1890.



WITNESSES

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WIRE FENCE.

SPECIFICATION forming part of Letters Patent No. 426,623, dated April 29, 1890.

Application filed December 2, 1889. Serial No. 332,325. (No model.)

To all whom it may concern:

Be it known that I, PETER MAST, a citizen of the United States, residing at Waterville, in the county of Lucas and State of Ohio, have
5 invented certain new and useful Improvements in Wire Fences; and I 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
10 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to wire fences of that
15 character in which a series of wires are put in tension longitudinally and properly supported the desired distance apart, and to which are woven a series of transverse wires, whereby to not only support the longitudinal wires be-
20 tween the posts from sagging, but to add to the appearance of the fence and render the same the better adapted to turn the stock.

A further object is to render it inexpensive and convenient to manufacture the woven
25 fence in sections that can be readily attached to the posts, and by joining the ends of the sections continued to any desired length commensurate with the area of the field to be inclosed.

30 A further object is to provide a tension device that shall be inexpensive of construction, positive in action, and that can be secured to put two strands of wire in tension with provision for compensating for wires of unequal
35 lengths, whereby there will be equal tension upon each strand.

A further object is to construct the tension device so that there shall be a sufficient spring
40 thereto to compensate for the expansion and contraction in length of the wires due to climatic changes.

A further object is to construct the posts of a rectangular bar of metal with a plate to extend parallel therewith, between which and
45 the posts the longitudinal wires are clamped when drawn to the desired tension, thereby causing the post to possess a strength equal to that of an angle-bar of the same weight, and rendering the construction much cheaper,
50 as well as adapting the parts to serve as clamps to the wires.

A further object is to provide an anchor or stay to the base of the posts that shall also serve to hold the plate to the posts.

A further object is to provide an inexpensive 55 clamp for holding the plate and anchor to the post.

In the drawings, Figure 1 is a front elevation of a portion of fence constructed in accordance with my invention, showing two sections of the woven wire connected by my improved tension device. Fig. 2 is a vertical section of the same, taken on line *ww*, Fig. 1. Fig. 3 is a horizontal section on line *xx*, Fig. 2. Fig. 4 is a like view on line *yy*, Fig. 2. 65 Fig. 5 is a detail view showing the tension device in its adaptability to wires of unequal lengths.

In carrying out my invention I construct a number of sections of the woven wire of from 70 six to fifteen rods in length, (about eight rods being the preferred length,) with the wires at the end of each section secured in pairs to a centrally-perforated plate, the central perforation being of a size to accommodate a threaded bolt to be passed through the same and draw the two sections in the desired tension by means of nuts upon the bolts. By this means the wire portion of the fence is rendered portable, and by reason of its being 80 formed in sections, with provision for securing tension upon each section, it is convenient to erect and secure in proper tension.

A designates the post, formed of a rectangular bar of metal, the post being designed 85 to be inserted into the ground with the edge to the wires.

B designates a plate of metal, designed to be clamped with the flat side parallel with the edge of the post, thereby forming an angled post of great strength, as the width of the post A prevents buckling or bending edge- 90 wise, and the plate B, being secured with the greatest width thereof at right angles to the width of post A, prevents buckling or bending in the direction of the length of the fence, this construction of post allowing the use of metal bars of a minimum weight.

C designates clamps for securing the plate B to post A, and preferably consists of a plate 100 D, perforated to receive bolts E, which also pass through perforations in plate B, arranged

in staggered order of a distance apart vertically to allow a wire to pass between the bolts E, as in Fig. 2.

F designates an anchor-plate, formed of any desired length and of a width to extend into the earth a distance sufficient to steady the post; and also to bear upon plate B and hold it firmly in place, the anchor being secured to post A by clamps C, or in any preferred manner.

My improved tension device consists of a series of plates G of varying lengths, and formed with a central perforation to receive a bolt H and end perforations, through which the ends of the wire of each section are passed in pairs and secured preferably by twisting.

Plates G are made in differential lengths, in order to properly space the wires, it being understood that a preferred form of construction is to secure the lower longitudinal wires closer together than the upper wires, in order to properly turn small stock.

In manufacturing wire fencing by my improved system the sections of wire may, for economy, be woven by hand by simply stretching the longitudinal wires and looping the transverse wires around the same and properly securing the ends, when, after securing plates G to the ends of the sections, the woven wire may be rolled for transportation to the field.

In proceeding to erect a fence the end post is first secured in the ground, and preferably a second post at a short distance therefrom connected with the end post by means of a truss-brace I, such as described in Letters Patent granted to me, numbered 411,995, and dated October 1, 1889. By this construction tension upon the second post causes the truss-brace to bear outwardly upon the end post. After securing the end and second posts in position I secure posts, preferably about every two rods therefrom, across the field in which the fence is to be erected, after which I secure the longitudinal wires of the woven-wire fencing to the end post, and run the first section from the roll, after which the end of the second section is connected with the end of the first section by means of bolts H, passed through the central perforations in plates G, upon which are screwed nuts H', to secure the sections together and put tension upon the same. This operation is repeated until the entire line of wire fencing is completed and secured either permanently or temporarily at the opposite end, when the nuts H' upon bolts H of each tension device are tightened to bring tension upon the entire line of fence, after which plates B are placed in parallel relation with the edges of posts A. Anchor-plates F are then secured to the posts with their inner sides bearing upon plates B, when the earth is thoroughly tamped against the anchors. Clamps C are now employed to secure the plates to the posts and the wires firmly in place between the posts and plates, thereby preventing longitudinal movement of

the wires, the clamps being so arranged that one bolt E is below and one above the wire, as shown in Fig. 2, wherein is shown a clamp to each wire, this number of clamps being only necessary at the post next to the end, three clamps being sufficient with a ten-wire fence by reason of using the plate B, which is of sufficient rigidity to clamp the intermediate portions to prevent longitudinal movement. In constructing fences of this character, in order to insure an equal tension upon the wires, it has been found necessary to couple each opposing wire with a tension device, thereby greatly increasing the expense.

In some cases when it has been attempted to couple all of the wires to a single plate it has been found that the uneven lengths of wire would cause great tension upon the shortest, while the longest would be out of tension. By my construction, wherein the head and nut of the bolt may act as a pivot upon which the plates G may move to compensate for unequal lengths, as shown in Fig. 5, there is insured an equal tension upon all of the wires, and by reason of the wires being coupled in pairs the proper spacings may be made in constructing the sections.

Should the line of fencing be of great length, the fence, after being stretched as much as possible, may be secured to every fourth post and the intermediate tighteners caused to put the fence in proper tension, an object impossible of attaining wherein the entire length of woven wire is in one piece and the tension is effected from each end only. It is well-known that the wires in the character of fence described are expanded and contracted in length by climatic changes. These variations in length are compensated for by the spring of the plates G, thereby insuring equal tension at all times. It will be observed that in the construction described the cost is reduced to a minimum, with convenience of handling and great strength.

What I claim is—

1. In a wire fence constructed in sections, a series of tension-plates, each perforated centrally and at its ends, the latter perforations receiving the ends of two longitudinal wires in the same section, in combination with a threaded bolt passed through the central perforations of opposite plates on adjoining sections and a nut on the bolt for drawing the wires in tension, substantially as described.

2. In a wire fence constructed in sections, a series of tension-plates, each perforated centrally and at its ends, the latter perforations receiving the ends of two wires in the same section, loosely looped therein, in combination with a threaded bolt passed loosely through the central perforations of opposite plates on adjoining sections and a nut on the bolt for drawing the pairs of wires in tension, whereby the plates are allowed a limited pivotal movement on the bolt to compensate for uneven contraction and expansion of the wires.

3. In a wire fence, the combination, with a

rectangular vertical post and a series of horizontal plates at right angles to the rear edge of the post, of longitudinal wires bearing against the front edge of the post, a vertical face-plate at right angles to the front edge of the post and bearing against the wires, and threaded bolts passed through said plates and provided with nuts, substantially as described, and for the purposes stated.

4. In a wire fence, a post formed of two sections between which the wires are held, in combination with clamps, each comprising a vertical plate at the rear edge of the post and bolts passed through said plate and the front section of the post in staggered order, to allow the wires to rest between the bolts, as and for the purpose set forth.

5. In a wire fence, a post formed of two sections between which the longitudinal fence-wires are clamped, in combination with an anchor-plate in front of and against the front section of the post and a clamp comprising a vertical plate at the rear edge of the post and bolts passed through said rear plate and through the anchor-plate, substantially as described, and for the purposes stated.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

PETER MAST.

Witnesses:

WILLIAM WEBSTER,
CARROLL J. WEBSTER.