

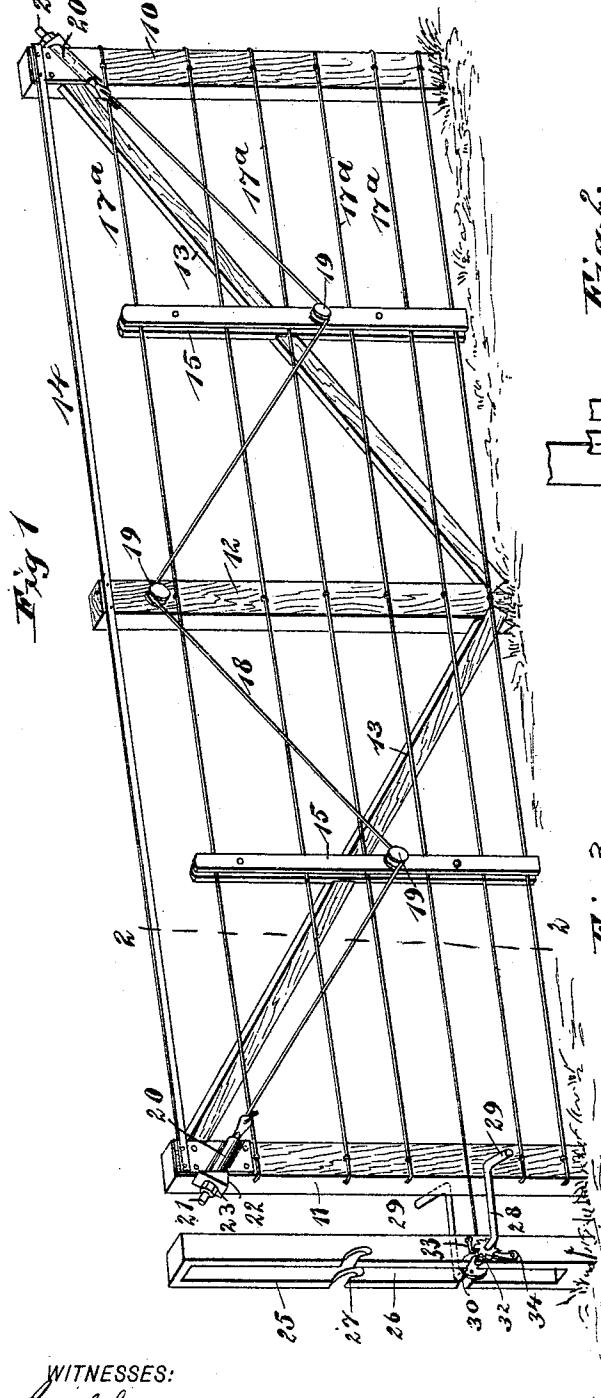
No Model.)

J. T. PATTON.
FENCE.

2 Sheets—Sheet 1.

No. 500,033.

Patented June 20, 1893.



(No Model.)

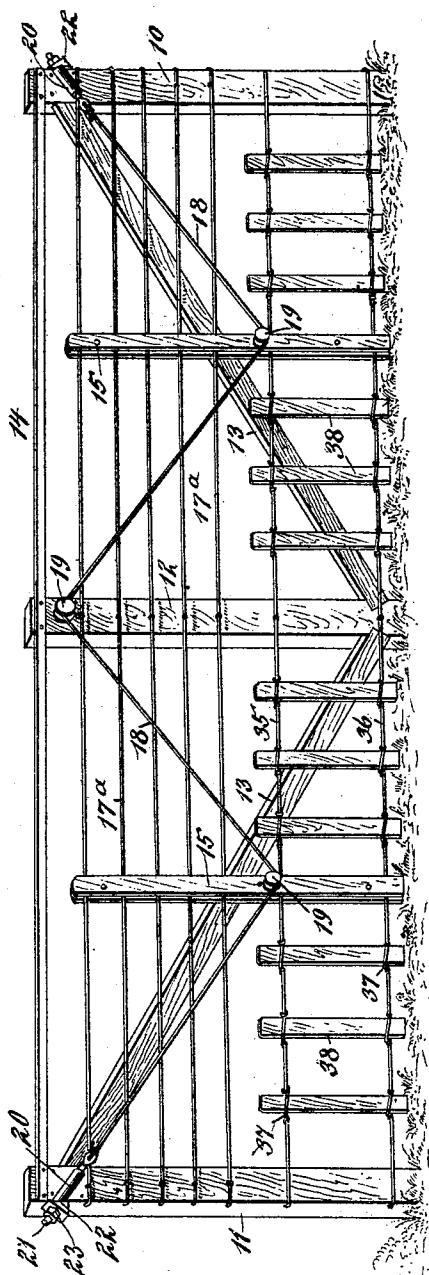
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Fig. 4.



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FENCE.

SPECIFICATION forming part of Letters Patent No. 500,033, dated June 20, 1893.

Application filed October 8, 1892. Serial No. 448,246. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. PATTON, of Highland, in the county of Highland and State of Ohio, have invented a new and useful Improvement in Fences, of which the following is a full, clear, and exact description.

My invention relates to an improvement in the construction of fences, and has for its object to construct a fence mainly of wire and in a simple, durable and economic manner, and to provide a means whereby the sagging of the fence may be prevented, and whereby also the wires may be conveniently, expeditiously and effectually stretched and held under tension by the stretching device until the wires are secured to position.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of a section of fence constructed in accordance with my invention. Fig. 2 is a vertical section taken practically on the line 2—2 of Fig. 1. Fig. 3 is a sectional view through the wire stretching device, illustrating the wire in connection therewith; and Fig. 4 is a perspective view of a section of fence, illustrating a slight modification in its construction.

Any desired number of posts are firmly planted in the ground. In the drawings three posts are shown, two end posts designated as 10 and 11, and an intermediate post 12. One face of all of these posts is preferably made flat, as illustrated in the drawings, and the three posts are securely braced and held in an upright position through the medium of diagonal brace bars 13. These bars are secured in any approved manner to the inner faces of the corner posts near the upper ends of said posts, and the brace bars extend from this point downward in direction of the center or intermediate post 12, and the lower extremities of the brace bars are stepped in the opposite sides of the said intermediate post. In stepping the brace bars in the intermediate posts the latter are provided on opposite sides with angular recesses, into which the lower

extremities of the brace bars fit, as clearly shown in Fig. 1. The posts are also held in vertical alignment by the auxiliary brace or tie bar 14. This bar is of flat metal, and is nailed, screwed or otherwise secured to the flat surfaces of the posts at the top portions thereof. The brace or tie rod or bar 14 may be made quite light if in practice it is found desirable; as, for example instead of a bar being used, a strap of metal may be employed.

Between the intermediate and the corner posts stays 15, are located. These stays, as shown in Fig. 2, consist of two parallel bars 15^a and 15^b, held a suitable distance apart by washers 16, and the two bars are connected by means of bolts 17, passed through them and also through the washers 16. The stays are vertically located and are not entered into the ground, nor do they extend up as far as the tie or brace bar 14.

The wires 17^a used in the construction of the fence are secured by staples or otherwise to one of the corner posts; the wires are then passed through the stays and through staples upon the intermediate post to the next corner or end post, where they are also passed through staples as shown in Fig. 1. The staples of the intermediate and the last end post are not driven until the wires are stretched, and the stretching is accomplished by the use of a device to be hereinafter set forth.

To complete the construction of the fence a tension wire 18, is employed, and this wire is adapted as a brace for the fence throughout its length and also to prevent sagging of the fence. For the reception of this tension wire peripherally-grooved pulleys 19, are employed. One of these pulleys is securely attached to the center or intermediate post 12 near the top thereof, preferably between the top wire 17^a and the tie or brace bar 14, and another pulley 19, is securely attached to one face of each stay 15, the attachment being usually made at or near the centers of the stays. Sockets 20, are secured diagonally upon the end posts near the top portions thereof, and these sockets receive bolts 21, the bolts being diagonally located, and the inner faces of the bolts are provided with eyes while the outer ends are threaded. A wedge nut 22, is loosely mounted upon each of the

screws, and the flat or straight surfaces of these nuts have bearing against the outer faces of the end posts, and the screws are likewise provided with lock nuts 23, which are 5 screwed upon the threaded portions of the bolts and have bearing against the inclined surfaces of the wedge nuts. The tension wire is passed over the pulley upon the intermediate post and beneath the pulleys upon the 10 stays, and the ends of the wire are secured to the inner portions of the bolts 21, as best shown in Fig. 1. It is therefore evident that by 15 tightening up the bolts 23, tension will be exerted upon the stays in such a manner as to cause them to remain in the position in which 20 they are placed, and thus a sagging of the wires will be prevented, as a pin may be passed through the stays beneath each of the 25 wires 17^a of the fence. The stays are prevented from slipping as each has a recess 24 produced in one of its side faces to receive the brace bar 13 adjacent to which they are placed. If in practice it is found desirable the pulleys 19 may be made to turn.

25 The wire tension device is shown in Figs. 1 and 3. It consists of a post 25, adapted to be firmly set in the ground adjacent to the end post where the wires are loosely fastened. The post 25, is provided with a longitudinal 30 slot 26, extending from a point near the bottom preferably to a point near the top; and in the outer face of the post 25, any desired number of inclined slots 27 is transversely formed and these slots are adapted to constitute 35 bearings for a crank shaft 28. The crank shaft 28, is of practically U-shape, its members being provided with outwardly-extending handles 29, and the bow portion of the shaft is adapted to enter the slots or bearings 40 27 in the post.

The bow member of the crank shaft has secured upon it at or near its center a disk 30, in which apertures 31, are made; and near one end of the bow section of the shaft a 45 ratchet wheel 32, is secured, and this ratchet wheel, when the shaft is in its bearings in the post 25, is preferably engaged by two pawls 33 and 34, one engaging it from above and the other from below, the pawls being removably 50 fulcrumed upon the post 25 adjacent to the bearings 27.

In the operation of stretching the wire, the shaft is placed in one of the bearings, and if a wire is in alignment with the shaft it is carried over the bow portion thereof and is secured to the disk 30, as shown in Fig. 3. The shaft is then revolved, the pawls permitting it to turn in one direction only while engaging with the ratchet wheel as shown in Fig. 55 1. When the required tension has been brought to bear upon the wire under manipulation, the staples through which the wire has been passed are driven firmly home in the post and the wire is held in its stretched position. The wire is then cut off at the post adjacent to which the tension device is located, and the end is ordinarily bent around the post.

In the event that the wire to be stretched is not in alignment with the shaft when placed in either of the bearings 27 of the post 25, a 70 strand of wire is attached to the shaft and looped to the wire to be stretched, the staples through which the fence wire passes serving to guide it in proper direction while being placed under tension. If in practice it is 75 found desirable the bearings 27, may be produced directly in one of the corner or end posts of the fence, in which event the shaft is used upon that post and the auxiliary post 25, may be dispensed with.

80 It is evident that a fence constructed in the manner above set forth will be exceedingly durable and economic, and that each and every part of it will be properly braced so that there will be no lateral sagging, and the 85 vertical sagging of the wires may be easily overcome by adjusting the tension wire 18.

In Fig. 4, the fence therein illustrated is of the same construction as that shown in Fig. 1, except that the wires 17^a are arranged closer 90 together than shown in Fig. 1, and the last wire is placed at or near the central portion of the fence. The space between the ground and the lower wire 17^a, is filled up to an extent, by two strands of wire 35 and 36, running across all of the posts and likewise through the stays 15, but more than two wires 35 and 36 may be employed if in practice it is found desirable. Upon these wires 35 and 36 a series of pickets 38 is placed, the pickets being fastened to the wire strands by staples or equivalent forms of fastening devices, or through the medium of loops 37 of wire, as illustrated.

When the fence is constructed as shown in 105 Fig. 4, the lower portion of it will be stronger than when constructed as shown in Fig. 1, and the fence shown in Fig. 4 is therefore better adapted for inclosing spaces in which small animals are to be pastured or confined, as the 110 pickets will afford more resistance than the wire strands; they are more rigid also, and they may be arranged as close together as necessary to prevent exit of the animals between them.

115 I desire it to be distinctly understood that in both forms of the fence the stays may be made single instead of double as illustrated, and that they may be attached to the strands of wire in any manner that may be found desirable or practicable.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a fence, the combination, with the end 125 and the intermediate posts of a section, and brace bars or beams attached to the upper portions of the end posts and extending diagonally downward to an engagement with the lower portion of the intermediate post, and 130 wires stretched along all of the posts, of stays to which the wires are attached, located at each side of the intermediate post of a section and having locking engagement with the

diagonal brace beams, a pulley secured to the intermediate post near its upper end, pulleys secured to the stays near their centers, tension devices located upon the end posts, and 5 a wire attached to the said tension devices and passing over the said pulleys, as and for the purpose specified.

2. In a fence, the combination, with the end and intermediate posts of a section, and brace bars or beams attached to the upper portions of the end posts and extending diagonally downward to an engagement with the lower portion of the intermediate posts, and wires stretched along all of the posts, of stays secured to the wires; located at each side of the intermediate post of a section and having connection with the diagonal brace beams, a pulley secured to the intermediate post near its upper end, pulleys attached to the stays near 15 their centers, tension devices located upon the end posts, a wire attached to the said tension devices and passed over the said pulleys, and pickets secured to the lower strands of the wire, substantially as and for the purpose 20 specified.

3. In a fence, the combination, with the end and intermediate posts of a section, a metallic brace or tie bar connecting the upper ends of said posts, diagonal brace beams emanating 25 from the upper portions of the end posts and extending downward to an engagement with the opposite sides of the intermediate posts, the lower ends of the brace bars being stepped in said posts, of a series of wires stretched 30 longitudinally along the posts and secured thereto, stays through which the wires pass, held vertically in engagement with the brace bars, sockets formed upon the upper portions 35 of the end posts, screws held to turn in said

sockets, carrying wedge and lock nuts, pulleys secured to the stays and the intermediate posts of a section, the pulley of the intermediate post being out of alignment with those of the stays, and a tension wire secured to the inner ends of the posts and passing over said 40 pulleys, as and for the purpose set forth.

4. In a fence, the combination, with the end and intermediate posts of a section, and wires stretched along all of the posts, of stays to engage with the wire, located at each side of the 45 intermediate post of a section, a pulley secured to the intermediate post near its upper end, pulleys secured to the stays near their centers, tension devices located upon the outer end posts, a wire attached to the said tension 50 devices and passing over said pulleys, and a locking connection between the wires and the stays, as and for the purpose specified.

5. In a fence, the combination, with the end and the intermediate posts of a section, and 55 wires stretched along the posts, of stays held in engagement with the wires, the stays being located at each side of the intermediate post of a section, a pulley secured to the intermediate post near its upper end, pulleys secured 60 to the stays near their centers, tension devices located upon the end posts, a wire attached to the said tension devices and passing over the said pulleys, and pickets securely 65 attached to the lower wires of the fence, the 70 pickets being located between the end posts and stays and the stays and intermediate post, as and for the purpose specified.

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Witnesses:

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