

(No Model.)

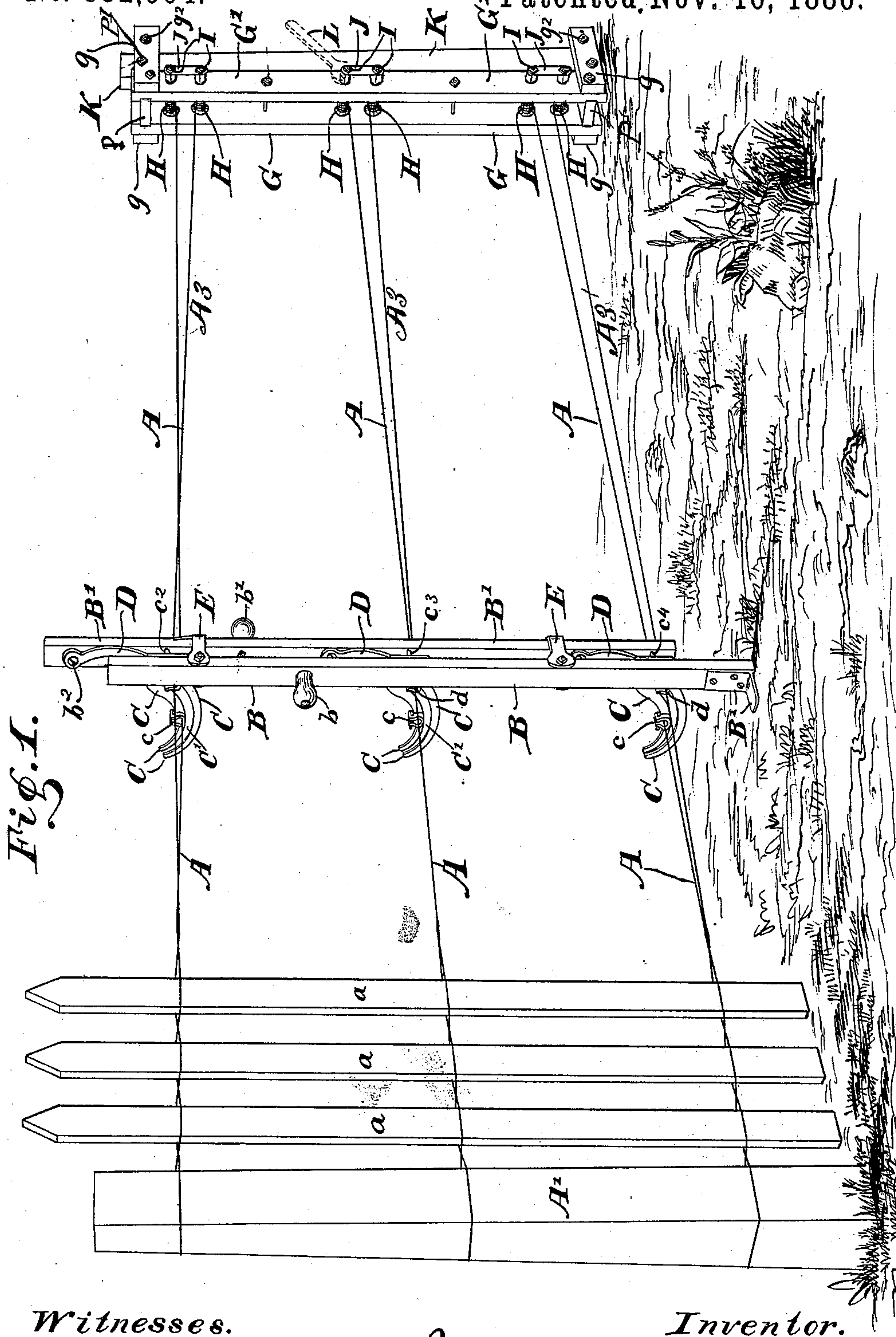
2 Sheets—Sheet 1.

H. OGBORN.

FENCE WEAVING MACHINE.

No. 352,904.

Patented, Nov. 16, 1886.



Witnesses.

Chas. W. Leonard.
Geo. W. Bunting.

Inventor.

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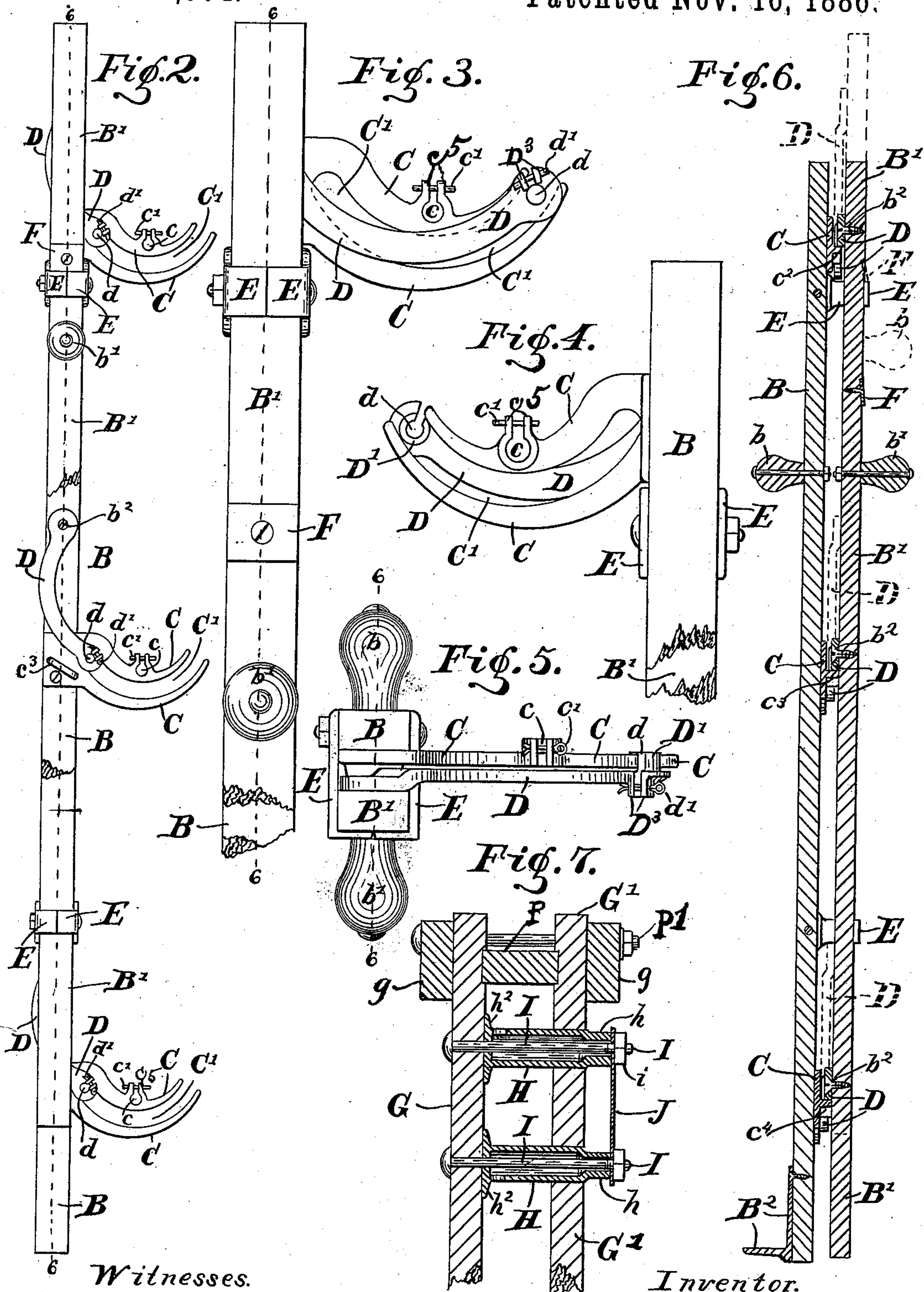
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UNITED STATES PATENT OFFICE.

HARRISON OGBORN, OF RICHMOND, INDIANA.

FENCE-WEAVING MACHINE.

SPECIFICATION forming part of Letters Patent No. 352,904, dated November 16, 1886.

Application filed June 5, 1886. Serial No. 204,251. (No model.)

To all whom it may concern:

Be it known that I, HARRISON OGBORN, a citizen of the United States of America, residing at Richmond, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Fence-Weaving Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of said specification, in which—

Figure 1 is a perspective view of the weaving and tension devices. It also shows a section of the fence and posts as usually constructed. Fig. 2 is a side elevation, with a portion of the frame broken away near the middle. Fig. 3 is a side elevation of the weaving device, with the parts in different position from that shown in Fig. 2. Fig. 4 is a side elevation from the opposite side to that shown in Fig. 3. Fig. 5 is a top view of the same, showing the weaving devices with the sliding bar D pushed down and out. Fig. 6 is an edge view of the weaving devices, showing in dotted lines the position of the sliding bar D when at the upper end of the stroke. Fig. 7 is a vertical sectional view of a portion of the tension devices, showing the construction of the working parts. (See, also, Fig. 1.)

My invention relates to a novel construction and arrangement of vertical bars and weaving-arms attached thereto, and to novel means for locking and unlocking the vertical bars and holding them in any position required, and in novel means for holding the under wire parallel to and in proper position at all times when the slat is inserted relatively to the upper wire, and in adjustable automatic tension devices, to which one end of the wires is secured, and which hold the wires firmly, and yet permit them to be uncoiled when the tension becomes great enough to cause the spools to turn on their bolts.

B and B' represent two parallel bars, having the clasps E E secured to bar B and embracing bar B', to prevent lateral motion when the bar B' is reciprocated by means of the handle b². The bar B is also provided with a handle, b, for the operator to hold it firmly upon the ground when the bar B' is reciprocated. A

foot-plate, B², is also secured to the lower end of bar B, to give it a broader foundation. Bar B is also provided with two or more horizontal curved bars, C, having the slots C' and c. The latter are formed about midway of the upper part of arm C, to receive the upper wires, A, which are held therein by cotter-pins c', passing through the lips c⁵. These slots c are large enough to permit splices or knots in the wire to pass through, so that there will be no stoppage of the wire when moved longitudinally in them.

Slots C' are open at their outer end to receive a flange, D', on bars D. Said flange is provided with an opening, d, for the wire A³, which can be removed from the slot without loosening it at either end or disturbing the tension of finished work. The curved bars D are of about the same length as the slotted bars C, and are pivoted at their upper end to the bar B'. The lower end of these bars D is provided with a flange, D', which projects into and slides freely within the slot C'. On the end of the arm are formed the flanges D³, having a pin, d', for securing the wire in the opening or slot d. The flanges D' of the curved bars D are held in the curved slots C' by reason of the attachment of bars D to bar B', and bars C to bar B. These bars, as before stated, are held against all but a reciprocating movement by the clasps E E. Lugs c², c³, and c⁴, formed integral with bars C, hold bars B and B' a proper distance apart.

F is a stop designed to hold the bar B' in the position shown in dotted lines, Fig. 6, when it is desired to put in a slat or picket. It is secured to the outside of bar B', and may be of any desired form. In the present instance a plate is used. The upper part of the plate is countersunk in bar B', to give its outer face an inclined or wedge-like surface, so that as the bar is pushed up the plate will pass under the upper clasp, E, and hold said bar in place until released by the operator. When the stop or plate F is forced under the clasp, the upper part of bar B' is bent or forced inwardly toward bar B, and to prevent the stop from straining the clasp the lug c² is made shorter than the lug c³, say about the thickness of plate F.

In order to provide a complete tension device as a necessary and indispensable part of

my invention, I construct one as follows: The frame is built as shown in Figs. 1 and 7. In Fig. 7 the entire device is shown. I generally use two bars about four feet long, four inches wide, and one inch thick. One of these bars, G', has two or more sets or pairs of holes bored in it about four inches apart, as shown in Figs. 1 and 7, for the reception of two or more pairs of hollow spools, H H. The other bar, G, is placed about three inches from the first, as shown in Fig. 7, and this bar is pierced with small holes exactly opposite to those in bar G', for the reception of the bolts I I, which pass through and hold the spools H H in position. These bolts fit tightly in bar G, so they cannot be turned round. There should be grooves cut in these bars, as shown in Fig. 7, and blocks P placed therein. There are also two horizontal pieces of wood or other material, g g, bolted to each end of this device, Figs. 1 and 7, usually about three inches wide and thirteen inches long, fastened by bolts to each end of the upright bars, as shown. Their projecting ends embrace the post K, as shown in Figs. 1 and 7, and are detachably attached to the post by bolts g² g² passing through holes in bars g g. (See Fig. 7.) The frame being prepared as described, the round spools H H, having square parts h, on which the wrench shown in dotted lines, Fig. 1, operates, are placed in position, as shown in Fig. 7, with flange h² resting firmly against bar G, the body of the spool resting in the hole in bar G', and bolt I passing through the spool H. I use a long washer, J, Figs. 1 and 7, having a hole near each end, so as to embrace the bolts I I, which prevents the washer revolving. Outside of the long washer I put the nuts i i on the bolts I. The flat surface of flange h² being made smooth and oiled, and the other end of the spool H and washer being smooth and oiled, a firm uniform pressure on the ends of the spools is produced by the nut i, which makes the tension work smooth and regular when in use, allowing the wire to uncoil when the strain becomes sufficient, without any care on the part of the operator.

My drawings show a six-wire fence; but I make machines with more or less wires, as may be desired.

The operation of my invention is as follows: The wires being permanently attached at proper points to post A, with the necessary posts ready set along the line, the other ends of the wire are carried to the tension device, which may be ten, twenty, forty, or more rods from the starting-point, the wires being ten, twenty, or more feet longer than the distance from post A' to the tension device. The ends of the wires are attached to the spools by slipping them through small holes in the spools H, and bending them so as to prevent their pulling out. The nuts i are then tightened to suit the operator, and the spools rotated by the wrench (shown in dotted lines) in the direction indicated in Fig. 1 until all the extra wire is wound on the spools and the amount

of tension desired given the spools by the nuts i. The weaving device is now placed upon the wires, several feet away from the post A', and a picket dropped down between the wires and forced by the hand and foot, or driven by any convenient hand instrument, into the desired position. The weaving device should now be moved to twist the wires between the picket and it. Then the bars are pressed toward each other, the bar B' is pushed down, the catch F passes under the clasps E E, the bar D moves downward and outward and carries the wire A³ under, outward, beyond, and above wire A, as shown in Fig. 3, and thus crosses the wire, so that the under one presses up against the upper wire, A, so as to keep both wires parallel with each other, and at the same time open a space for another slat, which is inserted in the same way and forced in position in like manner, when the bar B' is raised and the parts returned and held in position shown in Fig. 1. The operation is then repeated, the weaving devices being moved along on the wire as the pickets advance. The wires hold the weaving devices in an upright position, and the moment the operator raises or lowers the bar B' both hands are free to place the picket in position.

I usually cut the pickets of uniform length, and lay a board down on the ground for the machine and the lower ends of the pickets to rest on, so as to have the pickets even at the top and bottom. When a few rods are finished, I raise the fence to the proper position and fasten it with staples or nails to the post, they being ready set. Meantime the tension-spools let off as much and no more of the coiled wire as is taken up by the bends in the wire.

This machine does not break, twist, strain, and destroy the fiber of the wire, and waste large quantities of it by harsh and excessive twisting, as many machines do, and takes up very little in the length of the wire, thus preserving the strength and quality of the wire, and saving largely in the quantity of wire used in a given length of fence built.

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

1. The combination of two adjacent vertical weaving-bars, the slotted bars C, and the pivoted bars D, each having a wire-retaining device, clasps for holding the bars in position, and handles for operating them, in the manner and for the purposes substantially as set forth.

2. The combination of two vertical parallel weaving-bars, clasps for holding them in position, handles for operating them, and slotted bars C and pivoted arms D, each having holes for the wires, for the purposes and uses substantially as set forth.

3. The combination of two vertical weaving-bars having the slotted bar C and pivoted bar D, each provided with a wire-retaining device attached thereto for weaving the wires and

slats together, lugs for holding them the proper distance apart, and clasps for holding them in position while in motion, substantially as set forth and described.

5 4. The combination of two vertical weaving-bars secured together, one having the slotted bars C, provided with a wire retainer or holder, and the other having the pivoted bars D, provided with a wire retainer or holder, substantially as described.

10 5. The combination of bars B and B', clasps E, slotted curved bars C, having recesses *c*, curved pivoted bars D, having holes *d*, lugs *c*² *c*³ *c*⁴ between the bars B and B', plate or stop F, and the handles *b* *b'*, substantially as described.

20 6. The curved slotted bar C, rigidly attached to bar B, and having recess *c* near its middle, in combination with curved bar D, pivoted at the top to bar B', having lug D', with recess *d* at its outer end, by means of which it is made to traverse slot *c'*, as and for the purpose set forth.

25 7. The rigidly-attached bar C and pivoted bar D, formed and attached as described, in combination with upright bars B B', spools H H, bolts I, nuts *i* *i*, frame G, G', and P, bolts P', and arms *g* *g*, substantially as and for the purposes set forth.

30 8. The frame G, G', and P and bolts P', in combination with spools H, bolts I I, nuts *i* *i*, uprights B B', and bars C D, constructed in the manner substantially as and for the purposes set forth.

35 9. The frame G, G', and P, in combination with spool H, having flange *h*² and square part *h*, bolt I, and nut *i*, substantially as and for the purposes set forth.

40 10. In combination with the frame G G', spools H, bolts I, and nuts *i*, the long double washer J, for the purposes specified.

11. The curved slotted bar C, rigidly attached to the upright B, and provided with the recess *c* for the wire A, as herein set forth.

45 12. The curved slotted bar C, rigidly attached to the upright B, and provided with the recess *c* for the wire A, in combination with the arm D, pivoted to bar B', and provided with recess *d* for the wire A³, as herein set forth.

50 13. The curved slotted bar C, rigidly attached to the upright B, and provided with recess *c* and slot C', open at its outer end, for the purposes specified.

55 14. The curved slotted bar C and curved pivoted bar D, provided with recesses *c* *d*, respectively, in combination with pins *c'* *d'*, substantially as shown and described.

60 15. In combination with a tension device and a fence-post, the within-described weaving device, consisting, essentially, of the uprights B B' and the curved slotted bar C and curved pivoted bar D, substantially as shown and described.

65 16. In a wire-fence machine, the combination of bars B and B', having devices for crossing the wires, and the lugs *c*², *c*³, and *c*⁴, for the purpose specified.

70 17. The frame G, G', and P, spool H, bolt I, and nut *i*, in combination with projecting arms *g* *g*, post K, and bolt *g*², for attaching the tension devices to the post, in the manner and for the purposes herein set forth.

In testimony whereof I have affixed my signature in presence of two witnesses.

HARRISON OGBORN.

Witnesses:

WILBERN K. BRADBURY,
C. E. BRADBURY.