

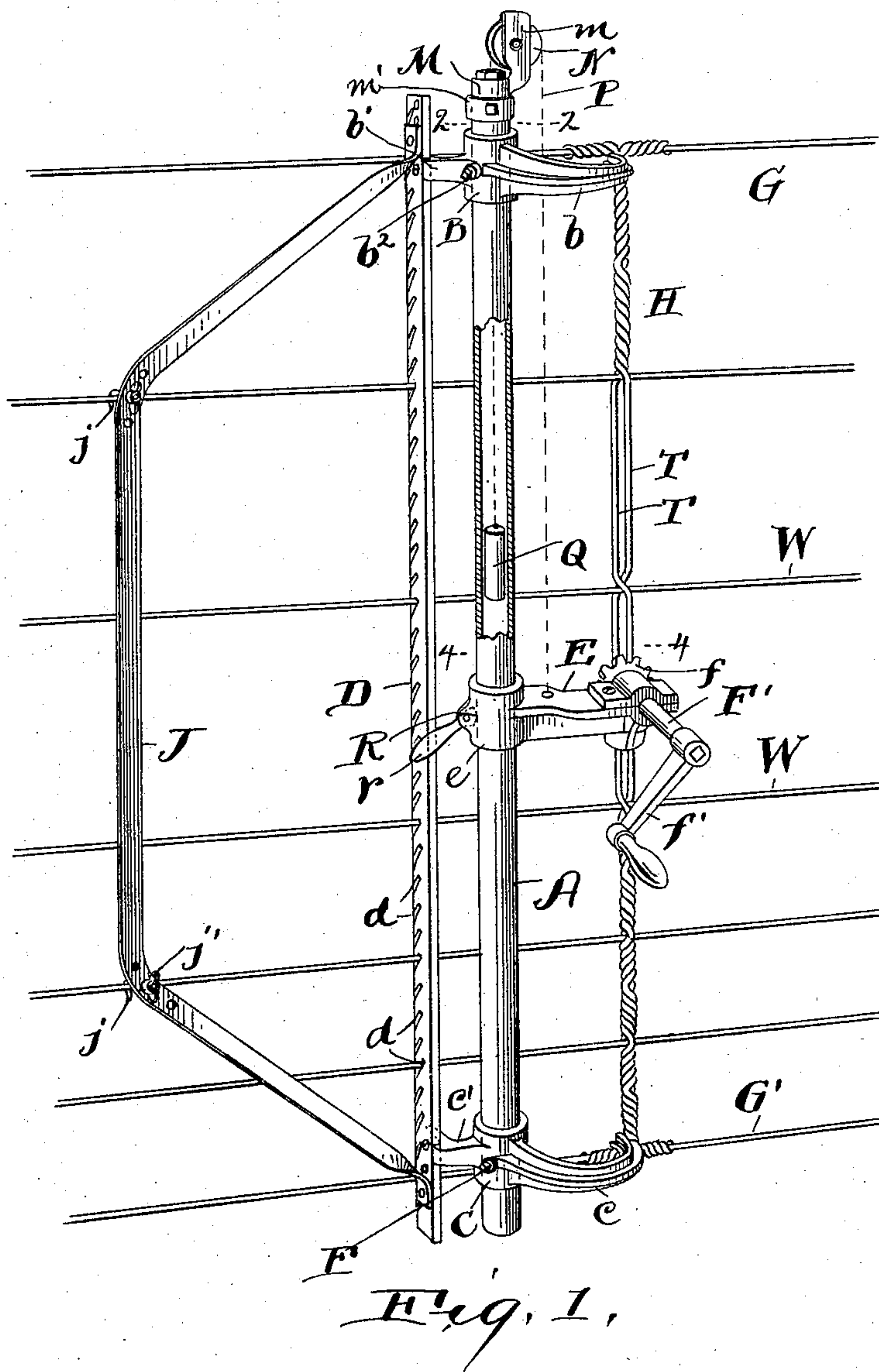
(No Model.)

2 Sheets—Sheet 1.

A. E. ROBERTS.
FENCE MAKING MACHINE.

No. 604,905.

Patented May 31, 1898.



Witnessed.
E. B. Gilchrist
Philip C. Knowlton.

Inventor:
Albert C. Roberts,
By his Attorneys,
Shurston & Bates

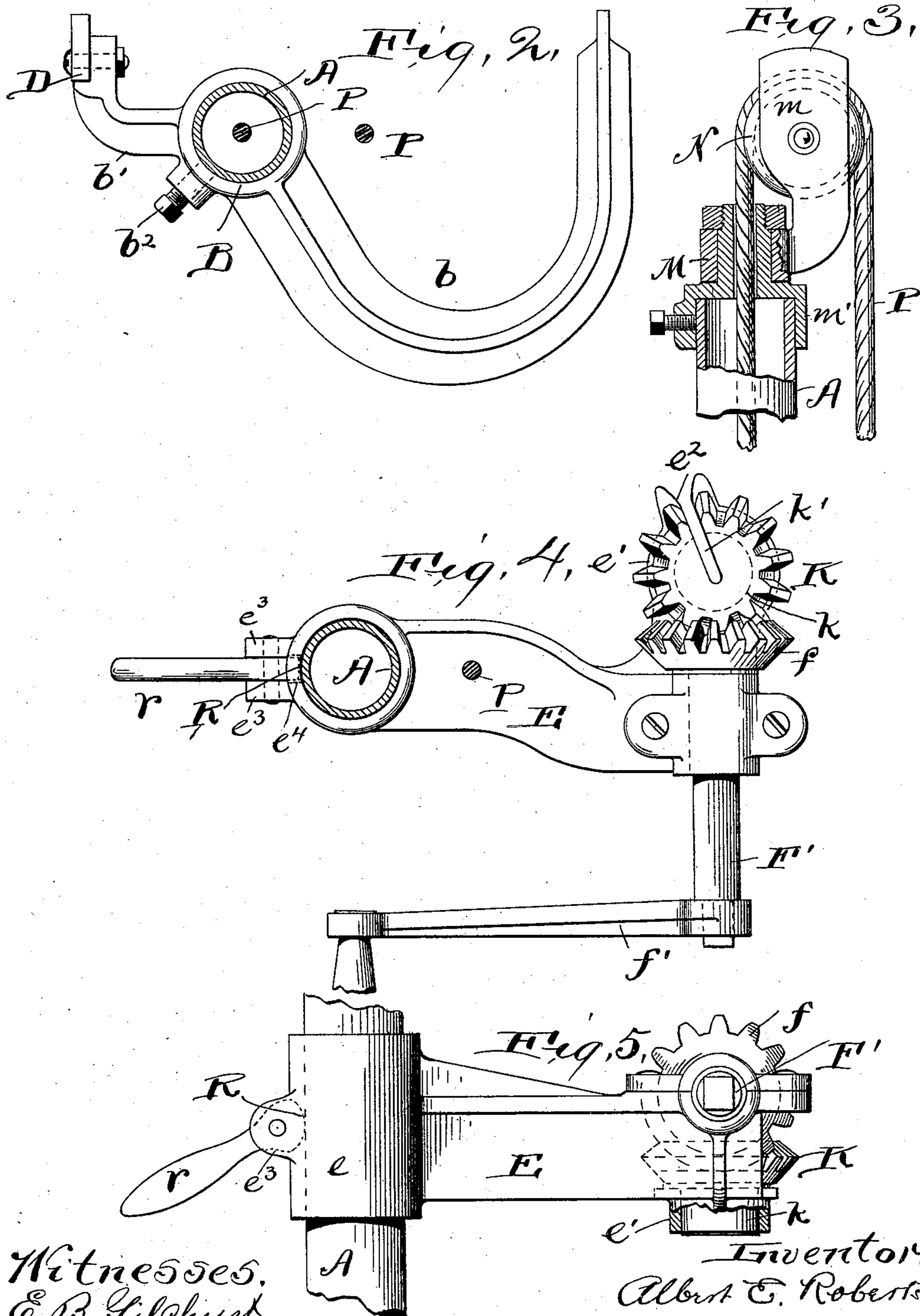
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UNITED STATES PATENT OFFICE.

ALBERT E. ROBERTS, OF NORWALK, OHIO, ASSIGNOR OF ONE-HALF TO
JOHN H. CLAUSS, OF FREMONT, OHIO.

FENCE-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 604,905, dated May 31, 1898.

Application filed December 2, 1897. Serial No. 660,556. (No model.)

To all whom it may concern:

Be it known that I, ALBERT E. ROBERTS, a citizen of the United States, residing at Norwalk, in the county of Huron and State of Ohio, have invented certain new and useful Improvements in Fence-Making 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.

The invention relates to a portable fence-machine adapted for use in the field.

The object is to provide a cheap and efficient machine whereby two vertical stay-wires which are placed on opposite sides of previously-stretched running wires and at their ends are wound about the top and bottom running wire may be twisted together between said running wires to form a stiff stay which by the aforesaid twisting is fastened upon the running wires.

The invention consists in the construction and combination of parts hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of my improved fence-machine in position to perform its functions. Fig. 2 is an enlarged sectional plan view on line 2 2 of Fig. 1. Fig. 3 is an elevation, partly in section, of the top of the post which supports the other parts of the machine. Fig. 4 is a sectional plan on line 4 4 of Fig. 1; and Fig. 5 is an elevation of the parts shown in Fig. 4, the lower part of the twister-bearing being sectioned.

A represents a tubular post which when the machine is in use rests in a vertical position upon the ground.

B represents a collar which embraces the post A near its upper end and is adjustably fixed thereto by the set-screw b^2 . A curved arm b is formed integral with this collar, and the end of this arm engages beneath the top running wire G near the stay H, which is being twisted, to prevent the twisting of the stay from pulling said wire down out of line. C represents another collar which embraces the post A near its lower end and is adjustably fixed thereto by a set-screw F. A curved arm c is formed integral with the collar C.

The end of this arm lies above and engages with the bottom running wire G' near the point where the stay in process of formation is connected therewith. The purpose of this arm is to prevent the twisting of the stay from drawing this running wire upward. The collar B has also a second arm b' and the collar C a second arm c' , and to these arms b' and c' is secured a vertical bar D, in the edge of which are formed a plurality of upwardly-inclined notches D. The running wires W engage in these notches when the machine is in operation. A curved bar J is secured to this bar D at its top and bottom, its position being such that it lies against the running wires when the notched bar engages with said wires W and when the ends of the curved arms b and c engage, as above stated, with the top and bottom running wires, respectively. Hooks j , having threaded stems, pass through holes in this bar J. These hooks engage with two of the running wires, whereby when the nuts j' on the ends of said threaded stems are screwed up this bar J is fastened to said running wires.

The arms b and c are curved substantially as shown, so that after the ends of said arms engage, as described, with the running wires the ends of the stays may be twisted upon said running wires by a tool which may be revolved around the running wires without striking said arms b and c .

E represents a bracket-arm having a hub e upon its inner end, which hub embraces and is vertically movable upon the post A. This bracket-arm carries the twisting mechanism, which is constructed as follows:

The twister consists of a bevel-gear K and a cylindrical portion k , which is mounted in a vertical cylindrical bearing e' in the bracket-arm E. In this twister is a radial slot k' , extending from end to end and from its edge to a short distance past its center. The bearing e' , in which this twister is journaled, is likewise slotted, wherefore the two stay-wires may enter the slot k' in the twister, passing through the slot e^2 in the bearing.

F' represents a horizontal operating-shaft which is likewise journaled in the bracket-arm E. It has upon its inner end a bevel-gear f , which meshes with the bevel-gear K of

the twister. A crank f' is fixed to the shaft F' , whereby it may be rotated.

On the top of the post is a collar M , having two vertical ears m , between which the sheave N lies and to which said sheave is journaled. This collar is preferably swiveled upon a cap m' , which is fast to the post; but said collar M may be rigid with the post. A rope P is fastened to the bracket-arm E , passing over said sheave, its other end being fastened to a weight Q , which is movable up and down in the tubular post, the weight being of such size that it about balances the bracket-arm and the devices carried by said arm.

On the rear side of the hub e are two ears e^3 , between which lies a cam R , which cam is pivoted to said ears. The cam projects through a slot e^4 in the sleeve and is adapted to bear against the post A . The cam is provided with a handle r , by means of which it may be operated. This cam is the means by which the arm E may be clamped at any desired point and in any desired position to the post A . The handle r being lowered, the arm E may be moved up and down or turned around on the post A , so that it may reach a position where it may engage with the stay-wires between any pair of running wires. This clamping device may, however, be omitted, if desired.

The manner of using the machine is the following: The running wires W are stretched and secured. The described machine is then placed in proper position, the end of the post resting upon the ground. The two collars B and C are secured at the proper elevation. The running wires are caused to enter notches d in the bar D . The ends of the two arms b and c are placed, respectively, below the top running wire and above the bottom running wire near the points where the stay is to be attached, and the bar J is secured to the running wires by the hook-bolts j . Two stay-wires T T are placed in a vertical position on opposite sides of the running wires and the ends of these stays are wound about the top and bottom running wires. The arm E is now raised or lowered to a point which will bring the twister midway between two running wires. This arm is swung horizontally until the slots e^2 and k embrace both stay-wires, the clamping-cam R is operated, and then the crank is turned until the stay-wires are sufficiently twisted. The arm E is then swung clear of the stay-wires, is raised or

lowered, as may be necessary, and then again swung into engagement with the stay-wires, as before. These operations are repeated until the stay-wires are twisted between all of the running wires.

Having described my invention, I claim—

1. In a fence-making machine, in combination, a supporting-post, a vertically-movable bracket-arm having a slotted bearing for a twister, a twister consisting of a cylindrical portion which is mounted in said bearing and upon which it revolves, and a geared portion whereby it is revolved, said twister having a longitudinal slot k' , and a geared operating-shaft for revolving said twister, a cable fastened to said bracket-arm, a sheave carried by the post over which the cable passes, and a counterbalance-weight secured to the end of the cable, substantially as and for the purpose specified.

2. In a fence-making machine, in combination, a tubular post, a sheave mounted upon the post, a vertically-movable bracket-arm carried by said post, a weight movable in the post, and a cable connecting said weight and bracket-arm and passing over said sheave, and a stay-twister carried by said bracket-arm, substantially as and for the purpose specified.

3. In a fence-making machine, in combination, a post, two adjustably-fixed collars, each having a curved arm the end of which is adapted to engage with a running wire, a bracket-arm on the post between said collars, and a stay-twister carried by said bracket-arm, substantially as and for the purpose specified.

4. In a fence-making machine, in combination, a post, a collar B adjustably fixed thereto having the curved arm b and the oppositely-extended arm b' , a collar C adjustably fixed to the post having the curved arm c and the oppositely-extended arm c' , the vertically-notched guide-bar fixed to the arms b' and c' , and adapted to engage with the running wires of a fence, the bracket-arm on said post, and stay-twisting mechanism carried by said bracket-arm, substantially as and for the purpose specified.

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

ALBERT E. ROBERTS.

Witnesses:

E. L. THURSTON,
J. H. CLAUSS.