

(No Model.)

A. E. ROBERTS.
FENCE MAKING MACHINE.

No. 604,906.

Patented May 31, 1898.

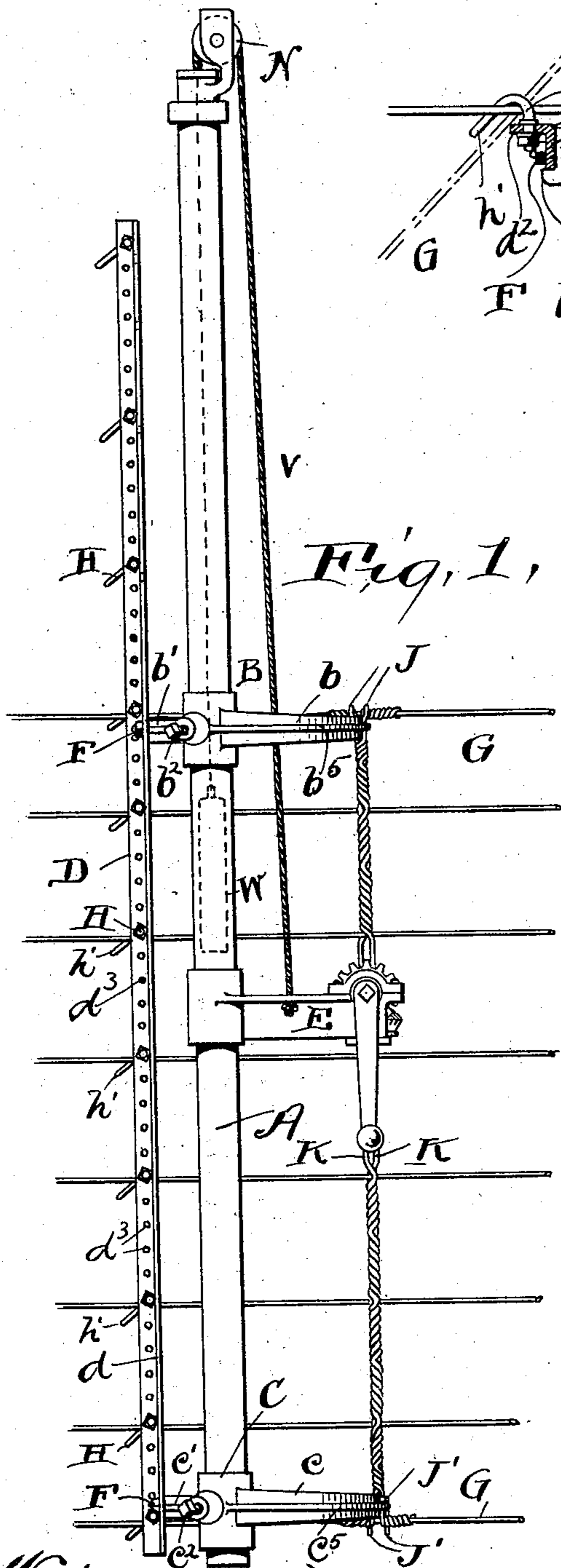


Fig. 1,

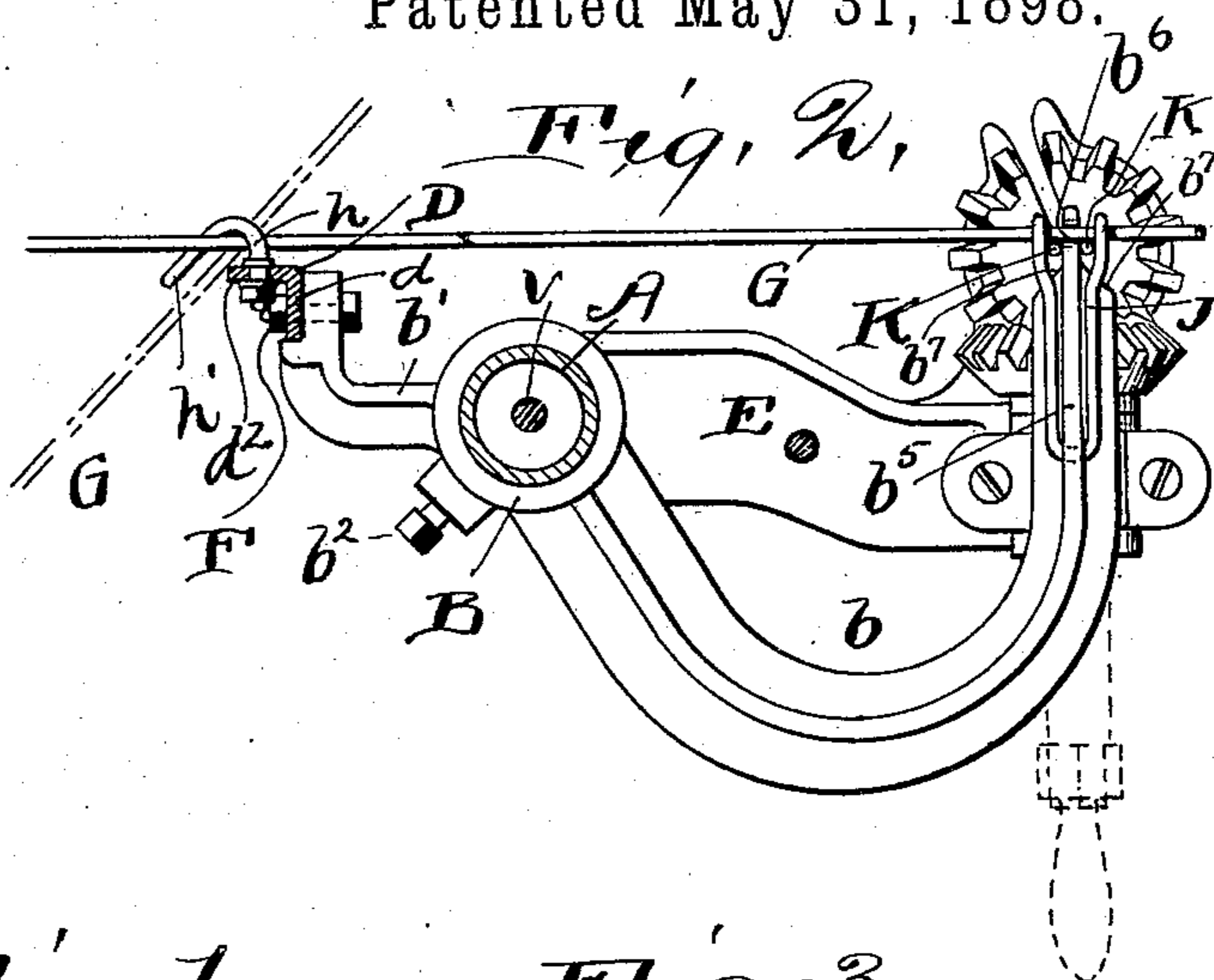


Fig. 2,

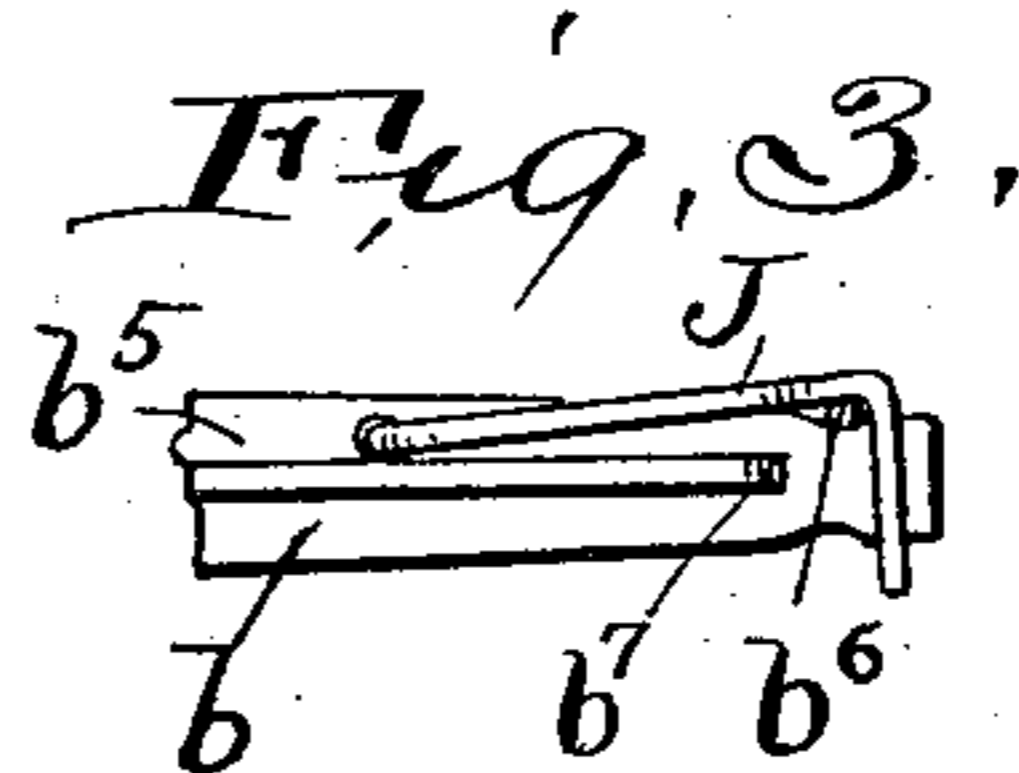


Fig. 3,

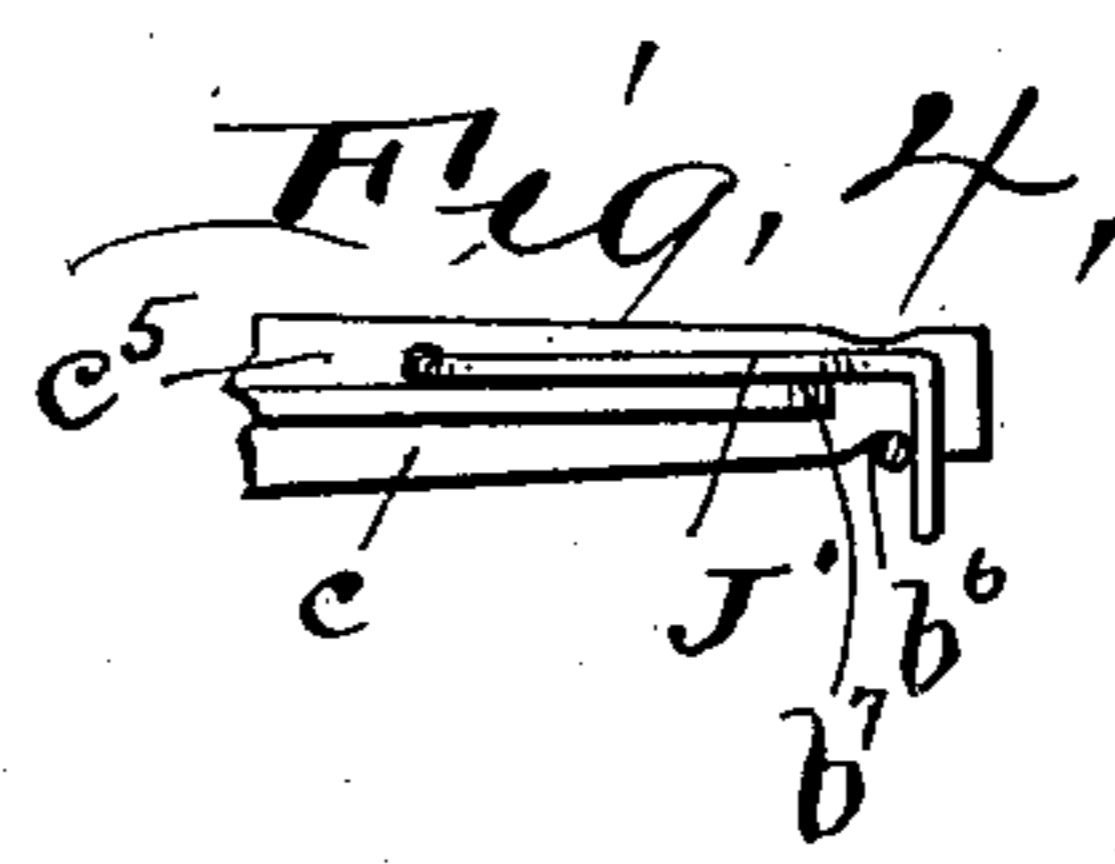


Fig. 4,

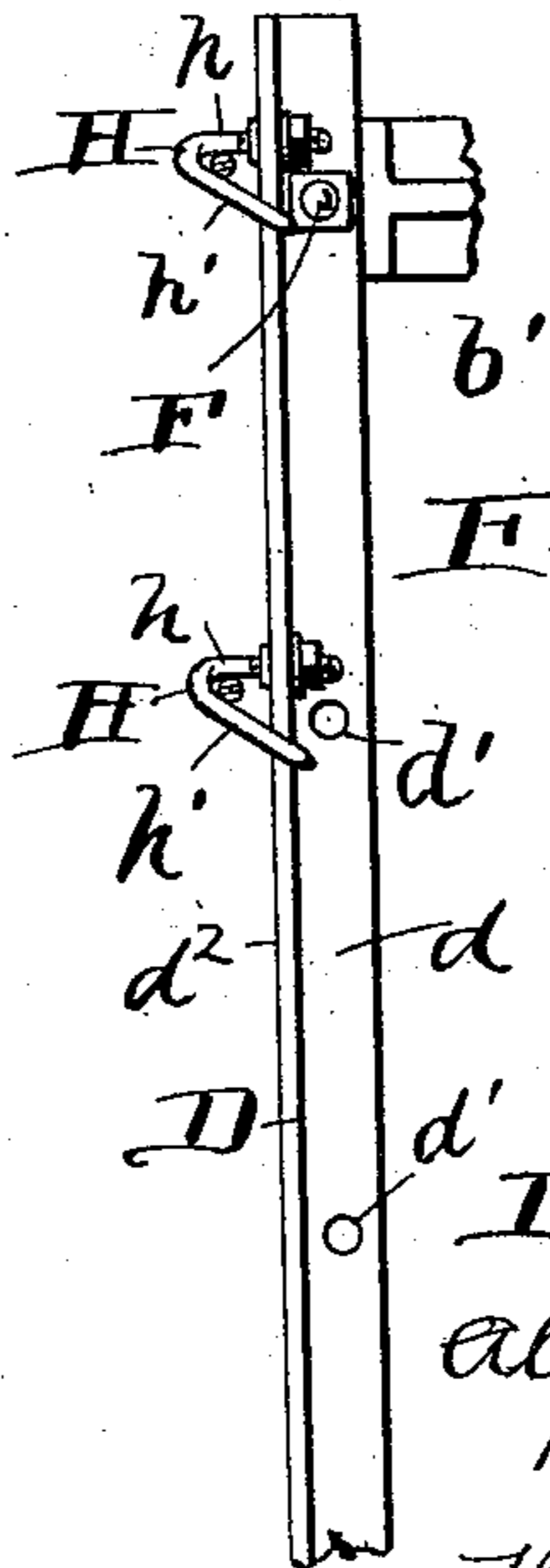


Fig. 5,

Witnessed
E. B. Gilchrist
Philip C. Knowlton.

Inventor,
Albert E. Roberts,
By his Attorneys,
Thurston & Bates

UNITED STATES PATENT OFFICE.

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

FENCE-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 604,906, dated May 31, 1898.

Application filed January 11, 1898. Serial No. 666,331. (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 a certain new and useful Improvement in Fence-Making Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

The present invention is designed especially as an improvement upon the fence-making machine shown and described in my pending application, filed December 2, 1897, Serial No. 660,556, which machine is adapted to twist two stay-wires together between the previously-stretched running wires of a fence.

The objects of the invention are to simplify and cheapen the construction, to facilitate the necessary engagement and subsequent disengagement of the machine from the running wires upon which stays are to be twisted by the machine, to hold said machine in proper relation to the running wires during the twisting of the stays, and to produce a machine capable of easy transformation to adapt it to making fences of different heights.

The invention consists in the construction and combination of parts hereinafter described, and definitely pointed out in the claims.

In the drawings, Figure 1 is a front elevation of the machine embodying my invention. Fig. 2 is a plan view of the same. Fig. 3 is a view from the right side of Fig. 1 of the end of the arm *b*. Fig. 4 is a similar view of the bar *c*, and Fig. 5 is a view from the left side of Fig. 1 of the vertical angle-bar.

Referring to the parts by letters, A represents the tubular post, which when the machine is in use is intended to rest upon the ground. Embracing this post near its upper end and rigidly fastened to the post at any desired elevation by means of a set-screw *b*² is a collar B. Integral with this collar is a curved arm *b*, the end of which is adapted to engage beneath the upper running wire G, and also an arm *b'*, which extends in the opposite direction. Embracing the post A near its lower end is a similar collar C, which is adjustably secured thereto by a set-screw *c*². Integral with this collar are two arms *c'* and

c, which are shaped like the corresponding arms attached to collar B, the arm *c* being intended to engage at its end with the top side of the lower running wire G.

The stay-twisting mechanism is supported by the post between the collars B and C. As shown, it is carried by an arm E, which is vertically movable upon the post and is counterbalanced by a weight W in the post, the weight and arm being connected by a cord *v*, which passes over a sheave N, mounted on the top of the post.

In the particulars referred to the machine shown in the drawings is substantially like the machine shown in the prior application referred to.

D represents a vertical bar formed of angle-iron. One side, *d*, of the bar is secured by bolts F to the arms *b' c'*, which bolts pass through holes in said arms and through holes *d'* in the angle-iron. Near the upper end of this bar D a plurality of these holes *d'* are formed in the side *d* of the angle-bar, whereby said bar D may be secured to the upper arm *b* whatever may be the elevation at which the collar B is secured to the post. In the other side, *d*², of the bar D are formed a plurality of holes *d*³, in which is secured one leg of the hook-bolts H. These hook-bolts are substantially U-shaped; but the free legs *h'* of these hook-bolts are inclined downward, lying below the other legs *h*—that is to say, the hooks are set obliquely. The open part of the hooks are toward the front of the machine. The hooks are placed in this oblique position so that they may be caused to easily and quickly engage with the running wires G when the right-hand side of the machine is swung forward—that is to say, when the machine occupies the position with respect to the running wires which it does with respect to the dotted lines in Fig. 2, representing the running wires. When the machine is in this relative position to the running wires, the hooks may be easily engaged with the running wires; but when the right-hand side of the machine is swung backward until the ends of the arms *b* and *c* engage, respectively, below and above the top and bottom running wires the lower legs of the hooks pass under the running wires, wherefore the running

wires are held between the hooks and the bar D and cannot be removed from the hooks until the right side of the machine is again swung forward. The machine is held in the position
 5 with relation to the running wires which is shown in Fig. 1 by devices which engage with the running wires and prevent the right-hand side of the machine from swinging forward. The devices for this purpose which are shown
 10 consist of two hooks J J', which are pivoted, respectively, to ribs b^5 c^5 on the ends of the arms b and c . The rear ends of the hooks are turned downward and are adapted to pass behind the top and bottom of the wires, respec-
 15 tively, thus preventing the right side of the machine from swinging forward. The machine is thus held in proper relation to the running wires for twisting the stays thereon; but the machine may be moved along the run-
 20 ning wires freely to any desired position.

On the top of arm b is a shoulder b^6 , which lies in front of the running wire which rests upon said arm, said running wire being held in fixed relation to the said arm by said shoul-
 25 der and by the hook J. On the bottom of arm c is a similar shoulder, between which and the hook J' the lower running wire is held.

On both sides of both arms b and c are the shoulders b^7 . The outer ends of the two hook-
 30 arms are spread apart, whereby the stay-wires K K may pass through the openings bounded by the running wires G, the shoulders b^7 , and the sides of the hooks J and be held in proper relation to the running wires until said stay-
 35 wires are twisted upon the top and bottom running wires.

Having described my invention, I claim—

1. In a fence-making machine, the combination of a vertical post, a collar B secured
 40 thereto having two rigid arms b and b' , a collar C secured to the post having the two rigid arms c and c' , and stay-twisting mechanism carried by the post between said collars, with a vertical bar rigidly secured to the two arms
 45 b' c' , and a plurality of obliquely-disposed hooks II secured to the rear side of said bar for engagement with the running wires, substantially as specified.

2. In a fence-making machine, the combi-

nation of a vertical post, a collar B secured
 50 thereto having two rigid arms b and b' , a collar C secured to the post having the two rigid arms c and c' , and stay-twisting mechanism carried by the post between said collars, with a vertical bar secured to the two arms b' c' , a
 55 plurality of obliquely-disposed hooks secured to the rear side of said bar for engagement with the running wires, and two hooks pivoted to the arms b and c respectively and adapted to engage behind the running wires,
 60 substantially as specified.

3. In a fence-making machine, the combination with a vertical post, two arms b and c secured to said post, and stay-twisting mechanism between said arms, with the hooks piv-
 65 oted respectively to said arms, and adapted to engage behind the running wires with which said arms engage, substantially as specified.

4. In a fence-making machine, the combination of a vertical post, a collar B adjust-
 70 ably secured thereto having two rigid arms b and b' , and a collar C secured to the post and having the arms c and c' , with a vertical angle-bar secured to the arm c' , and having in one side d near its upper end a plurality of
 75 holes, and a bolt adapted to pass through the arm b' and through any of said holes to fasten said bar to the arm b' , substantially as specified.

5. In a fence-making machine, the combination of a vertical post, a collar B adjust-
 80 ably secured thereto having two rigid arms b and b' , and a collar C secured to the post and having the arms c and c' , with a vertical angle-bar secured to the arm c' , and having in
 85 one side d near its upper end a plurality of holes, and a bolt adapted to pass through the arm b' and through any of said holes to fasten said bar to the arm b' , said bar having in its other side d^2 a plurality of holes, and ob-
 90 lique hook-bolts secured in the last-named holes, substantially as specified.

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

ALBERT E. ROBERTS.

Witnesses:

ALBERT H. BATES,

PHILIP E. KNOWLTON.