

(No Model.)

2 Sheets—Sheet 1.

E. BLODGETT.  
FENCE MAKING MACHINE.

No. 389,540.

Patented Sept. 18, 1888.

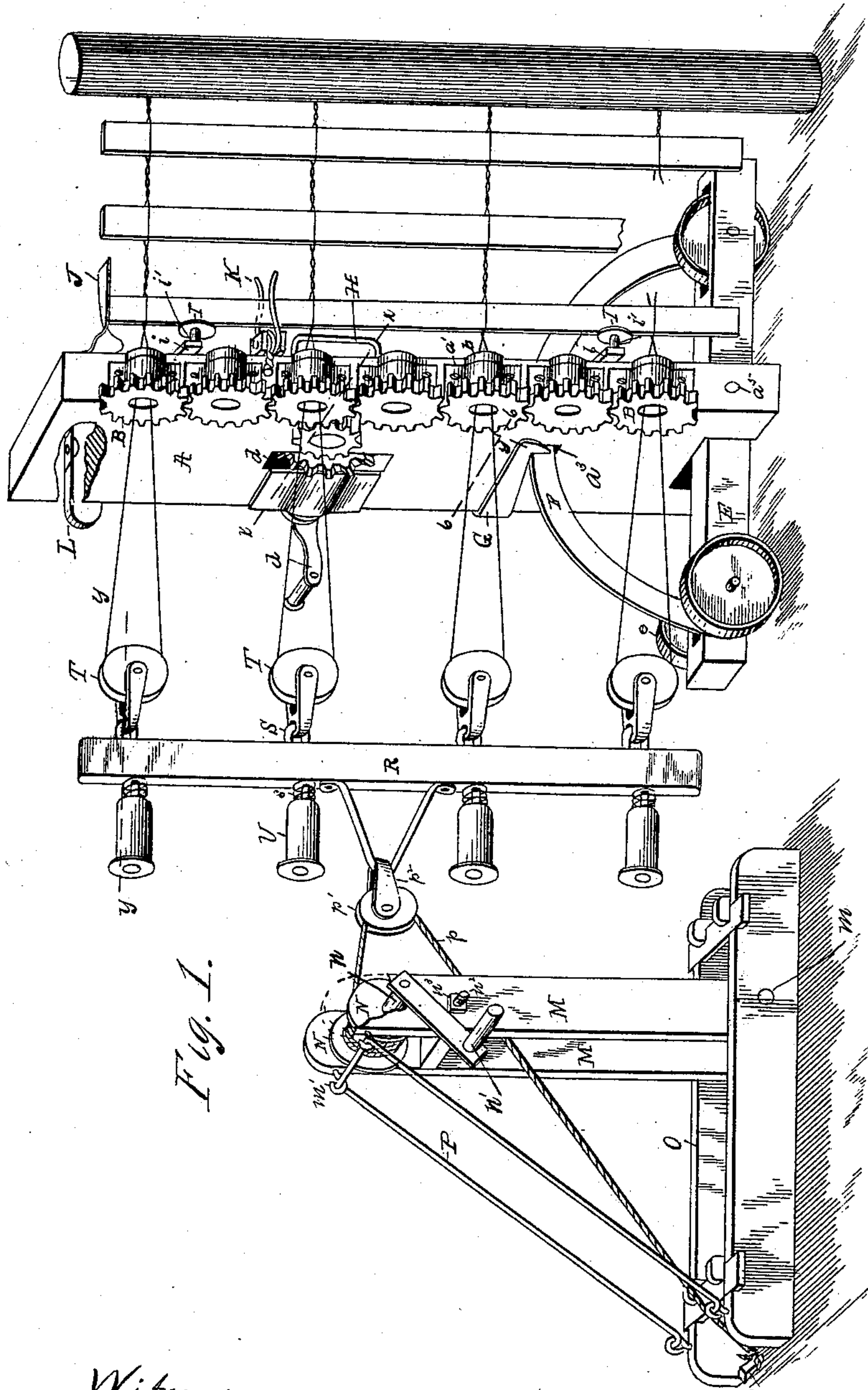


Fig. 1.

Witnesses  
W. A. Barnes.  
Van Duren Hillyard.

Inventor:  
Eames Blodgett  
By R. S. A. P. Lacey  
Atty.

(No Model.)

2 Sheets—Sheet 2.

E. BLODGETT.  
FENCE MAKING MACHINE.

No. 389,540.

Patented Sept. 18, 1888.

Fig. 2

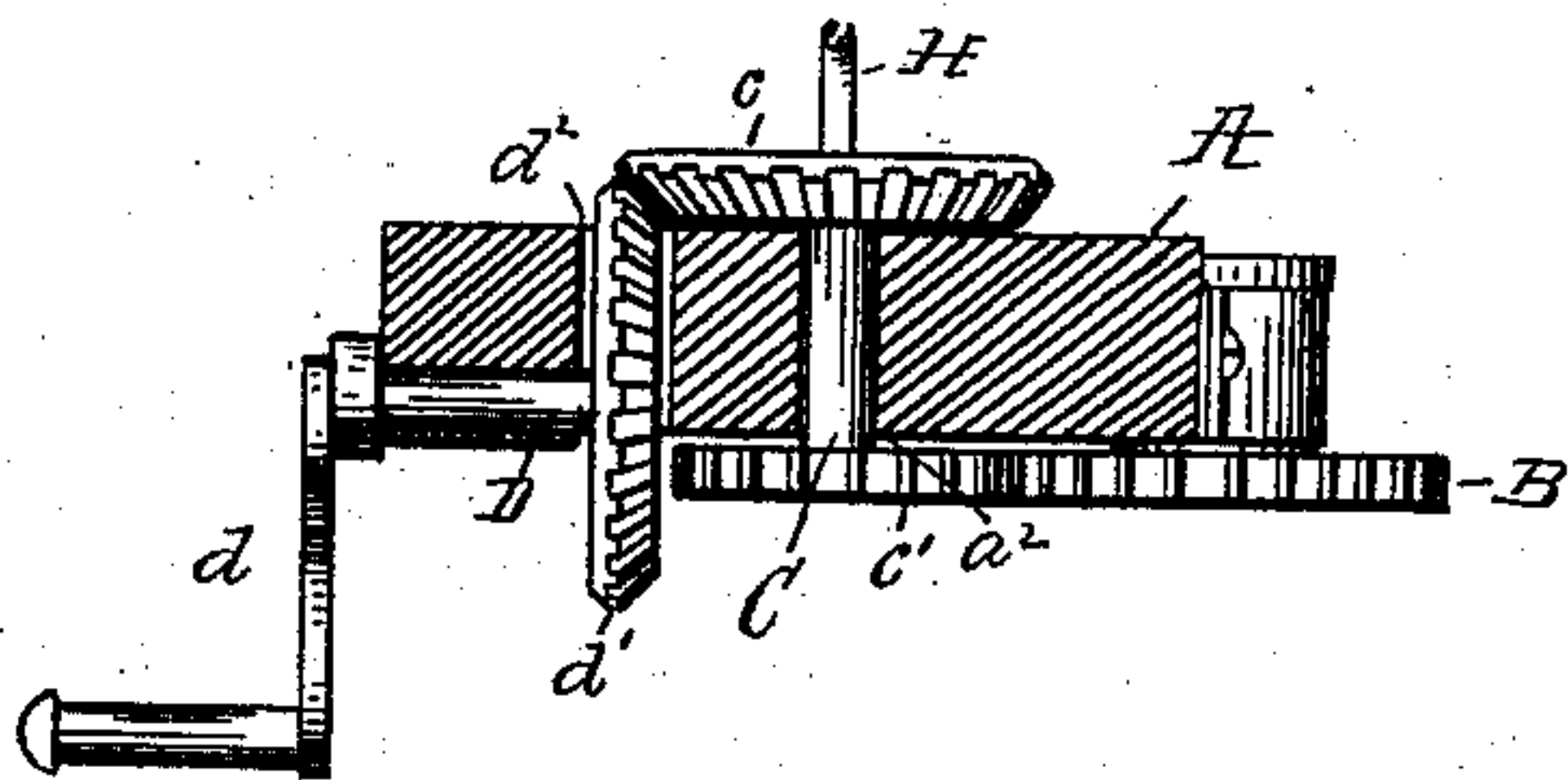


Fig. 3.

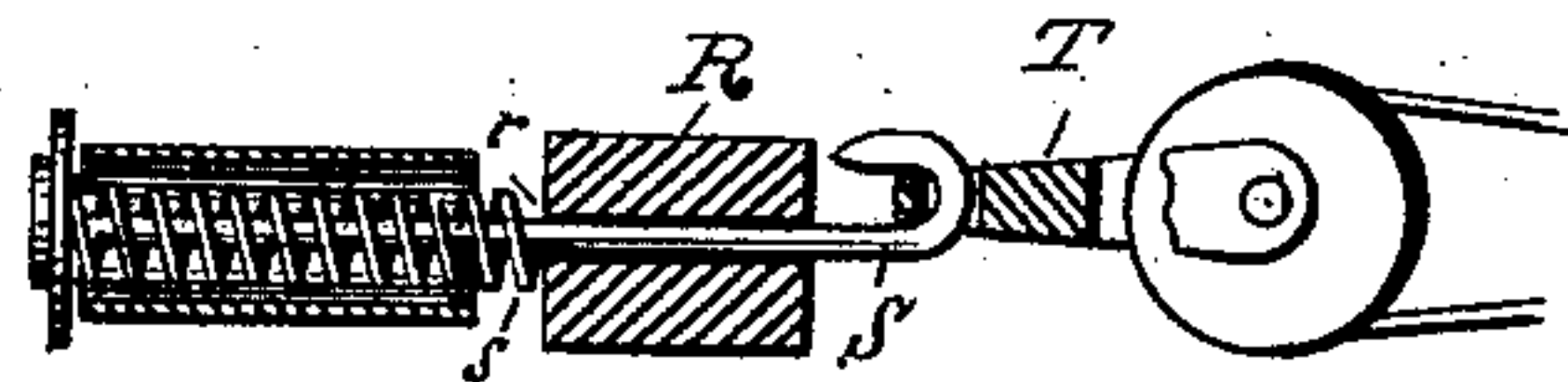


Fig. 4.

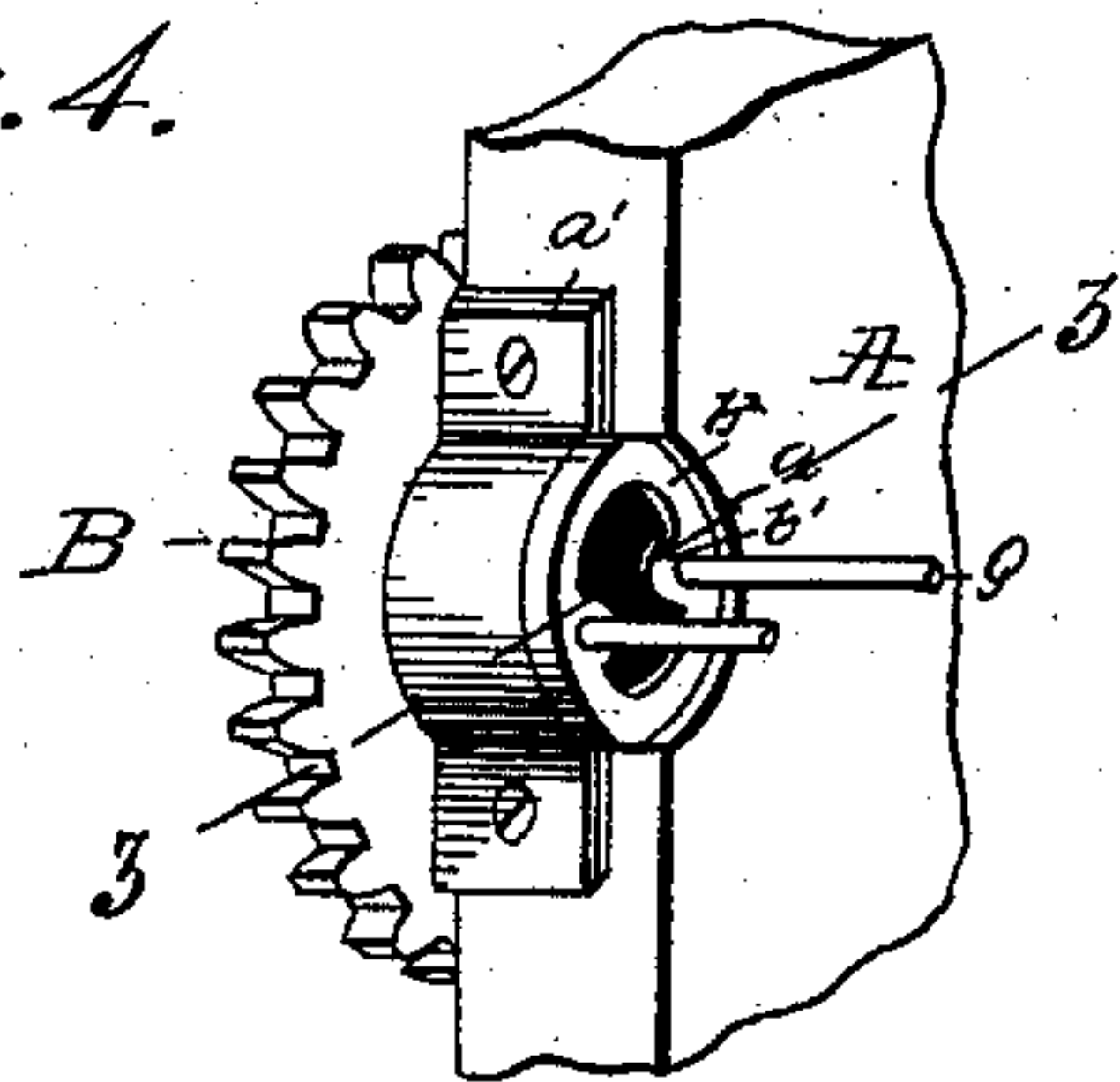


Fig. 5.

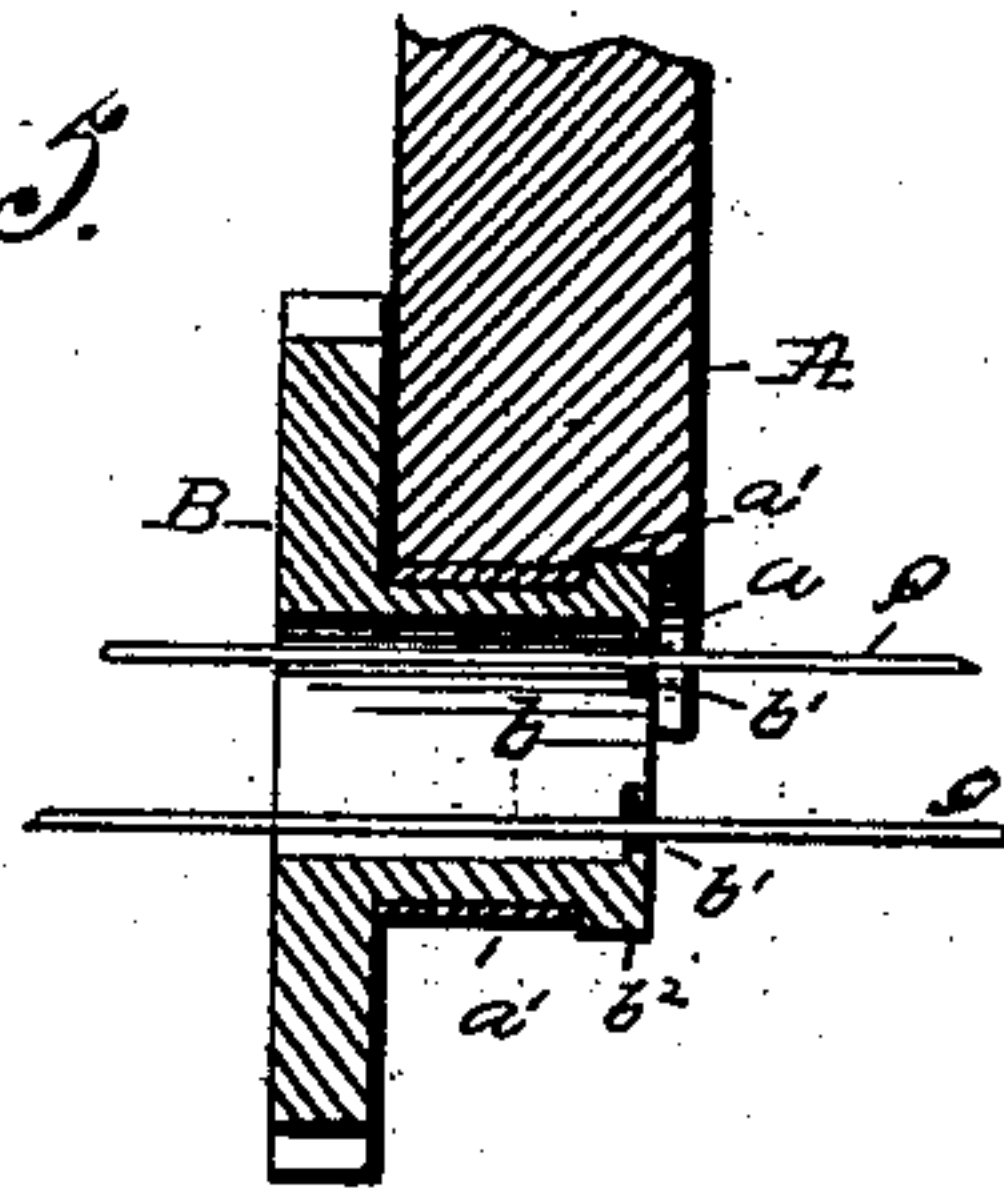
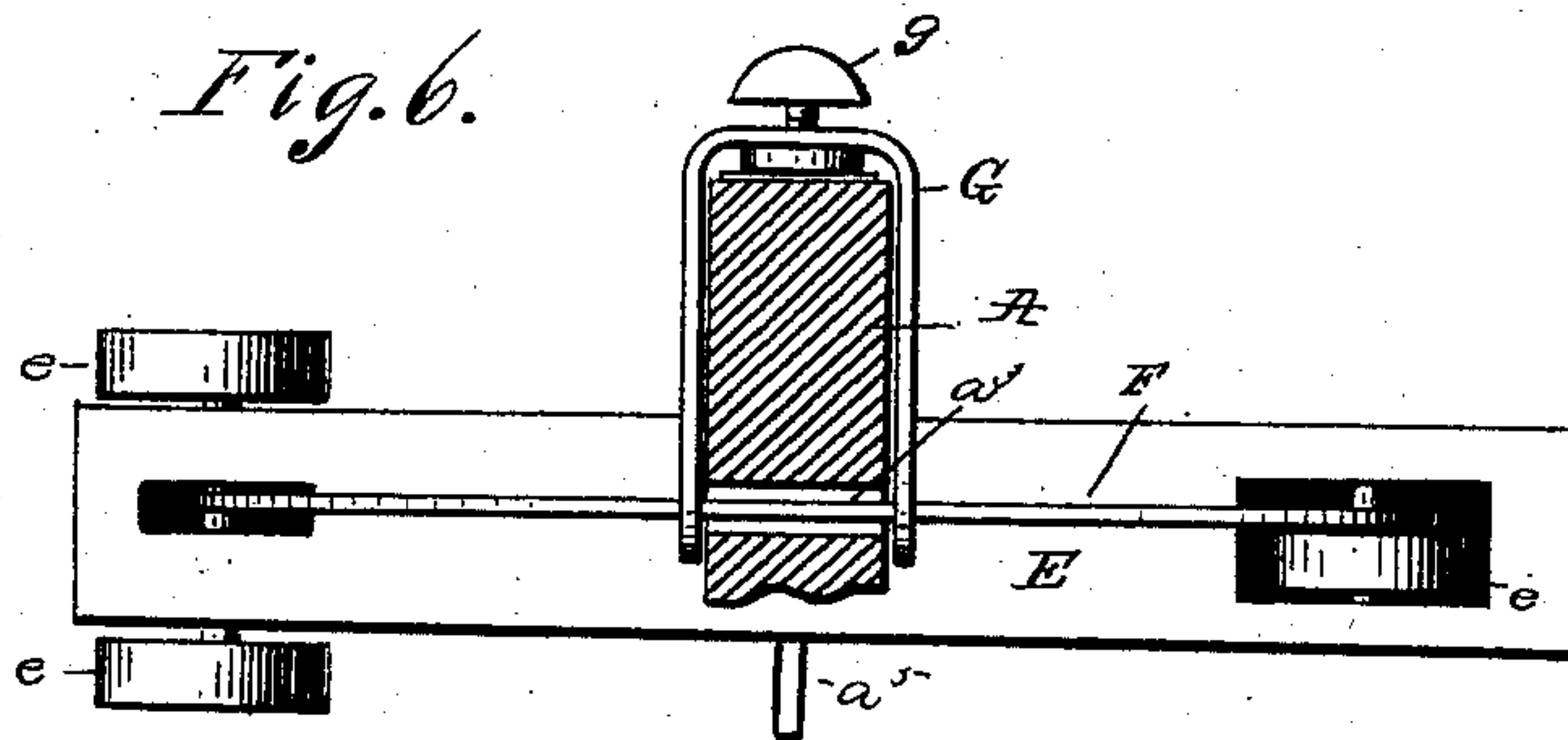


Fig. 6.



Witnesses.  
M. A. Barnes.  
Van Buren Hillyard

Inventor.  
Eames Blodgett  
By R. S. & A. P. Lacey  
Attys.



# UNITED STATES PATENT OFFICE.

EAMES BLODGETT, OF COLDWATER, MICHIGAN.

## FENCE-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 389,540, dated September 18, 1888.

Application filed December 19, 1887. Serial No. 258,390. (No model.)

*To all whom it may concern:*

Be it known that I, EAMES BLODGETT, a citizen of the United States, residing at Coldwater, in the county of Branch and State of Michigan, have invented certain new and useful Improvements in Fence-Weaving Machines; and I do 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 ap-  
10 pertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The present invention relates to that class  
15 of fence-making machines which consist, essentially, of an upright post, standard, or support, upon which are mounted a series of geared wheels or twisters, also a set of geared wheels and counter-shaft, upon which is placed  
20 a crank which operates the whole system of wheels, and a tension device, which is composed of two upright pieces or standards, a windlass or drum, a lower sill or base, and a metal bail, which supports the upright post  
25 or standard in a perpendicular position, and an equalizing device arranged between the tension and wire-twisting devices.

The object of said invention is to provide a simple, durable, and easily-operated machine,  
30 and one that is efficient and capable of performing the work in a rapid and satisfactory manner.

To these ends the invention consists in the construction and combination of parts, which  
35 will hereinafter be described, and more particularly set forth in the claims, and shown in the annexed drawings, in which—

Figure 1 is a perspective view, parts being broken away, of a fence-making machine of  
40 my invention; Fig. 2, a cross-section of the standard carrying the twisters on the line X X of Fig. 1, looking in the direction of the arrow; Fig. 3, a cross-section of the equalizer on the line Y Y of Fig. 1; Fig. 4, a detail per-  
45 spective view of a portion of the twister-standard, showing the manner of securing the twister thereto; and Fig. 5, a section of the twister on the line Z Z of Fig. 4. Fig. 6 is a horizontal section on the line 6 6 of Fig. 1, on  
50 an enlarged scale, parts being broken away.

The twisting mechanism or device is composed of the following elements: the upright

post or support A, upon which are mounted the twisters B, geared together, the counter-shaft C, having the gear-wheels *c* and *c'*, the  
55 shaft D, provided with the crank *d*, and the gear-wheel *d'*, which meshes with *c*, the bore or sill E, with the half-circle F attached and mounted on the wheels or rollers *e* at either  
60 end, the clamp G, with hand-screw *g*, the operating-handle H, the spacing-blocks or distance-gages I, the guide J, to regulate the height of the slats in the fence, the picket-holder K, and the spirit-level L.

The tension device is composed of two up-  
65 right posts or bars, M, which support the journals of the windlass or drum N, which is clamped at its ends between them, the base or sill O, the supporting bail or brace P, attached at its lower end to the posts M, the  
70 ropes or chains *p*, and the sheave *p'*. On the right side of the upright support or post is provided at suitable distances semicircular or other openings, *a*, into which are placed and  
75 held in position the metal boxings *a'*. Near the upper end of the upright support or post is an opening, *a''*, through which the counter-shaft C, having the operating-gears *c* and *c'*, passes.

Near the lower end of upright, support, or  
80 post A is the opening *a'''*, through which the half-circle F operates. At the lower end of said upright or support is a mortise or notch, *a''''*, into which I fit the base or sill E. At or  
85 near the center of said base or sill, and through the ends or projections formed at the lower end of support or post A, and through the base  
or sill, is passed the bolt *a'''''*, which form a piv-  
otal connection between the post A and base  
90 E, so that the support or post A can be moved forward or backward at will to get it into a perpendicular position. On the front side and  
near the right edge of said support A are lo-  
cated the spacing-blocks I, which are con-  
95 nected with the arms *i*, extending laterally from the standard by the studs or pins *i''*. At  
or near the upper end of the support or post A is arranged the guide J, which insures the  
slat being kept at an even height. The pick-  
100 et-holder K is attached to the right side of the support or post A, and is composed of a set  
of wire springs, between which the picket is placed and yieldingly held while driving it to  
its proper position between the wires.



The base or sill is provided with a suitable opening at or near its center for the reception of the bolt or pivot  $a^5$ , which pivotally connects the support or post A with the base.

5 The front end of the said base or sill is provided with one wheel or roller and the rear end with two wheels or rollers.

The half-circle F is attached at one end to the bolt or pivot which forms the axle upon which the forward wheel or roller in base or sill is journaled, and extends backward through the opening  $a^3$ , provided for it in the support or post, and has its other end placed on the bolt or pivot, which forms the axle upon

15 which the two wheels or rollers are mounted. The support or post A is secured in any desired position by means of the clamp G and hand-screw  $g$ , as shown. The clamp is made U-shaped, with a hook,  $g'$ , at each end, and

20 having a screw-threaded opening at its center for the reception of the hand-screw. The twister-gear B is formed and composed of a toothed disk or wheel having a tubular extension,  $b$ , at its rear, which forms the axle

25 or bearing of said disk or wheel. The bore  $b$  extends through the disk or wheel, and at the rear of the said bore are two lugs, as ears  $b'$ , through which are holes or openings for the wires Q to pass through in constructing the fence. By reducing the middle portion of  $b$

30 a shoulder or collar,  $b^2$ , is formed at the rear end of  $b$ , and the boxing  $a'$ , being closed upon  $b$  between the shoulder and disk or wheel, effectually prevents all lateral displacement.

35 The boxing is formed of two half-circular pieces, preferably of metal, with end extension, as is usual in forming the tops for boxing of machinery with the usual holes through which bolts or screws for fastening are to pass.

40 The boxes thus formed may be held into and against the sides of the semicircular openings  $a$ , provided on the side of the support or post A, either by screws or bolts. My usual plan is to pass the bolts entirely through the support or post and through the holes in the box-

45 ing. The boxes, being thus separate and detached, can be adjusted independently of each other to insure the proper meshing of the gearing of the twisters. This construction

50 makes it convenient to remove or replace any one of the twisters at will. The operating-crank  $d$  is attached to the shafts D, on the inner end of which is the beveled gear-wheel  $d'$ , operating in and through

55 the opening  $d^2$ , provided for the same in the support or post A. The said shaft D, having beveled gear-wheel  $d'$ , is held in position by a suitable boxing attached to the front side of support or post A. The said beveled gear-

60 wheel engages with the beveled gear-wheel  $e$ , of like form, on the rear face of upright support or post, and arranged on the counter-shaft C, which shaft passes entirely through said support or post A. Upon the said counter-

65 shaft, on the front side of upright support or post, is arranged the gear-wheel  $e'$ , which engages with one of the series of geared twisters

B, and thereby imparts the necessary movement thereto. At or near the upper end of the upright support or post I arrange an ordinary spirit-level which makes it easy to determine the proper position to operate the machine in.

The tension device is composed of the base or sill O, provided near each end with blocks so arranged that the lower end of the posts or bars M may be placed between them and be

75 secured in place by the bolt  $m$ . At or near the rear end of said base or sill O, I attach the ends of the brace or bail P in a flexible manner by a hook-and-eye joint, so it can be closed

80 down upon the base or sill for convenience of transporting or handling, or it can be raised to any desired angle to support and brace the post M. Between the upper ends of said posts

85 or bars M is placed the windlass N, composed of a metal spool, which is placed on a shaft,  $n$ , which passes through both posts M'. On one end of the shaft  $n$  is the operating-crank  $n'$ .

Directly beneath said spool or windlass and passing entirely through both upright standards is arranged the bolt  $n^2$ . By drawing up

90 on the burr  $n^3$  on said bolt it forces the upright standards against the ends of the spools or windlass, thus producing any desired tension. Hooks  $m'$  are provided at or near the

95 upper end of posts or bars M, into which the end of the bail P can easily be attached. The rope or chain  $p$  is wound upon the windlass or spool, and passes forward and around

100 pulley  $p'$ , attached to bail or loop  $p^2$  on equalizer R, and thence backward to a post or stake,  $p^3$ , driven into the ground between the bed-pieces of the tension-frame or attached to the said base O. It will be plainly

105 seen that by having the spool or windlass clamped between the posts or bars M a very even and strong tension can be secured, while with the rope or cable passing from the spool

110 around the pulley on the equalizer-bar, and attached to a post or stake driven into the ground or attached to bed-pieces of the stretch-frame, a strong draft can be obtained upon

the wires used in building the fence. I prefer to drive the stake into the ground, as it relieves the strain on the tension-frame. In securing the stretcher in position I use any manner of staking or fastening that seems convenient.

The equalizer—a vertical bar, R—has at suitable distances or places holes  $r$ , through each of which passes a bolt, S, on the forward

120 end of which is provided a hook, to which is attached or hooked the pulley-frame T. On the rear end of the bolt, which extends beyond the rear side of said bar R, is placed the coil-

125 spring  $s$ , which is held in position by a suitable washer, which in turn is secured and held upon said rear end of bolt by having the end of bolt threaded and a suitable nut, which

130 makes it convenient to remove the bolt or spring at will, or the end of the bolt may be upset. A tube, U, of any suitable material, is placed over said coil-spring, the rear end of



which rests against the washer at the rear end of the bolt. If an extra or undue strain be placed upon the equalizer, the front ends of the said tubes come in contact with the rear face 5 of the vertical bar, and thus relieve the coil-springs. By this means I can place a heavy strain upon the equalizer without damage to the coil-spring, and at other times gets an easy even strain upon the wires as needed to perform the work. 10

A fence-weaving machine made as shown and described is very simple, durable, and practical, being adjustable in nearly every particular, insuring ease and the best of results.

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

1. The combination of the base, the wheels at each end of the base, the half-circle having 20 its ends fastened to the base by the same shaft on which the wheels are mounted, the post provided with the twisting mechanism pivotally connected with the base and having an opening for the passage of the half-circle, the

U-shaped clamp having hook ends, and the 25 hand-screw, substantially as shown and described.

2. The combination, with the base O, the two uprights M, pivoted at their lower end to the base, the bail P, hinged at its lower end to the 30 base, and the hooks  $m'$ , near the upper ends of M, to engage with the bail, of the windlass clamped at its ends between the uprights M and the bolt  $n^2$ , substantially as and for the purpose described. 35

3. The combination, with the equalizer-bar, of the bolts S, passing through openings in the said bar, the pulley-frame on the forward end of the bolt, the coil-spring on the rear end of the bolt, and the tube placed over the spring, 40 substantially as set forth.

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

EAMES BLODGETT.

Witnesses:

L. E. ROSE,  
E. L. DUNHAM.