

(No Model.)

2 Sheets—Sheet 1.

C. P. LAMAR.  
TENSION DEVICE FOR FENCE MACHINES.

No. 474,137.

Patented May 3, 1892.

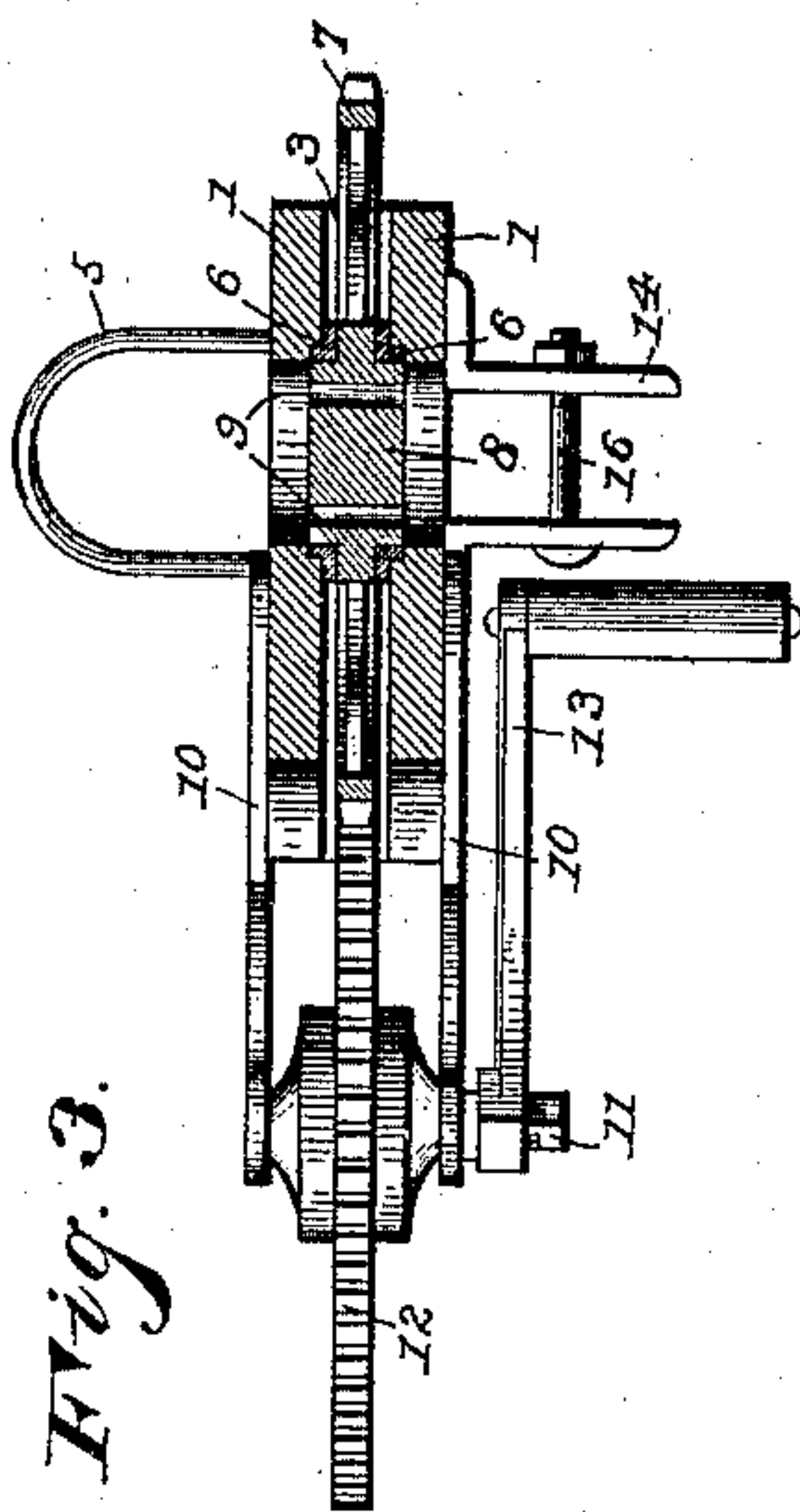
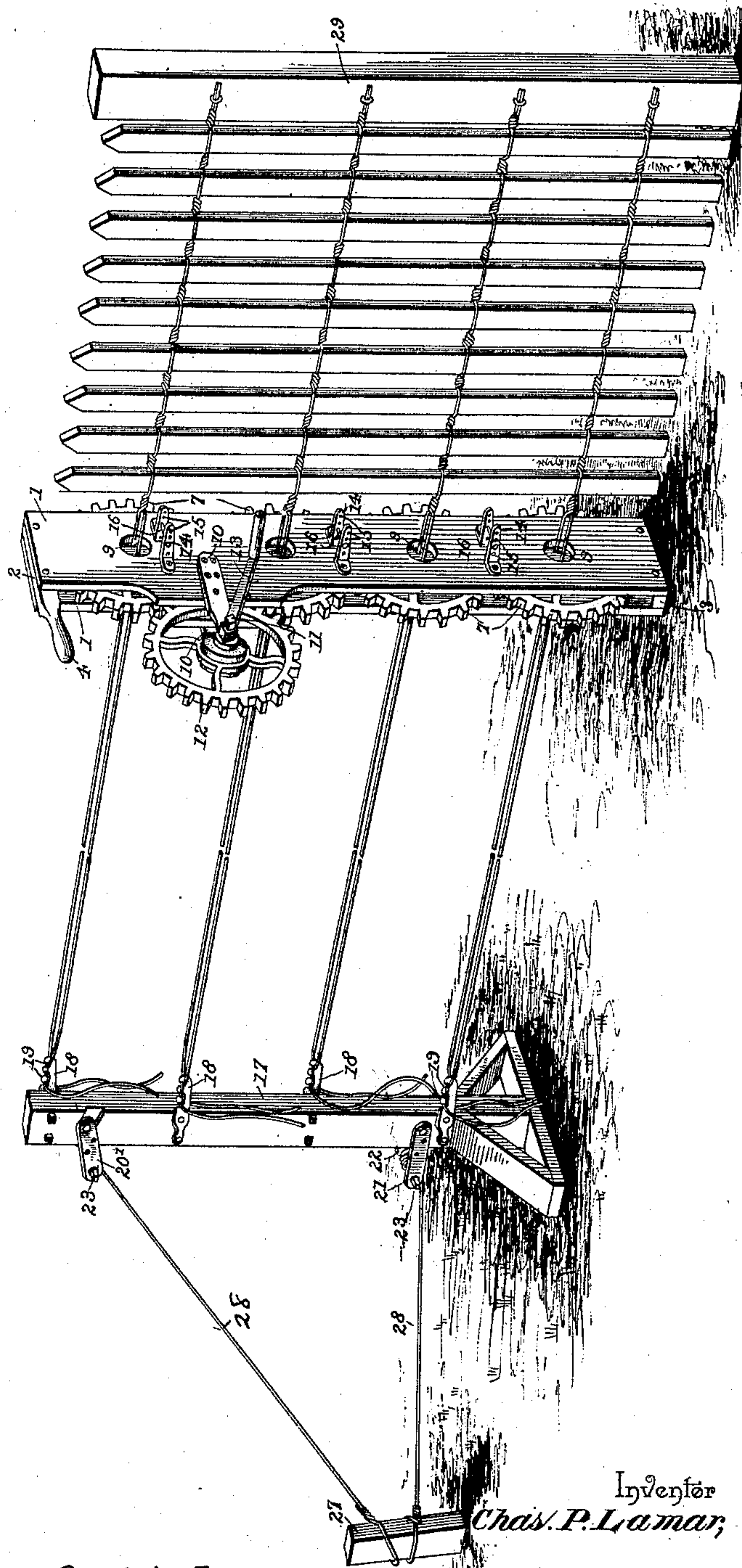


Fig. 1.



Witnesses;

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*Wm. Baggers*

By his Attorneys,

*C. A. Snow & Co.*

Inventor

*Chas. P. Lamar,*

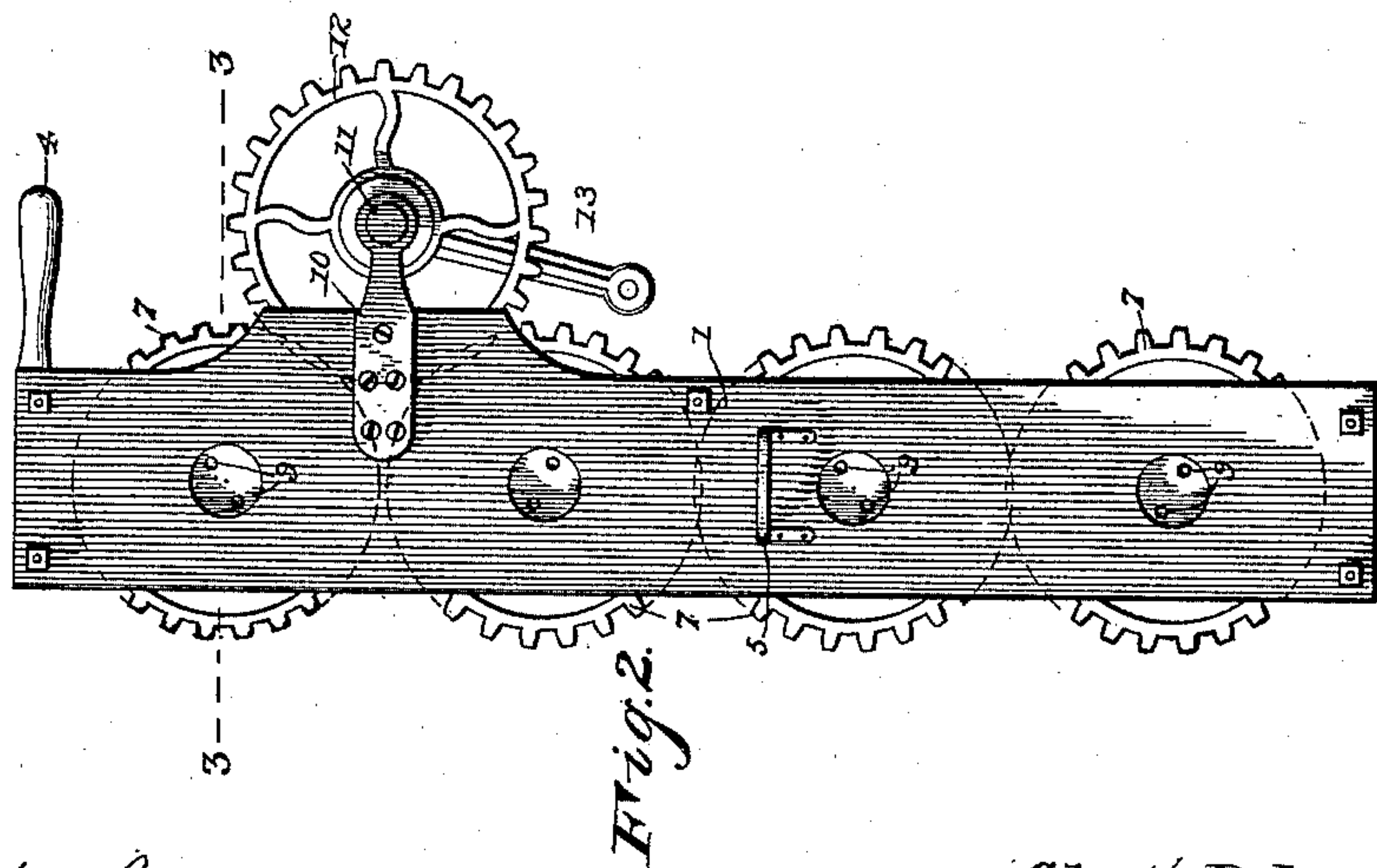
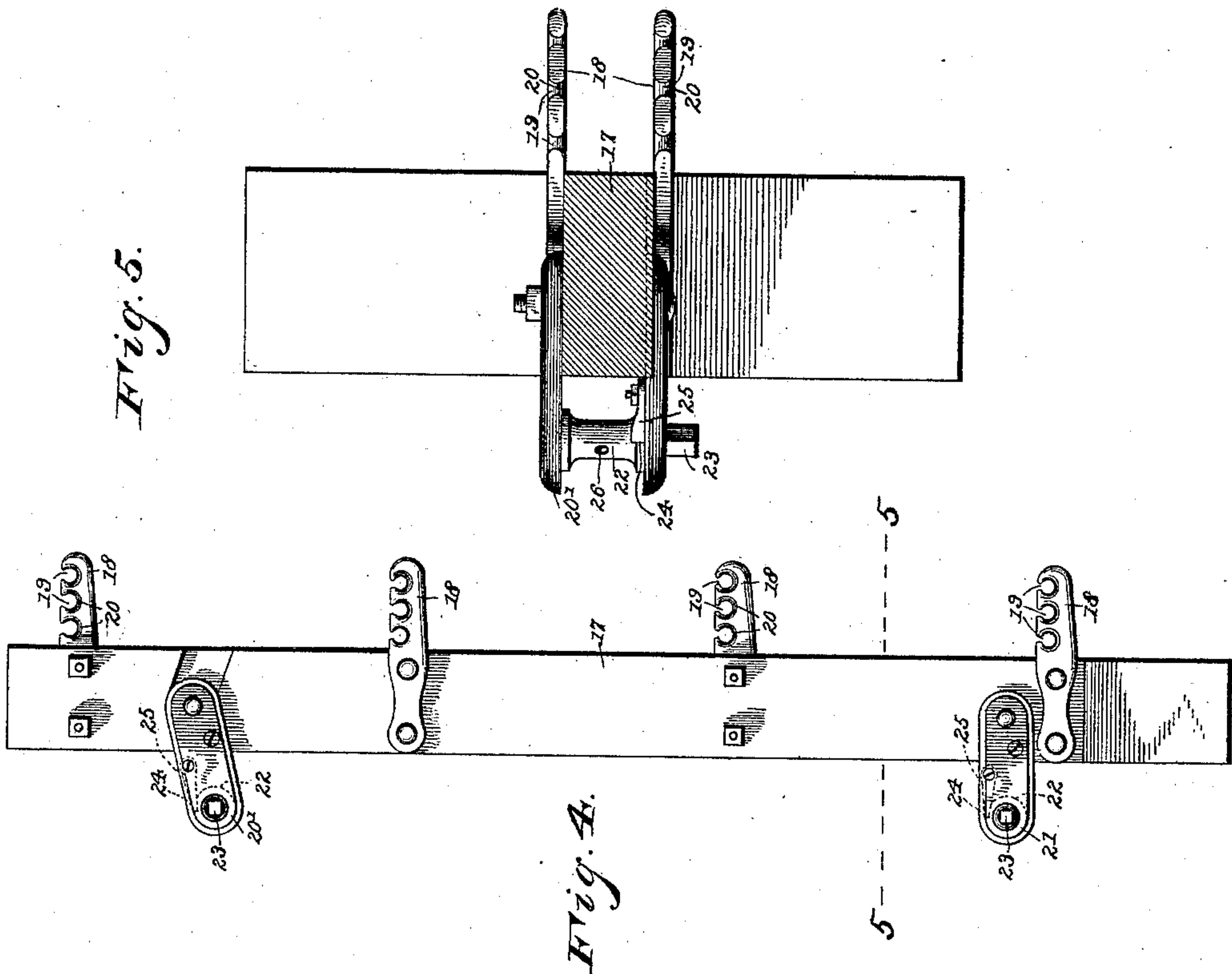
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*J. M. L. L. L.*  
*Wm. Bagges*

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Inventor  
*Chas. P. Lamar,*



# UNITED STATES PATENT OFFICE.

CHARLES PERCIVAL LAMAR, OF LYNDON, KANSAS.

## TENSION DEVICE FOR FENCE-MACHINES.

SPECIFICATION forming part of Letters Patent No. 474,137, dated May 3, 1892.

Application filed April 1, 1891. Serial No. 387,253. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES PERCIVAL LAMAR, a citizen of the United States, residing at Lyndon, in the county of Osage and State of Kansas, have invented a new and useful Fence-Machine, of which the following is a specification.

This invention relates to machines for manufacturing wire-and-picket fences, and more particularly with relation to the tension devices used in connection therewith; and it has for its object to provide a device of this class which is simple and easily operated.

The invention consists in the improved construction, arrangement, and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claim.

In the drawings hereto annexed, Figure 1 is a perspective view showing a portion of a fence in the course of construction, with my improved tension device used in connection therewith. Fig. 2 is a side elevation of the twisting apparatus. Fig. 3 is an enlarged horizontal sectional view of the same, taken on the line 3 3 in Fig. 2 and looking in a downward direction. Fig. 4 is a side view of the tension-post. Fig. 5 is an enlarged horizontal sectional view of the latter, taken on the line 5 5 of Fig. 4.

Like numerals of reference indicate like parts in all the figures.

Although any suitable twister or crosser may be used in connection with my improved tension device, hereinafter fully described, nevertheless a preferable form employed is that illustrated by me in the drawings, and which may be briefly described as follows: The twisting mechanism has a frame composed of side pieces 1 1, which are suitably connected by means of bolts, spacing-blocks 2 and 3 being interposed at the upper and lower ends and the upper spacing-block 2 being extended forwardly, so as to form a handle 4. An additional handle 5 is suitably attached to one of the side pieces.

The side pieces 1 1 are provided on their inner sides with bushings 6, forming bearings for the twisting-wheels 7, of which any desired number may be used, said twisting-wheels being arranged in a vertical series, one above the other. Each of said twisting-

wheels is provided with a hub 8, journaled in the bushings 6 and provided with a pair of transverse perforations 9 for the passage of the wires. Said twisting-wheels are also provided at their peripheries with teeth or cogs meshing with each other, so as to transmit motion from one to the other of said twisting-wheels through the entire series, as is the ordinary operation of twist-ers constructed in a manner similar to that shown in the drawings, and it of course being constructed so that the two upper cog-wheels do not inter-mesh with each other, as do those directly beneath the second wheel, which transmits motion to the same, while the upper wheel receives an independent motion. The sides of the frame are provided with forwardly-extending brackets 10, forming bearings for a shaft 11, carrying a spur-wheel 12, meshing with the two upper cog-wheels, which do not mesh with each other. Said shaft is also provided with a crank 13, by means of which it may be operated.

One of the sides of the twister-frame is provided with laterally-extending brackets 14, arranged in pairs and provided with series of perforations 15, through which bolts 16 are passed. These bolts serve as gages or buffers to regulate the distance between the pickets and the twister-frame, as is well known in the art.

The tension device comprises a post or upright 17, provided with a series of brackets 18, bolted alternately to the front and rear sides thereof and extending laterally to one side, each of said brackets being provided with a series of notches or recesses 19 in its upper side. The said notches or recesses are narrow at their upper ends and at their lower ends are beveled, as shown at 20, so that there shall be no danger of cutting the wires adjusted therein. Extending laterally to the opposite side of said post are pairs of brackets 20' 21, between which are journaled drums 22, having winding-posts 23 and notches 24, adapted to be engaged by suitably-arranged pawls 25. The drums are perforated, as shown at 26, for the attachment of the straining-wires. The upper brackets 20' are arranged in a downwardly-inclined position, while the lower brackets 21 are nearly horizontal.

In operation the tension-post, which is pro-



vided at its lower end with a suitable cross-brace, is arranged in a vertical position near one end of the line of the proposed fence. At a short distance from the said post is driven  
5 a stake 27, which is connected by means of the straining-wires 28 with the drums 22, journaled in the brackets 20' and 21. The corner-post at the opposite end of the line of the fence is indicated by 29. The wires are at-  
10 tached in pairs to the said corner-post, and the opposite or free ends of the wires are threaded through the recesses 19 in the brackets 18 of the tension-post, two wires being adjusted in each recess and crossing from one recess to the  
15 other through the entire series. A wrench or wrenches may then be applied to the winding-posts of the drums 22 and the latter rotated, thus drawing the tension-post in the direction of the stake 27 until the wires, the  
20 free ends of which pass through the recesses 19, have been strained to the requisite degree of tension. The surplus wire may rest upon the ground adjacent to the tension-post. Before attaching the wires to the corner-post  
25 they are threaded through the perforations 9 in the twisting-wheels, thereby mounting the twister-frame upon the said wires. A lath or picket is now inserted between the pairs of  
30 wires at a point between the twister-frame and the corner-post, and the twisting-wheels are then rotated one or more times, so as to give the desired number of twists to the wires, as usual, and the operation is repeated, as in other fence-machines of a like character.

The wire consumed by forming the twists is 35 supplied through the notched or recessed brackets of the tension-post from the surplus material, sufficient tension being created by the passage of the wires through said brackets to keep the wires constantly taut. 40

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

In a fence-making machine of the class described, a tension device comprising a post or 45 upright, a series of brackets secured to opposite sides of said post and extending laterally therefrom, each of said brackets being provided with a series of notches or recesses in its upper side, said notches having upper re- 50 duced necks or upper ends and enlarged beveled lower ends to prevent the slipping and cutting of the wire, horizontal and downwardly-inclined brackets extending laterally in the opposite direction to the aforesaid 55 brackets and having winding-drums adapted to be connected with a suitable point of attachment, whereby the tension-post may be moved toward the said point of attachment for straining the fence-wires, substantially as 60 set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

CHARLES PERCIVAL LAMAR.

Witnesses:

C. H. DICKSON,  
C. P. FELCH.