

(No Model.)

2 Sheets—Sheet 1.

B. A. WELDS.
SLAT AND WIRE FENCE MACHINE.

No. 501,636.

Patented July 18, 1893.

Fig. 1.

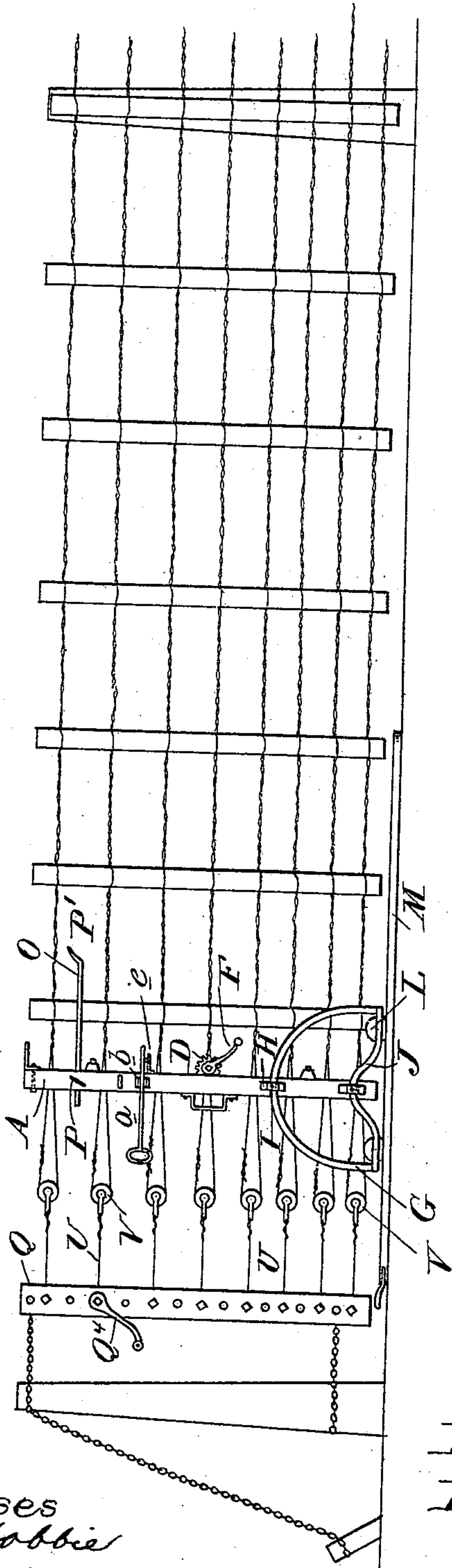


Fig. 3.

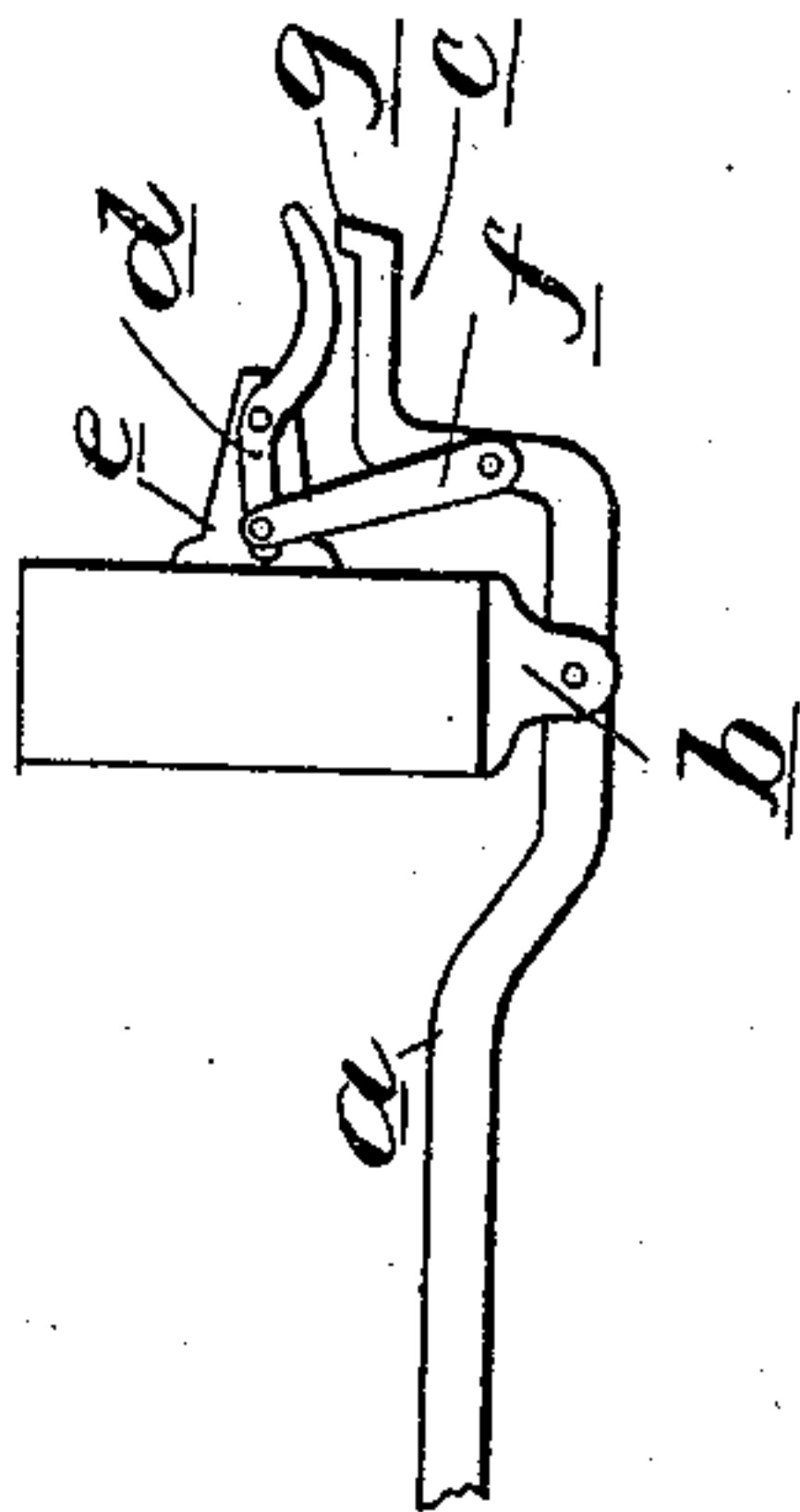
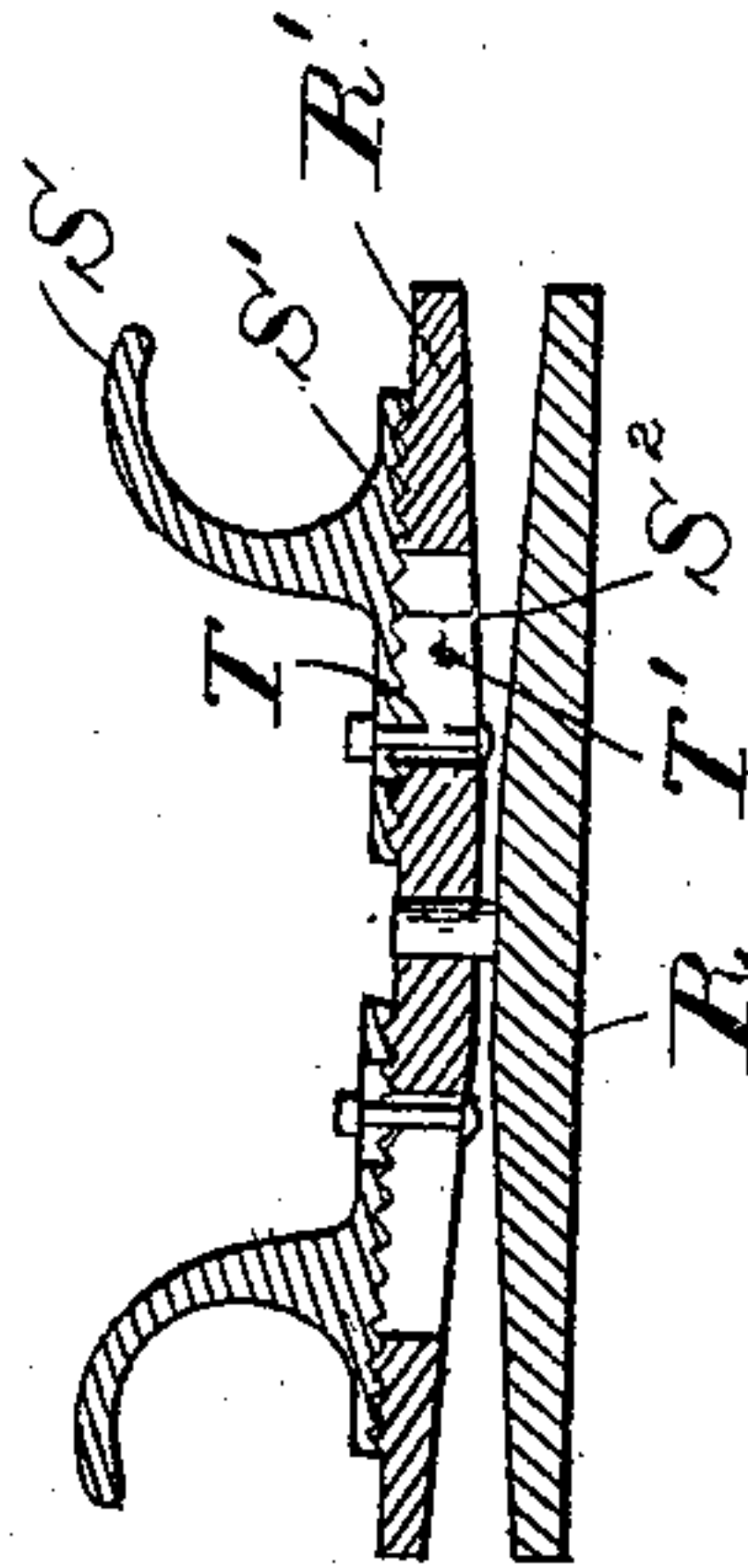


Fig. 4.



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2 Sheets—Sheet 2.

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Fig. 2.

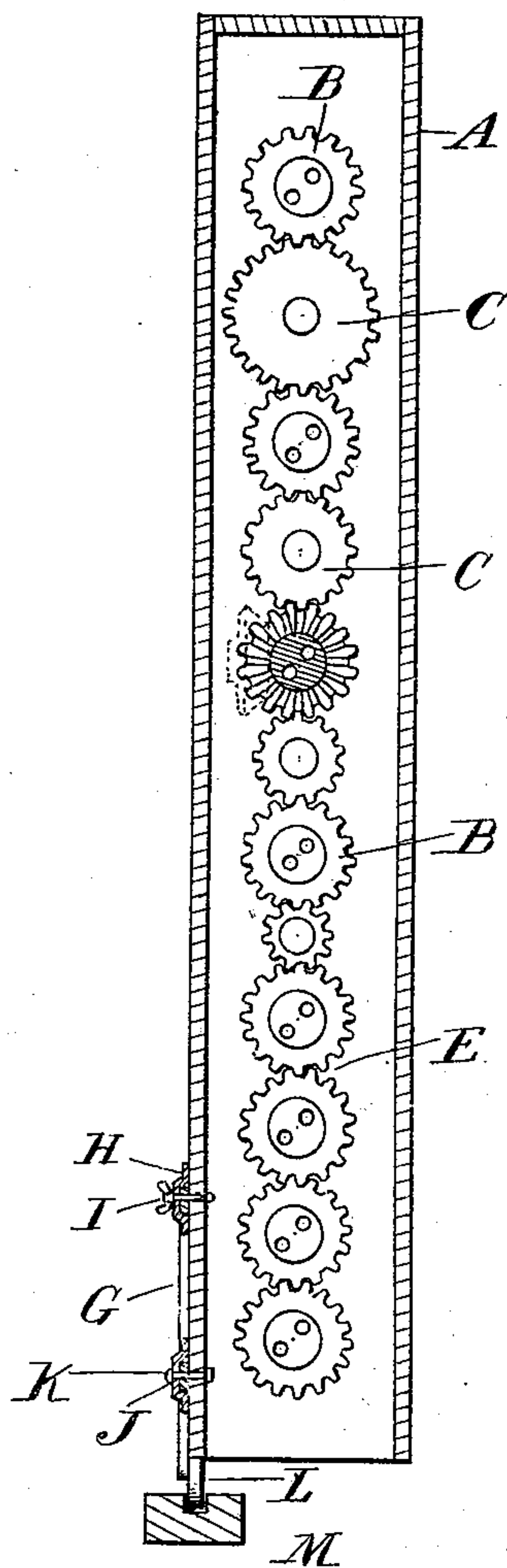


Fig. 5.

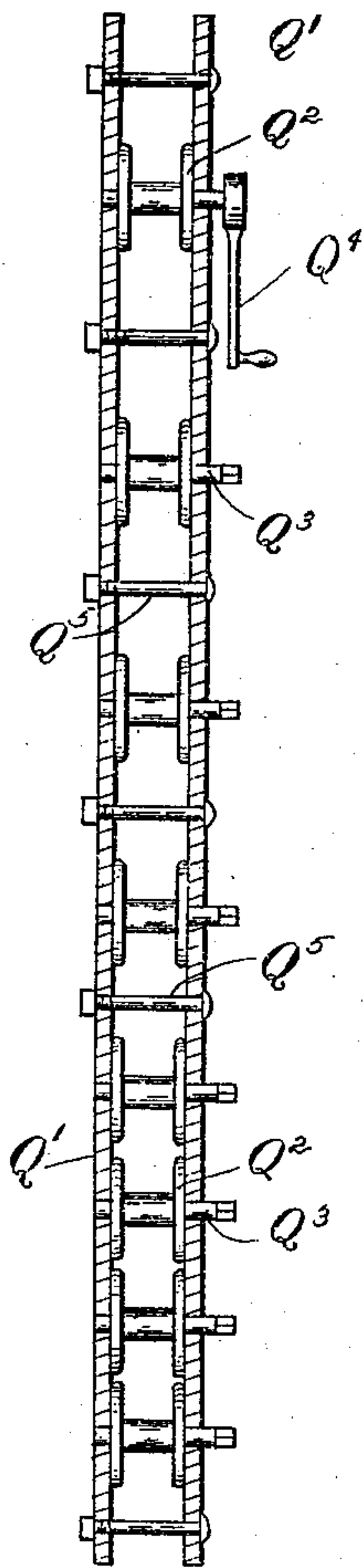
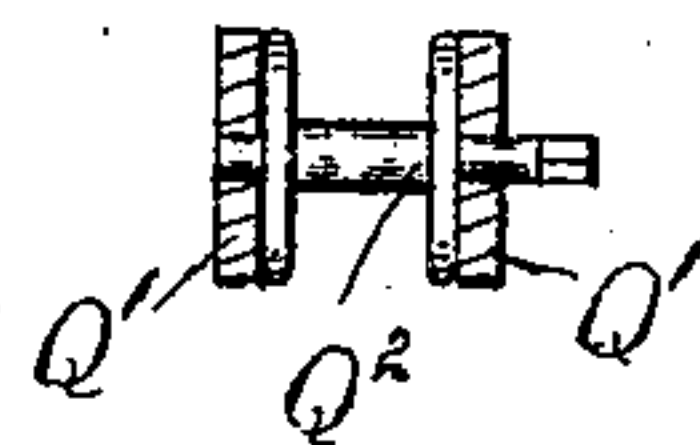


Fig. 6.



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UNITED STATES PATENT OFFICE.

BENJAMIN A. WELDS, OF JACKSON, MICHIGAN.

SLAT-AND-WIRE-FENCE MACHINE.

SPECIFICATION forming part of Letters Patent No. 501,636, dated July 18, 1893.

Application filed March 9, 1893. Serial No. 465,372. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN A. WELDS, a citizen of the United States, residing at Jackson, in the county of Jackson and State of Michigan, have invented certain new and useful Improvements in Fence-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The invention consists in the peculiar construction of the actuating devices for the twister wheels, the pivoted roller frame upon which the machine is supported, the picket grip, the tension device, and the wire reel.

15 The invention further consists in the peculiar construction, arrangement and combination of the various parts as more fully hereinafter described.

20 In the drawings, Figure 1 is an elevation of my improved machine showing it as in use. Fig. 2 is a longitudinal section through the machine illustrating the construction of the driving mechanism. Fig. 3 is an enlarged plan view of the picket grip. Fig. 4 is a cross section of the wire reel. Fig. 5 is a longitudinal section through the tension post. Fig. 6 is a cross section thereof.

30 A is the frame of my machine, which is preferably substantially a box shaped structure in which is journaled a series of twister wheels B. In the construction of slat and wire fences heretofore it has generally been the custom to arrange these twister wheels at stated distances apart, while it is desirable in building such fences to arrange the wires at the bottom nearer together than at the top. To enable me to positively gear these twister wheels together maintaining exactly the same speed for all the twister wheels and still vary the distance between the various wheels, I employ a series of graduated idler geared or intermediate drive wheels C which vary in diameter according to the space desired between the twister wheels, the lower gear wheels being of smaller diameter and apply the drive pinion D to any one of the twister wheels. The bottom twister wheels may be geared together directly, as shown at E.

50 F is the usual crank arm for actuating the drive pinion D. The roller frame upon which the machine is supported consists of the semi-

circular bar G slidingly secured beneath a strap H and having an adjusting screw I by means of which it may be secured at any of its adjusted positions.

55 J is a bar connecting the lower ends of this strap and pivoted at K in the bottom of the frame of the machine. This connecting bar J is provided with suitable rollers L running upon the track M. In the construction of such machines heretofore, it has usually been necessary to hold the slats by hand after they were inserted between the wires and before the wire had been twisted about them. I employ a gripping device which holds the slats in the proper relation to the machine, while the operator gives the first twists to the wire. This gripping device is illustrated in Fig. 3 and consists of the jaw c arranged in line with the wire apertures in the twisters, pivoted on a bracket b on the side of the machine. This jaw has an extension extending beyond its pivotal point forming a handle therefor.

75 d is a complementary jaw centrally pivoted in a bracket e on the front of the machine, the two being connected together on opposite sides of their pivotal points by a link f. The jaw c at its outer end is provided with the offset or hook portion g to engage behind the picket to hold the machine up to the picket, so that the first twists will be made snugly against the outer face thereof.

85 As soon as the first twists have been made the operator releases his hold of the hand lever a and continues the twisting until the desired distance between the pickets is reached, which is determined by means of a gage bar O, adjustably secured in the frame by means of a set screw P and having a finger P' extending between the pickets and adapted to strike the rear face thereof.

95 My tension device consists of the tension post Q comprising two upright posts Q' between which are the wire spools Q², secured to the shafts Q³, which at their outer ends are squared to receive the crank arm Q⁴.

100 Q⁵ are clamping bolts passing through the posts between each pair of spools and adapted to bear against the end thereof to hold them in their adjusted position and yet allow the spools to turn sufficiently to prevent breakage of the wire.

My improved wire reel is shown in Fig. 4 and comprises a base R upon which is journaled a reel frame R', having the outwardly curved arms S secured thereto. These reel arms have a base S', provided with a notched lower face S², which is adapted to be clamped above the reel frame by means of the clamping bolts T which pass through slots T' in the reel frame allowing me to adjust these reel arms to or from the pivotal point of the reel frame to accommodate it to reel the wire of any desired diameter.

U are tension wires which connect to the sheaves V around which the ends of the fence wires are looped, so arranged that any unequal expansion of any wire over the other will be taken up by said sheaves.

By using a machine of this construction with varied spaces between the different twister wheels I am enabled to employ the proper number of strands, so that a fence may be constructed with a minimum of slats, making practically a wire fence with simply sufficient slats in it to space and hold the wires. The twist in the wires also takes up the expansion and contraction and it is maintained tight at all times.

What I claim as my invention is—

1. In a fence machine, the combination of the frame, a series of twister wheels provided with circumferential gearing, a series of idler gear wheels of varying diameter decreasing toward the bottom between the upper series of twister wheels, the lower twister wheels being geared together, an actuating crank shaft and gear, and a picket gripping device for holding the pickets in position when the twister wheels are actuated, consisting of two jaws pivoted upon the frame, a link connect-

ing the jaws, and an actuating extension on one jaw, substantially as described.

2. In a fence machine, the combination of the frame, of a picket gripping device consisting of two jaws pivoted upon the frame, a link connecting them together, and an extension on one jaw forming an actuating lever for both jaws, substantially as described.

3. In a fence machine, the combination of the frame, a picket gripping device consisting of two jaws pivoted upon the frame, a link connecting them together on opposite sides of their pivotal points, and an extension for one jaw forming an actuating lever for both, substantially as described.

4. In a fence machine, the combination of the frame, a picket gripping device consisting of the lever *d* centrally pivoted upon the bracket *e*, the lever *a* pivoted upon the side of the frame and having a jaw extending beside the lever *d*, a link connecting the inner end of the lever *d* with the portion of the lever *a* beyond its pivot, and the lug or offset *g* at the end of the jaw *c*, substantially as described.

5. In a fence machine, a reel consisting of a base, a reel frame journaled thereon, having slots therein, and a serrated upper face, curved arms having notches on their lower faces engaging the serrations on the reel frame, and bolts for detachably securing the arms to the reel frame, substantially as described.

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

BENJAMIN A. WELDS.

Witnesses:

M. B. O'DOHERTY,
N. L. LINDOP.