

(No Model.)

2 Sheets—Sheet 1.

W. H. JENKINS.
FENCE MAKING MACHINE.

No. 444,752.

Patented Jan. 13, 1891.

Fig. 1.

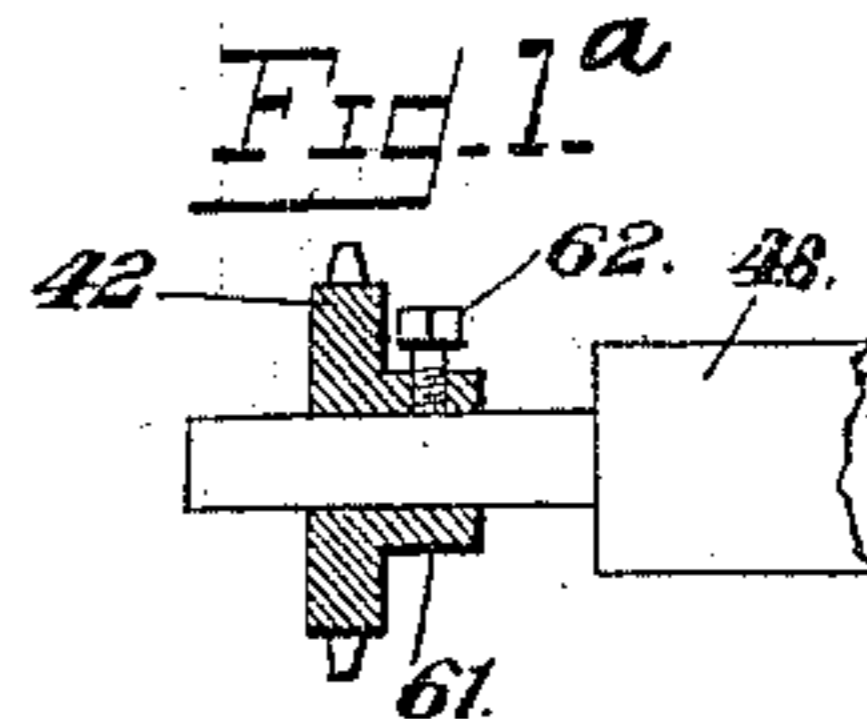
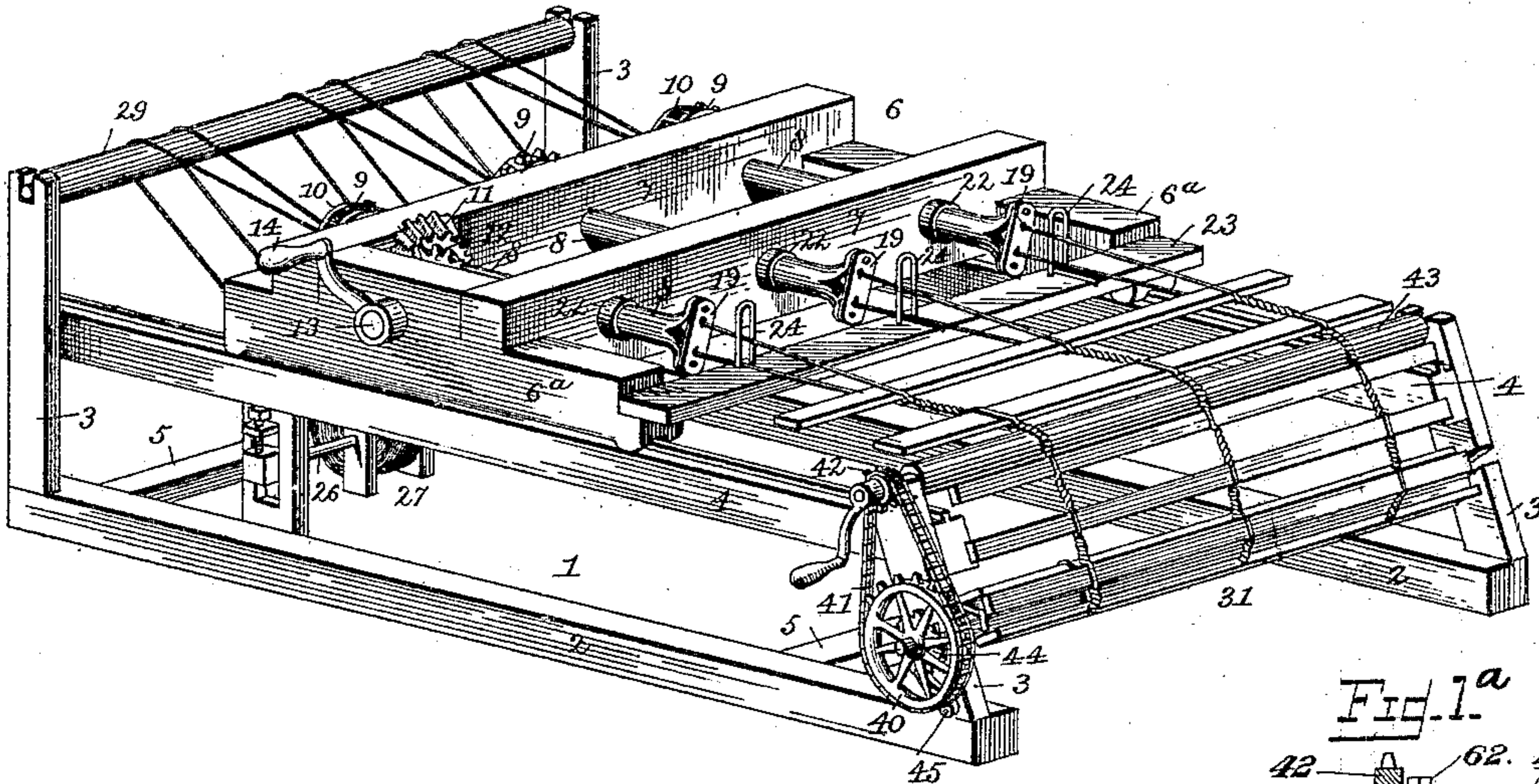
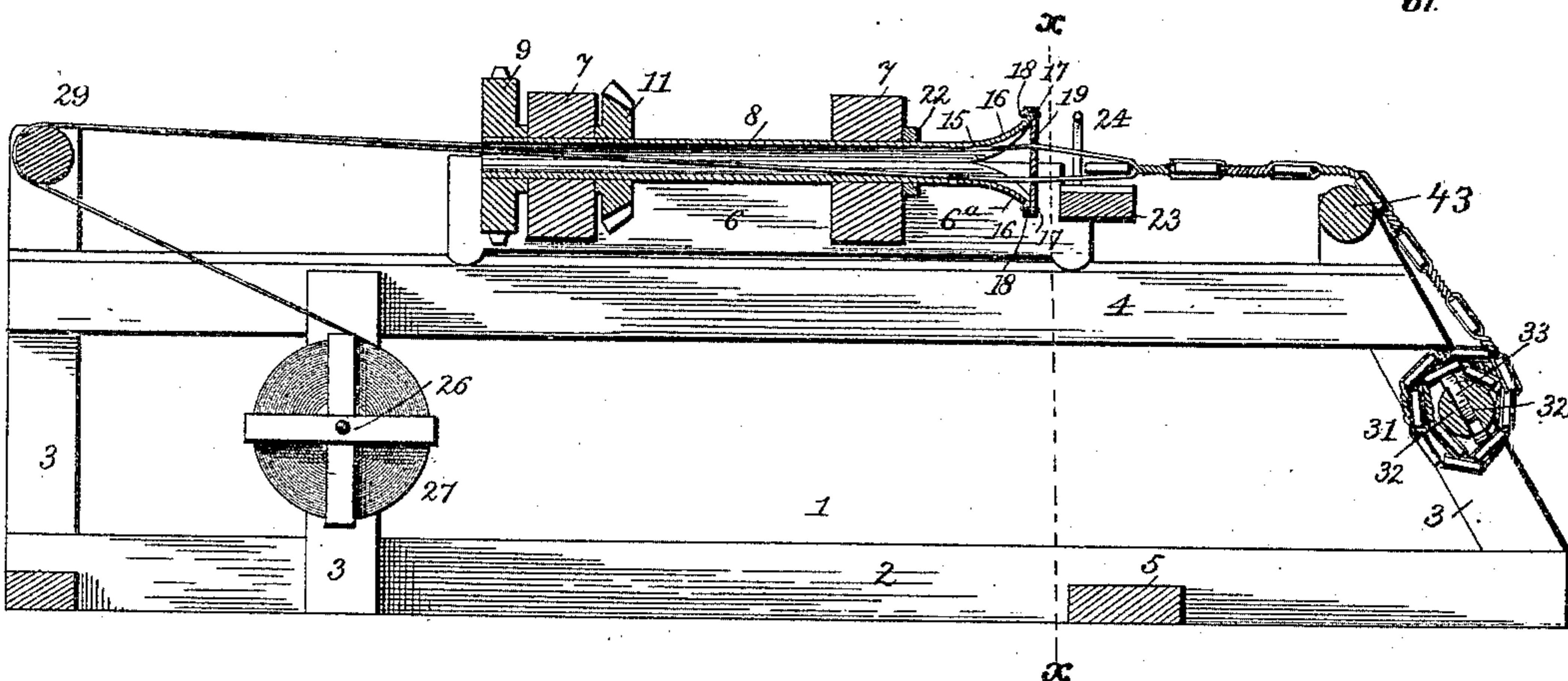


Fig. 2.



Witnesses

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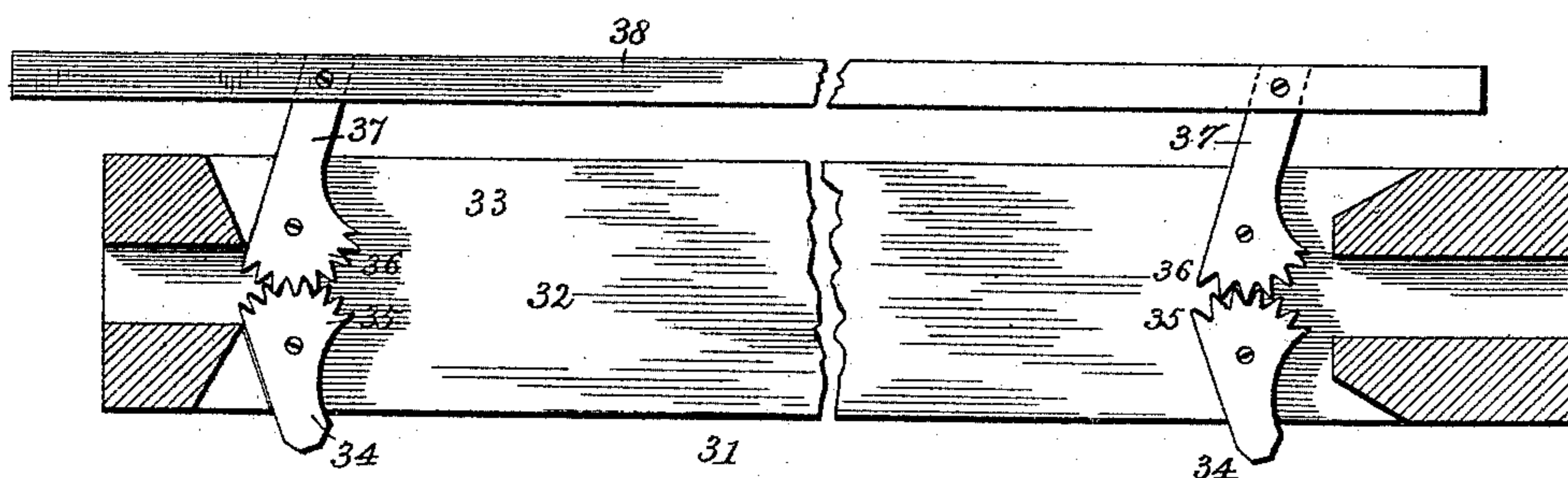
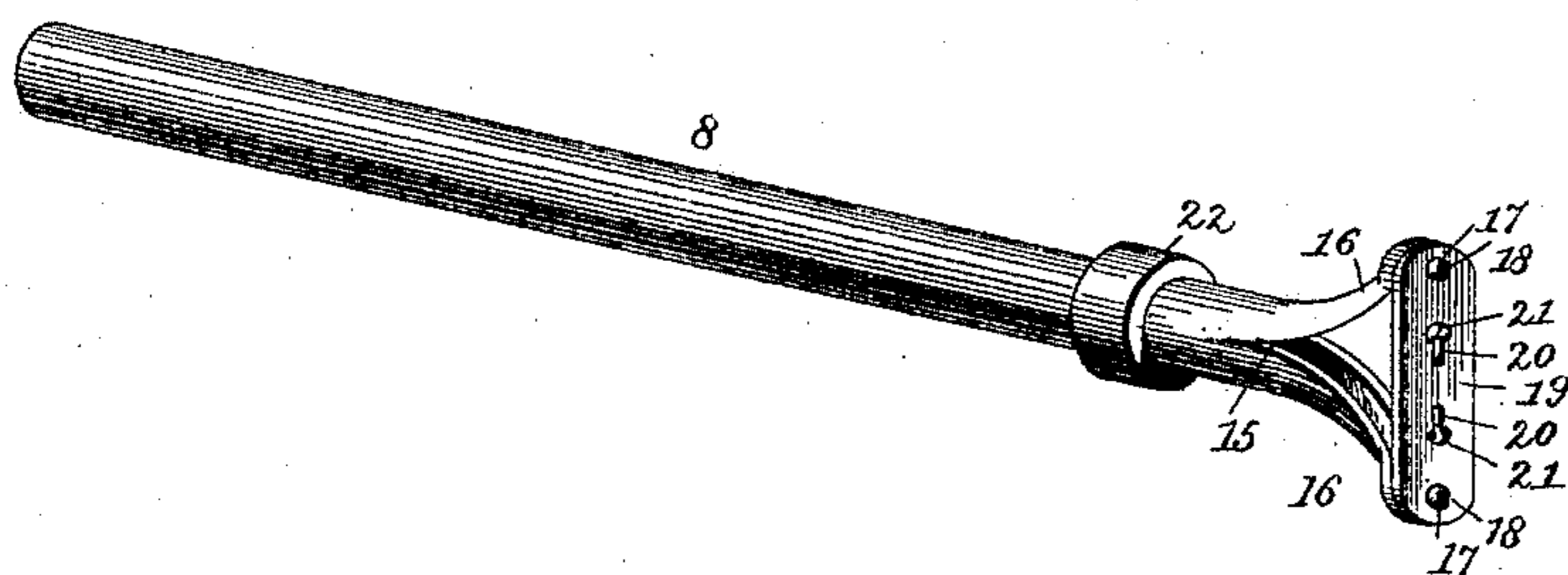
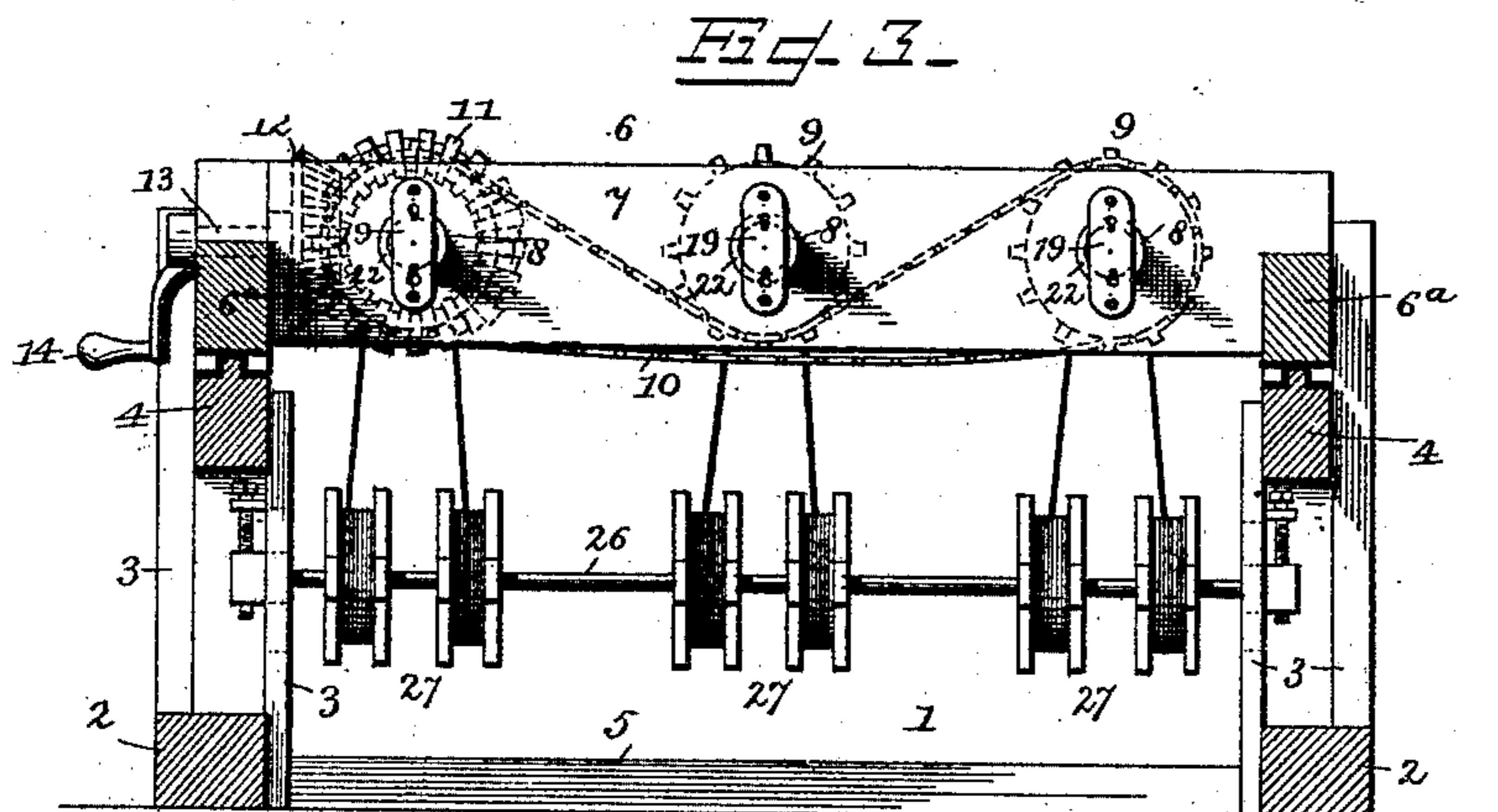
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UNITED STATES PATENT OFFICE.

WILLIAM H. JENKINS, OF GIRARD, ILLINOIS.

FENCE-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 444,752, dated January 13, 1891.

Application filed April 26, 1890. Serial No. 349,640. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. JENKINS, a citizen of the United States, residing at Girard, in the county of Macoupin and State of Illinois, have invented a new and useful Fence-Making Machine, of which the following is a specification.

This invention relates to machines for constructing fences of wires and wooden slats or pickets interwoven; and it has for its object to construct a machine of this class which shall be simple and inexpensive and easily operated.

With these ends in view the invention consists in the improved construction, arrangement, and combination of parts, which will be herein fully described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of my improved fence-machine. Fig. 1^a is a detail sectional view taken through the end of the guide-shaft 43. Fig. 2 is a longitudinal vertical sectional view of the machine, taken through the twisting-tubes. Fig. 3 is a vertical transverse sectional view taken on the line $x x$ in Fig. 2. Fig. 4 is a detail perspective view of one of the twisting-tubes. Fig. 5 is a detail sectional view of the winding-roller.

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

1 designates the bed-frame, which is composed of the sills 2, the uprights 3, the tracks or guideways 4, supported by said uprights, and suitable transverse braces 5, connecting the sills.

6 designates the carriage, which is mounted upon the tracks or guideways 4. Said carriage is composed of the sills or side pieces 6^a, which are connected by the transverse braces 7. The latter are provided with bearings for a series of twisting-tubes 8, of which any desired number may be used. The rear end of the twisting-tubes are provided with sprocket-wheels 9, which are connected by a chain 10. One of the twisting-tubes which is adjacent to the outer side of the carriage is provided with a bevel gear or pinion 11, meshing with a pinion 12, which is mounted upon the short shaft 13, journaled in the side of the

carriage-frame. The outer end of the shaft 13 has a crank 14, by means of which it may be conveniently manipulated. It will be seen that by operating the crank 14 the twisting-tubes may be simultaneously rotated.

The front ends of the twisting-tubes are provided with longitudinal slits 15, and are spread apart, so as to form the jaws 16, the front or outer ends of which are provided with perforations 17. Suitably attached to the said jaws by means of pins or bolts 18, passing through the perforations 17, are the twisting-plates 19, each of which is provided with two slots or perforations 20, enlarged at their outer ends, as shown at 21, so as to admit of the passage of any knots which it may be found necessary to form in the wires. The twisting-tubes in rear of the jaws 16 are inclosed by hoops or rings 22 for the purpose of adding to the strength of the twist-ers.

The longitudinally-sliding carriage 6 is provided in front of the twist-ers with a transverse brace 23, forming a slat-support. Said brace or slat-support is provided in front of each of the twist-ers with vertically-slotted uprights or staples 24. Said slotted uprights perform the double function of gages to regulate the position of the slats or pickets as they are being placed in the machine and guides for the wires.

Two of the uprights 3 near the rear end of the supporting-frame are provided with bearings for a shaft 26, upon which the wire-spools 27 are mounted. From the wire-spools the wires pass over a guide-roller 29 and thence through the twisting-tubes, the wires being threaded through the slots or perforations in the plates 19 at the front ends of said twisting-tubes, and from thence the wires are passed through the staples 24, which being done this part of the machine is in readiness for operation. The tension may be regulated by raising or lowering the shaft 26, carrying the wire-spools, so as to more or less complete the circuit around the roller 29.

31 designates the winding-roller, which is mounted in suitable bearings in the front uprights 3 of the bed-frame. Said winding-roller is composed of two side pieces 32, which are suitably connected so as to leave a slot or

space 33 between them. In this slot a series of arms 34 are pivotally mounted, the inner ends of said arms being provided with segmental racks 35, meshing with similar segmental racks 36 upon the inner ends of pivoted arms 37. The upper ends of the latter are connected by a pivoted handle-bar 38. It will be seen that by moving the latter in an outward direction the pivoted arms 34 will be manipulated so as to throw the outer ends of said arms out of the slot 33 beyond the side or edge of the roller. The fencing material manufactured by the machine may then be conveniently hooked onto and wound upon the said roller. The shaft of the roller 31 is provided at one end with a sprocket-wheel 40, which is connected by a chain 41 with a sprocket-wheel 42 on one end of a guide-shaft 43. The shaft of the roller 31 is also provided with a ratchet-wheel 44, engaging a pawl 45, which is suitably pivoted to the frame of the machine to prevent the said winding-roller from rotating in a reverse direction. The sprocket-wheel 42 is provided with a collar 61, having a set-screw 62, whereby it is mounted detachably upon the guide-shaft 43 for the purpose of enabling the sprocket-chain to be removed so that the roller 31 may be lifted out of the slot or bearings in which it is journaled in the frame in order that the roll of fencing material may be conveniently removed from said roller.

The operation of this invention and its advantages will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed. To start the operation of the machine, the ends of the wires projecting through the plates 19 of the twisters are first joined and a slat or picket is then inserted between the said wires in front of the gage-plates 24, after which the twisting-tubes are rotated any desired number of times by the mechanism described, thus twisting the wire. It should be observed that after the beginning of the operation the carriage should be located at the front end of the bed-frame. After starting the operation the ends of the wires are hooked onto the arms 34 of the winding-roller. The carriage, after the slat has been secured by twisting the wires, is moved in a rearward direction upon the bed-frame by the hand of the operator, who then inserts the next slat or picket between the wires in front of the gage-plates 24. The operation of twisting is then repeated, but in the opposite direction, so as to take the twist out of the wires back of the carriage. After each slat has been placed in position and before twisting the wires the carriage is pushed in a forward direction, thus causing the gage-plates 24 to press the slat or picket into the bights of the wires and cause it to be held securely while the operation of twisting is being performed. When the carriage reaches the rear end of the bed-frame, the winding-roller is rotated, thus winding the finished portion of the

fencing material thereon and bringing the carriage to the front end of the frame, after which the operation may be proceeded with as before. When a sufficient quantity of the fencing material has been manufactured to form a roll of the desired size, the wires may be cut in front of the gage-plates 24, and the winding-roller may be removed from its bearings and the sprocket and ratchet wheels removed from the shaft of said roller. The roll of fencing material may then be readily slipped off the latter, the pivoted arms 34 receding into the central space or slot of said roller, thus rendering the operation of removing the roll very easily performed.

Having thus described my invention, I claim—

1. In a fence-making machine, the combination, with a suitable supporting-frame, of a winding-roller journaled detachably at one end of said supporting-frame, a spool-carrying shaft mounted at the other end of said frame, and a carriage arranged to slide longitudinally upon said frame and carrying the twisting mechanism, substantially as set forth.

2. In a fence-making machine, the combination of a suitable supporting-frame having longitudinal tracks or guideways, a winding-roller journaled detachably at the front end of said frame, a guide-roller journaled at the rear end of said frame, a transverse vertically-adjustable shaft carrying the wire-spools, and a longitudinally-sliding carriage carrying the twisting mechanism, substantially as set forth.

3. In a fence-making machine, the combination, with the bed-frame, of the longitudinally-movable carriage, the twisting-tubes journaled in said carriage and provided with twisting-plates at their front ends having perforations for the passage of the wires, the transverse brace or slat-support arranged in front of said twisting-tubes and having the vertically-slotted uprights or gage-plates, and mechanism for simultaneously rotating the twisting-tubes, substantially as set forth.

4. In a fence-making machine, the combination, with the supporting-frame, of the longitudinally-movable carriage and the twisting devices journaled or mounted revolvably in said carriage, said twisting devices comprising the metal tubes, provided at their front ends with longitudinal slits forming diverging jaws, and the twisting-plates or spreaders secured at the front ends of said jaws and having slots with enlarged outer ends for the passage of the wires, substantially as set forth.

5. In a fence-making machine of the class described, the combination, with the frame having a longitudinally-movable carriage having a transverse brace or slat-support and carrying the wire-twisting mechanism, of the winding-roller mounted detachably in suitable bearings at the front end of said frame, said winding-roller being provided with a lon-

5 longitudinal slot, oppositely-extending arms mounted pivotally in said slot and provided at their inner ends with segmental racks meshing together, and a handle-bar connected pivotally with the arms, extending at one side of the roller, all constructed and combined to operate substantially as set forth.

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

WM. H. JENKINS.

Witnesses:

E. W. DENHAM,
E. E. COOPER.