(No Model.) 2 Sheets—Sheet 1.

W. H. REPPETO.

WIRE FENCE MACHINE.

No. 347,064. Patented Aug. 10, 1886.

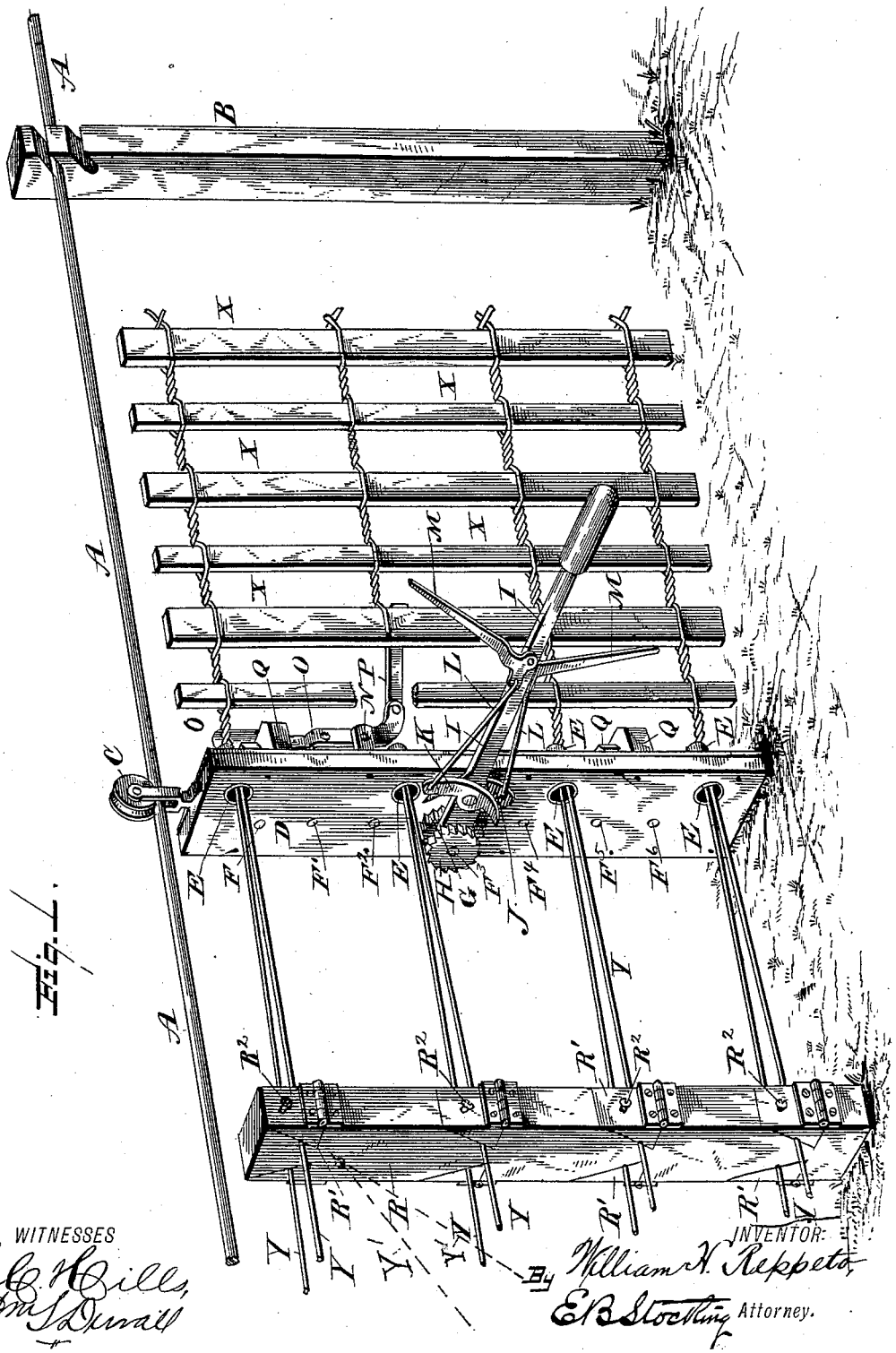

Fig. 1.

WITNESSES

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

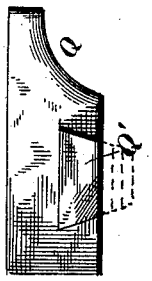


Fig. 5.

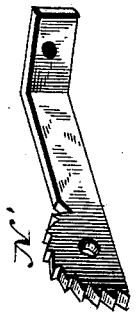


Fig. 6.

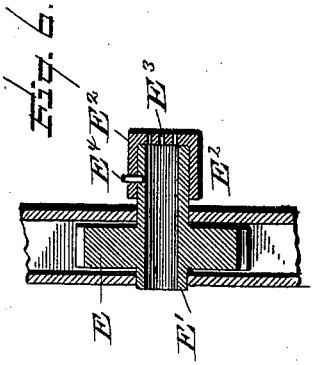


Fig. 3.

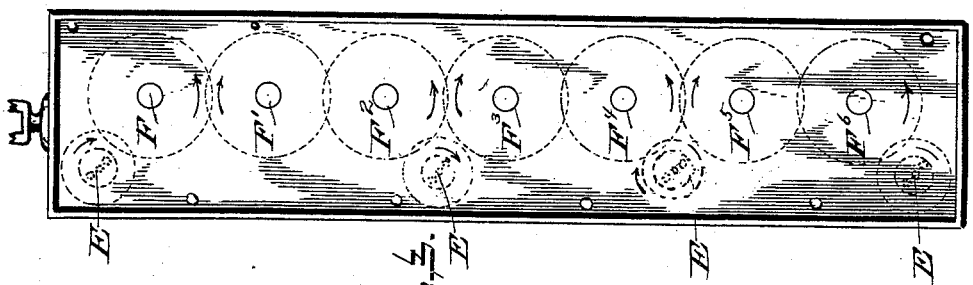


Fig. 2.

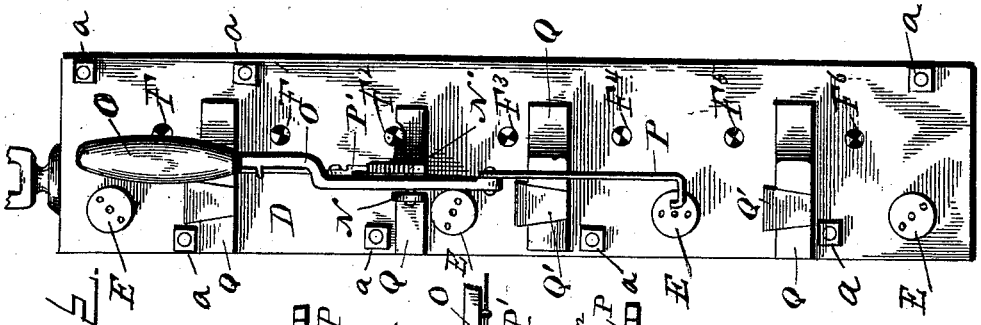
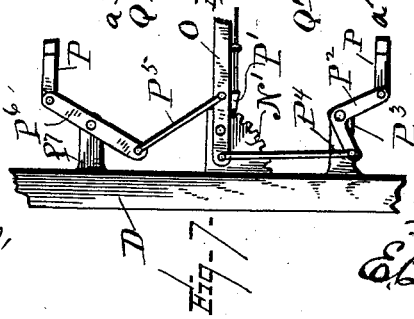


Fig. 7.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM H. REPPETO, OF FLORA, INDIANA.

WIRE-FENCE MACHINE.

SPECIFICATION forming part of Letters Patent No. 347,064, dated August 10, 1886.

Application filed May 10, 1886. Serial No. 201,698. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. REPPETO, a citizen of the United States, residing at Flora, in the county of Carroll, State of Indiana, have invented certain new and useful Improvements in Wire-Fence Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to wire-fence machines which are intended to twist wire strands about pickets, and to do this at the place where the fence is to be built; and among the objects of the invention is the provision of a mechanism for operating the twisters which will permit of a close approach of the machine to a post or other fixed object in the line of fencing.

Other objects and advantages of my invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a fence-machine embodying my invention and of a portion of a fence as constructed thereby. Fig. 2 is a side elevation of the machine. Fig. 3 illustrates the system of gearing employed. Figs. 4, 5, 6, and 7 are details, hereinafter described.

Like letters refer to like parts in all the figures of the drawings.

A represents a bar or rod, which serves the function of a track along which the twisting mechanism is moved. The track is supported by posts B, which may be the fence-posts with which the pickets are connected by the strands. In this instance a single roller, C, supports the machine D, in which are arranged twisters E, one for each pair of strands in the fence.

Referring to Fig. 3, which is an elevation of the frame-work D with the face-plate removed, the circumferential lines of the gearing and the twisters being shown in dotted circles, while their hubs or bearings are shown in full-line circles, as are also the bolt-holes for the face-plate connecting-bolts shown in Fig. 2 at *a*, it will be seen that four twisters are arranged in a perpendicular line with each other and at one side of the frame-work or casing of the machine, and that they are connected with each other by means of a series of gears, F to F^6, inclusive, arranged in a similar line with each other at one side of the twisters. The gear F^3 is the driving-gear of the system, while the twisters mesh with the gears F, F^2, F^4, and F^6, this arrangement rendering the gears F' F^3 F^5 intermediate gears or idlers. When the gear F^3 is rotated or partially rotated in one direction, as indicated by the arrow thereon, all of the twisters are rotated in the same direction.

On the shaft of the gear F^3 are mounted two ratchets, G and H, each having the operative faces of its teeth opposite to those of the other, and upon said shaft, between the ratchets, is mounted pivotally a lever, I, carrying two pawls, J K, one on each side of the lever, and each extended beyond its pivot and connected by a rod, L, to a bell-crank lever, M, pivoted to the main lever I, so that when either of the bell-cranks is swung down into line with the main lever the rod L draws upon the extension of the pawl and throws its opposite end into mesh with the ratchet co-operating therewith, so as to convey the motion of the lever I to the gear F^3, the ratchets being rigidly secured to the shaft thereof. By using the other ratchet the gearing and twisters are rotated in an opposite direction. This construction and arrangement of the power-applying devices is more compact and convenient than the ordinary crank and miter-gear connection, as the main projection is lateral with relation to the fence, and hence the machine itself can be operated more closely to a post or other object in the line of the fence. So, also, the arrangement of all of the twisters at one side of the machine permits of the use of either independent posts for the support of the track or rail A, or for that purpose the rail may be supported at the opposite side of the ordinary fence-posts to that to which the strands are secured. Again, the arrangement of the twisters and twister-operating gear in parallel vertical lines tends to balance the machine when suspended by a single roller, so that the same operates more smoothly and is more conveniently moved from point to point during the operation of building the fence.

On the side of the machine opposite the gear-operating lever I is a bracket, N, in which is pivotally supported a lever, O, having at

one end below its pivot a spacing-hook, P. (See Fig. 2.) One arm, N', of the bracket is formed after the manner of a ratchet, (see Figs. 5 and 7,) into which the pawl P', pivotally mounted on the lever O, takes, so that when the free end of the lever O is forced in a direction from the machine, the spacing-hook P being placed upon the picket X, as clearly shown in Fig. 1, the machine is drawn toward the picket, so that a freshly-inserted picket will be firmly held in position by the spacing-blocks Q, secured to or formed as a part of the machine. In this instance the faces of the blocks Q are recessed and adapted to receive removable spacing-blocks Q', which are preferably wedge-shaped and provided with beveled edges to fit the dovetail recesses of the blocks Q, so that thicker or thinner blocks Q' (see dotted lines, Fig. 4) may be inserted in the main blocks, to adapt the machine to build fences in which the spaces between the pickets vary, or to adapt the machine to weave alternate wide and narrow pickets. This latter object, however, is also accomplished by means of the pawl-and-ratchet mechanism P' N', hereinbefore described. The twisters consist of a gear-wheel, E, having a hollow journal, E', over one end of which is placed a cup, E^2, the bottom of which is perforated, as at E^3, for the passage of the wires to be twisted about the pickets. The cup is secured in position by means of a pin, bolt, or screw, E'. By this construction cups provided with perforations for different-sized wires may be substituted for each other.

The tension device comprises an upright standard or post, R, which may be connected permanently with the usual spool-frame or other apparatus for supporting the wires in the form of coils; or said beam may be supported independently in any suitable manner in line with the fence being built. At opposite edges of the beam or post R are pivotally secured triangular blocks R', the beam being cut away to receive the same. Screws or bolts R^2 serve to force the blocks firmly against the inclined walls of the recesses formed in the edge of the beam, post, or standard, so as to bind the strands Y therein and produce the desired tension. A suitable guy or guys, Y', (see dotted lines, Fig. 1,) are employed for securing the tension-post R in position.

The operation of the machine will be readily understood by persons skilled in this class of inventions from the description hereinbefore given.

In Fig. 7 there is illustrated a modification of the spacing devices, which consists in mounting the lever O upon a bracket, N', the ratchet-teeth of which are substantially square, in order to receive a square pawl, P', whereby a single pawl serves to hold the lever O against movement in either direction. If desired, the main lever I of the machine may be provided with a single pawl and ratchet having teeth of the same character as that shown in Fig. 7.

From the lever O, beyond its pivot, there extends a rod, P^4, which is connected to a bell-crank lever, P^2, mounted on a bracket, P^3, which lever is pivotally connected to one of the spacing-hooks P, and from the lever O, and at a point between its free end and pivot, another connecting-rod, P^5, extends to a lever, P^6, pivoted to a bracket, P^7, of the frame D of the machine, which lever P^6 is pivotally connected to the other spacing-hook P. Now, it will be noticed that when the lever O is oscillated in one direction the hooks P are drawn toward the frame D, and when the lever is oscillated in the opposite direction the hooks are moved away from the frame, so that spacing-hooks arranged near each end of a picket may be operated to determine the position of the machine from the last picket inserted, and by means of the several notches in the bracket N' said spaces may be adjustably determined.

It will be noticed that in the system of gears, F to F^6, employed each meshes directly with the other, and that the twisters are introduced into the system so as to receive motion from and yet so as not to be employed to drive or give motion to the system, and the twisters are all driven in uniform directions by being in mesh with the first, third, fifth, and seventh gears, and, furthermore, the power is applied, not to a twister, but to a gear, whereby all lost motion is taken up before either twister is moved to twist one set of strands of the fence more than another.

Having thus fully described my invention and its operation, what I claim is—

1. In a machine of the class described, the combination of a frame-work or case, a series of directly-intermeshing gears, and a series of twisters arranged to separately mesh therewith, substantially as specified.

2. In a machine of the class described, the combination of a system of directly-intermeshing gears, a series of twisters meshing laterally with the same, a ratchet fixed to the shaft of one of said gears, and a pawl-and-ratchet lever loosely mounted on said shaft, substantially as specified.

3. In combination with a system of gears and twisters arranged side by side, a pawl-and-ratchet mechanism mounted upon one of the intermediate gears, and a series of twisters meshing with the first, third, fifth, and seventh gear in the system of gears, substantially as specified.

4. In a machine of the class described, a spacing mechanism comprising a spacing-hook connected with a lever having a pawl and pivoted to a bracket a portion of which is formed as a ratchet, substantially as specified.

5. In a machine of the class described, a spacing block or bracket the face of which is dovetailed and provided with a removable bearing-block, substantially as specified.

6. A tension device for a machine of the class described, comprising a standard having opposite angular recesses, triangular blocks

movably mounted in said recesses, and means for adjustably forcing and retaining the blocks within the recesses, substantially as specified.

7. The combination of the gear F^3, ratchets G H, lever I, pawls J K, rods L, bell-cranks M, the gears F F' F^2 F^4 F^5 F^6, and the twisters E, substantially as specified.

8. In a machine of the class described, the combination of the bracket N N′, lever O, pawl P′, and the hook P, substantially as shown and described.

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

WILLIAM H. REPPETO.

Witnesses:
JOS. A. BRIDGE,
ISAAC PRITCHARD.