

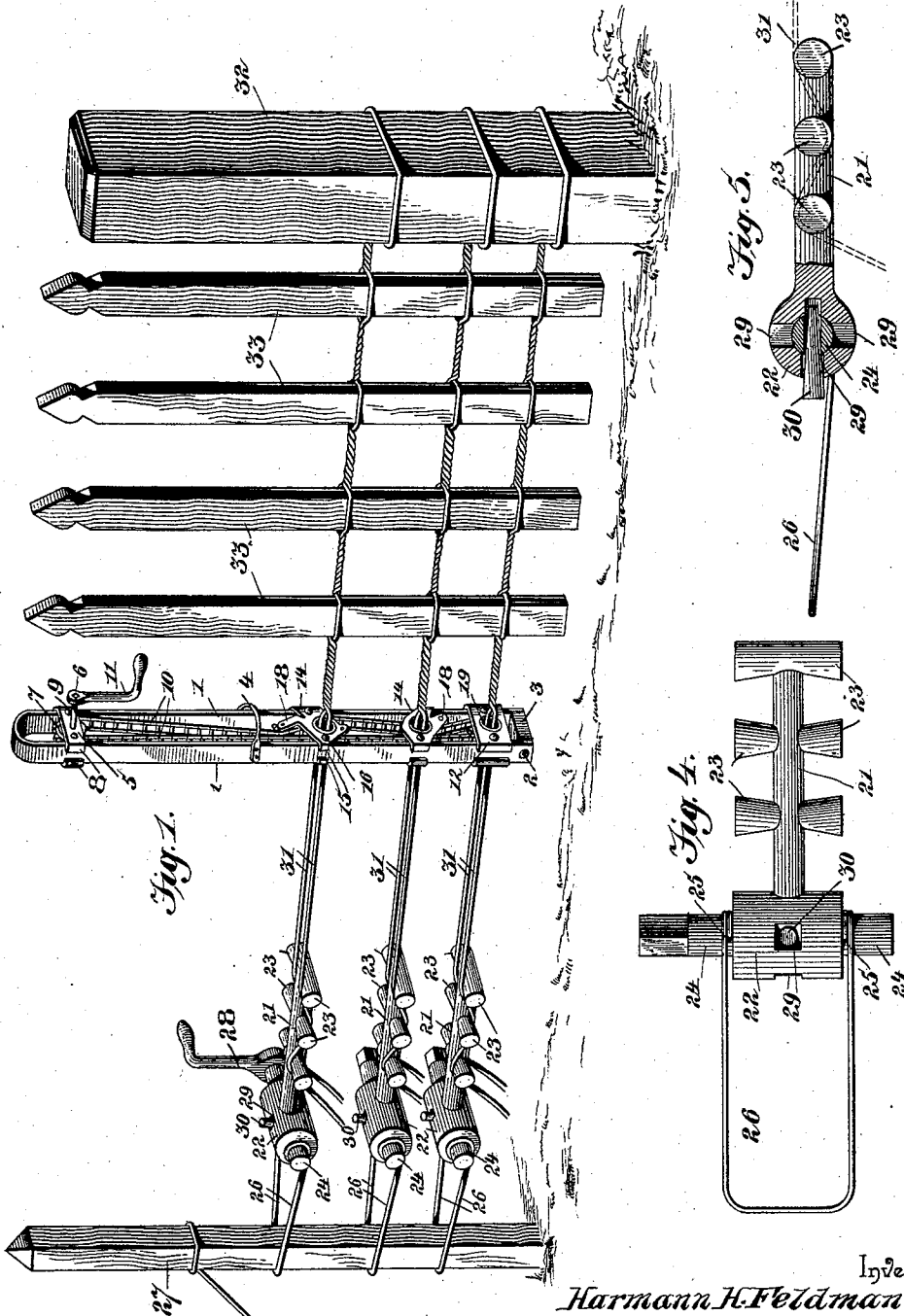
(No Model.)

2 Sheets—Sheet 1.

H. H. FELDMAN.
FENCE MACHINE.

No. 576,048.

Patented Jan. 26, 1897.



Witnesses
H. G. Dietrich
U. B. Hillyard.

By his Attorneys,

Hermann H. Feldman
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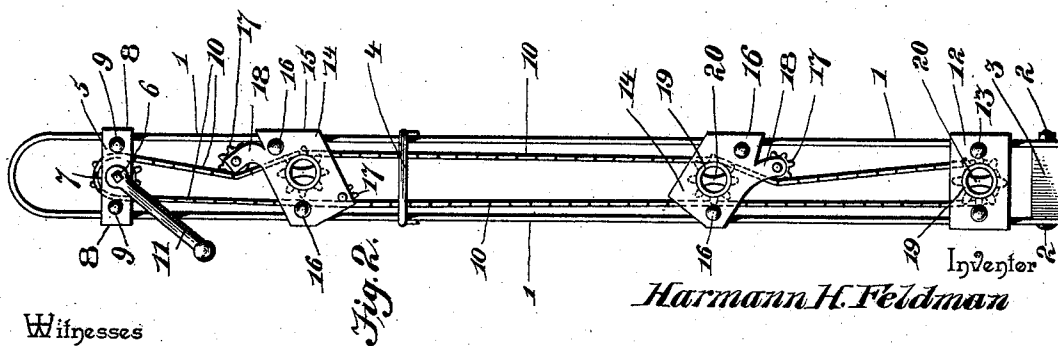
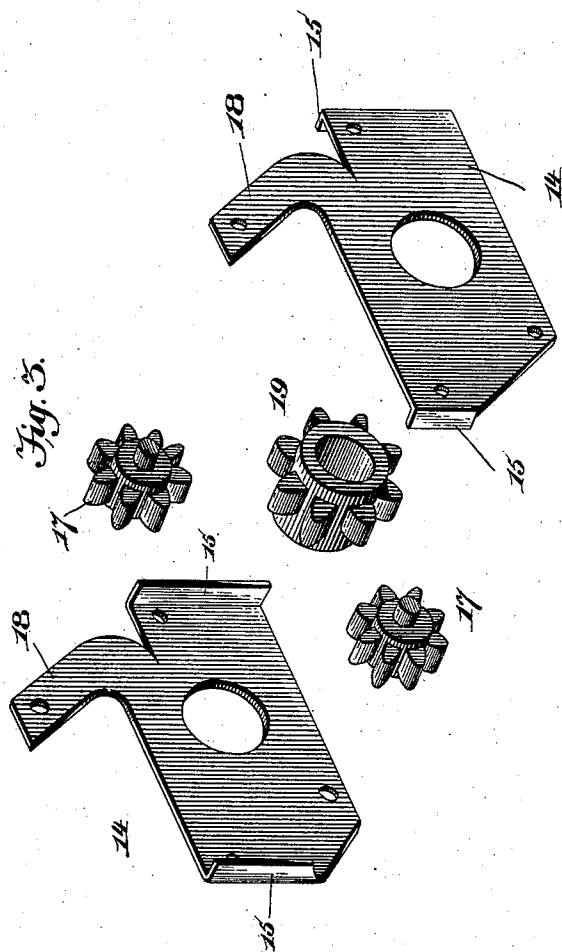
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2 Sheets—Sheet 2.

H. H. FELDMAN.
FENCE MACHINE.

No. 576,048.

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Witnesses
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V. B. Hillyard.

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UNITED STATES PATENT OFFICE.

HARMANN H. FELDMAN, OF ST. CLEMENT, MISSOURI.

FENCE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 576,048, dated January 26, 1897.

Application filed September 3, 1896. Serial No. 604,765. (No model.)

To all whom it may concern:

Be it known that I, HARMANN H. FELDMAN, a citizen of the United States, residing at St. Clement, in the county of Pike and State of Missouri, have invented a new and useful Fence-Machine, of which the following is a specification.

This invention relates to machines for wiring wood fencing in the construction of wire- and-picket fencing along the prescribed line of fence when erecting the same in the field.

The purpose of the invention is the provision of a machine for the purpose aforesaid which will be light, compact in the arrangement of its parts, and readily adjustable to the position and number of companion wires or cables of the fence to be constructed and between which the pickets are to be bound.

A further purpose of the invention is to devise a tension device which will admit of any slack in the wire being readily and quickly taken up, and which will preserve a uniform tension upon the wires, so that the twisting will be even and the pickets spaced a like distance apart.

Other objects and advantages are contemplated and will appear as the nature of the invention is unfolded in the following description, reference being had to the accompanying drawings for a full understanding thereof.

The improvement is susceptible of various changes in the form, proportion, and the minor details of construction without departing from the principle or sacrificing any of the advantages thereof, and to a full disclosure of the invention an adaptation thereof is shown in the accompanying drawings, in which—

Figure 1 is a perspective view showing the manner of constructing a wire-and-picket fence by means of a machine constructed in accordance with the principles of this invention. Fig. 2 is a front view of the fence-machine, showing the twisting-wheels differently related. Fig. 3 is a detail perspective view of a twisting-wheel, its mountings, and the direction-sprockets for the operating-chain, the parts being separated and arranged in a group. Fig. 4 is a top plan view of a tension device. Fig. 5 is a side elevation of the tension device, parts being broken away. Fig. 6 is an end view of a twisting-wheel, showing

the cross-bar for separating the companion wires.

Corresponding and like parts are referred to in the following description and indicated in the several views of the accompanying drawings by the same reference-characters.

The frame for supporting the operating parts of the machine comprises side bars or strips 1 and is preferably formed of a single length of bar-iron, which is doubled or folded upon itself, the free ends being secured together by a bolt 2 and held apart the required distance by an interposed block 3, the latter being mounted upon the bolt 2. The side bars or strips 1 extend parallel throughout their length to admit of the mountings of the twisting-wheels being adjustable thereon.

A handle 4 is located intermediate of the length of the frame and consists of a rod or bar bent between its ends and riveted or otherwise secured at its extremities to the side bars or strips, and this handle materially assists in bracing and holding the strips 1 at the required distance apart. Similar plates 5 are located near the upper end of the frame and have registering openings to receive a shaft 6, upon which is mounted a sprocket-wheel 7. The plates 5 have flanges 8 at their ends, which overlap the outer sides of the frame bars or strips and are secured together by bolts 9, the latter coming inside of and touching the inner faces of the bars or strips 1 and serving, in connection with the flanges 8, to prevent endwise movement of the plates when the latter are placed in position. Upon loosening the bolts 9 the plates 5 can be adjusted along the frame to the required position, so as to secure the requisite tension to the drive-chain 10. A crank 11 is removably fitted to a projecting end of the shaft 6 for turning the latter when it is required to operate the drive-chain 10 for actuating the twister-wheels.

Plates 12, similar in construction to the plates 5, are located near the lower end of the frame and are adjustably secured to the side bars or strips 1 by bolts 13, the ends of these plates being flanged for a purpose similar to flanging the plates 5. These plates are apertured to form bearings for the lower twisting-wheel.

The twisting-wheels intermediate of the

ends of the machine are similarly mounted, being journaled in plates 14, which are diagonally arranged with respect to the frame-bars, the diagonal corners being truncated and flanged, as shown at 15, to embrace and overlap the sides of the bars or strips 1. Bolts 16 connect the plates 14 and clamp them against the edges of the frame-bars and touch the inner sides of the latter, so as to fix the position of the plates. Direction-sprockets 17 are located at the opposite diagonal corners of the plates 14 and receive the opposite portions of the sprocket or drive chain 10. If preferred, one of the corners of the plates 14 may be extended, as shown at 18, so as to admit of the direction-sprockets being located at a greater distance from the twister-wheels. The twisting-wheels 19 are constructed alike and each comprises a sprocket-rim and a hollow hub, the latter projecting beyond the sides of the rim and obtaining bearings in openings of companion plates 14. A cross-bar 20 extends across the bore or opening of the hub and is designed to separate the strands or companion wires forming a cable and between which the pickets are bound. The parts entering into the formation of a twisting-wheel are integrally formed, being cast, thereby obviating the formation of any joints and resulting in a substantial structure. By loosening the bolts 16 the plates forming mountings for the twisting-wheels can be adjusted to the required position, thereby adapting the machine to the location or elevation of the line-wires or cables.

It will be understood that as many twisting-wheels will be provided as there are cables or line-wires in the fence to be constructed. The number of twisting-wheels may be in excess of the number of wires in a fence, and some of the twisting-wheels may remain out of operation, and such construction is contemplated within the scope of the invention.

The tension device is a bar or plate 21, having a bearing-head 22 at one end and formed along its sides with a series of transversely-alining projections 23. The projections 23 are enlarged at their outer ends, so as to retain the fence-wires in proper position, as they will have a tendency when subjected to strain to move toward the inner or smaller end of the projections and bear against the body or bar 21 of the device. The number of the projections 23 will vary according to the gage of the fence-wire and the strain to which the device will be subjected. A short shaft 24 is journaled in the bearing-head 22 and projects beyond the ends of the said head and is formed with openings 25 to receive the terminal portions of a wire loop 26, by means of which the device is anchored or hitched to a post 27 at any convenient point along the line of fencing. The terminal portions of the wire loop extending through the openings 25 upon each side of the bearing-head 22 retain the shaft 24 in place and at the same time form positive means of connection between the shaft and

the loop. One end of the shaft 24 is made angular or otherwise constructed to receive a crank 28, by means of which the shaft is turned in the bearing-head to shorten the wire loop, and thereby take up any slack that may exist in the line or fence wires. The bearing-head 22 is formed in its circumferential length with a series of openings 29, through any one of which is adapted to be passed a pin 30, so as to hold the shaft 24 in the desired position after the fence-wires have been sufficiently tightened. A tension device will be provided for each cable or pair of companion wires, as clearly indicated in Fig. 1 of the drawings.

In constructing a fence by means of the instrumentalities herein set forth the twisting-wheels are adjusted so as to correspond with the relative position which the line-wires are to occupy in the completed fence, and the strands or companion wires 31 of each cable are passed through the hubs of the twisting-wheels upon opposite sides of the cross-bars 20 and are secured at one end to a fence-post 32 and are rove through the spaces between the projections 23 of the tension devices, the latter being hitched or anchored to the fence-post 27 in the manner set forth. The fence-machine is suspended by means of the line-wires, and the latter are twisted by turning the crank 11 alternately in opposite directions, thereby obviating twisting of the parallel strands or wires between the tension devices and the machine, which would be the case if the crank were turned continuously in the same direction. After the formation of the twists a picket 33 is placed in position between the strands or companion wires 31, and the twisting-wheels are again actuated so as to secure the picket last placed in position. The machine is advanced along the wires step by step as the pickets are bound between the wires.

Having thus described the invention, what is claimed as new is—

1. In a fence-machine, the combination of a frame comprising side bars or strips, and mountings for the operating parts, comprising parallel plates having their terminal portions flanged to embrace or overlap the outer sides of the frame-bars, and bolts for connecting the plates and clamping them against the edges of the frame-bars, the said bolts touching the inner sides of the frame-bars and acting jointly with the flanged ends of the plates to hold the said plates in fixed relation, substantially as and for the purpose set forth.

2. In a fence-machine, the combination of a frame comprising side bars or strips, twisting-wheels, plates forming mountings for the twisting-wheels, a direction-sprocket journaled between the plates a short distance from the twisting-wheels, and a drive-chain engaging with the twisting-wheels and guided by the direction-sprockets, substantially as set forth.

3. In a fence-machine, the combination of

a frame comprising side bars or strips, similar plates diagonally disposed and having their opposite corners truncated and flanged to embrace or overlap the outer side of the frame-bars, bolts connecting the plates and clamping them against the edges of the frame-bars and touching the inner sides of the latter, a twisting-wheel journaled between the plates, direction-sprockets journaled between the diagonally-opposite corners of the said plates, and a drive-chain in engagement with the direction-sprockets and the twisting-wheel, substantially as and for the purpose set forth.

15 4. In means for constructing wire-and-picket fencing, a tension device comprising a bar or plate having a series of projections between which the wires are to be rove, and having a bearing-head at one end, a shaft journaled in
20 and having its ends projecting beyond the ends of the bearing-head, a wire loop or similar connection having its terminals extending through openings in the projecting ends of

the shaft to hold the latter in place and adapted to be wound thereon, and a pin passing through an opening in the aforesaid bearing-head and engaging with the shaft, substantially as and for the purpose specified.

5. In means for constructing wire-and-picket fencing, a tension device having a bearing-head, a shaft journaled in the bearing-head and extending beyond the ends thereof, a connection adapted to be wound upon the projecting end portions of the shaft, and a pin adapted to be passed through an opening in the bearing-head and engaged with the shaft to hold the latter against rotation, substantially as and for the purpose set forth.

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

HARMANN H. FELDMAN.

Witnesses:

CHAMP CLARK,
J. N. MAUPIN.