No. 630,875. Patented Aug. 15, 1899.

N. A. FIELDER.

FENCE MACHINE.

(Application filed July 21, 1897.)

(No Model.)

Fig. 1.

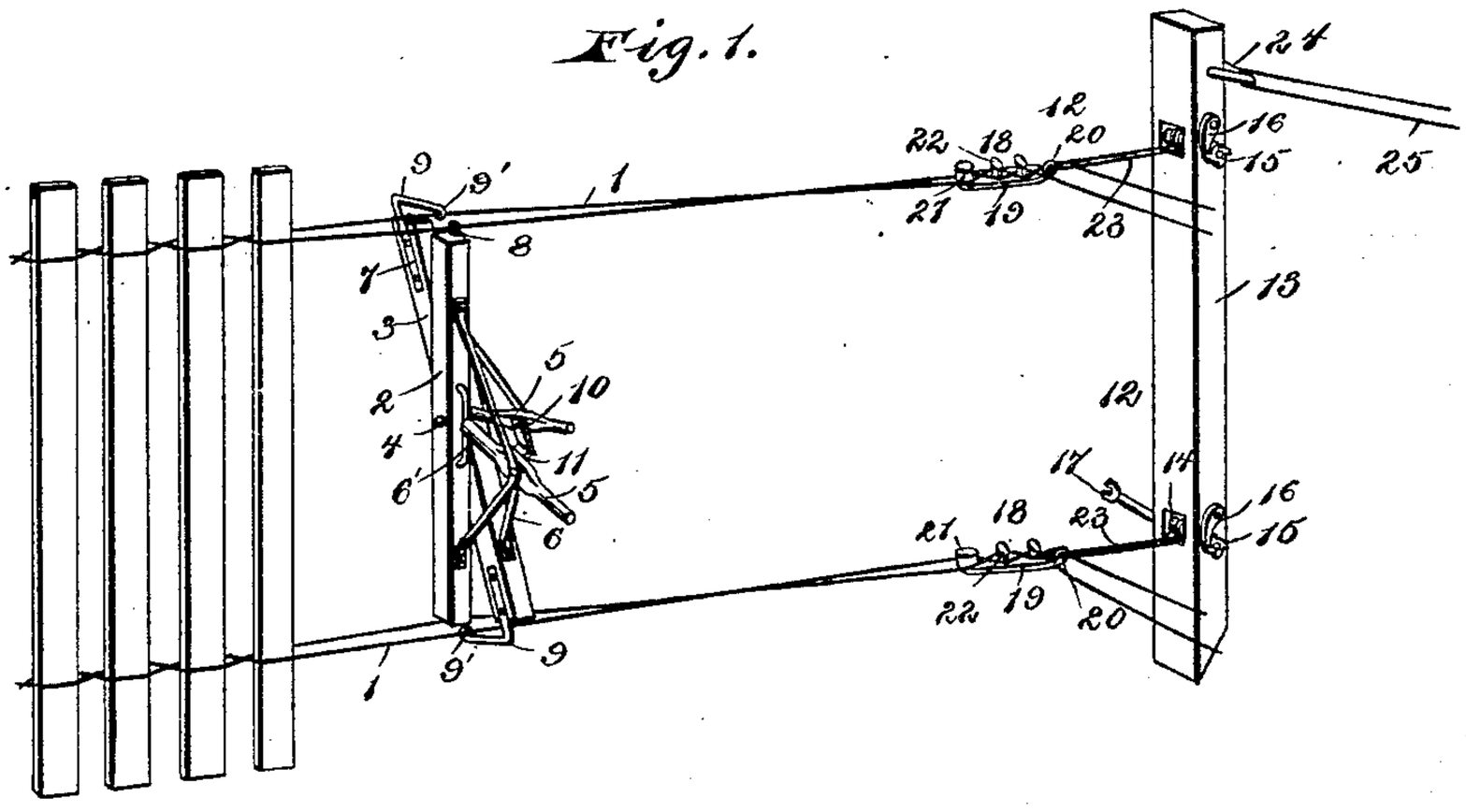


Fig. 2.

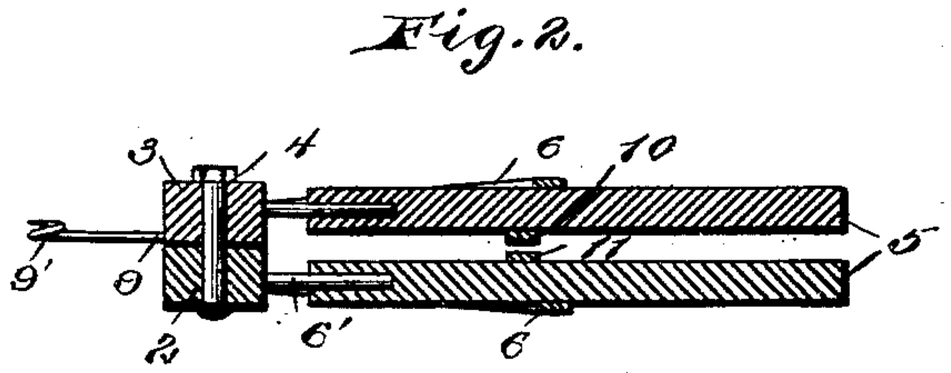


Fig. 3.

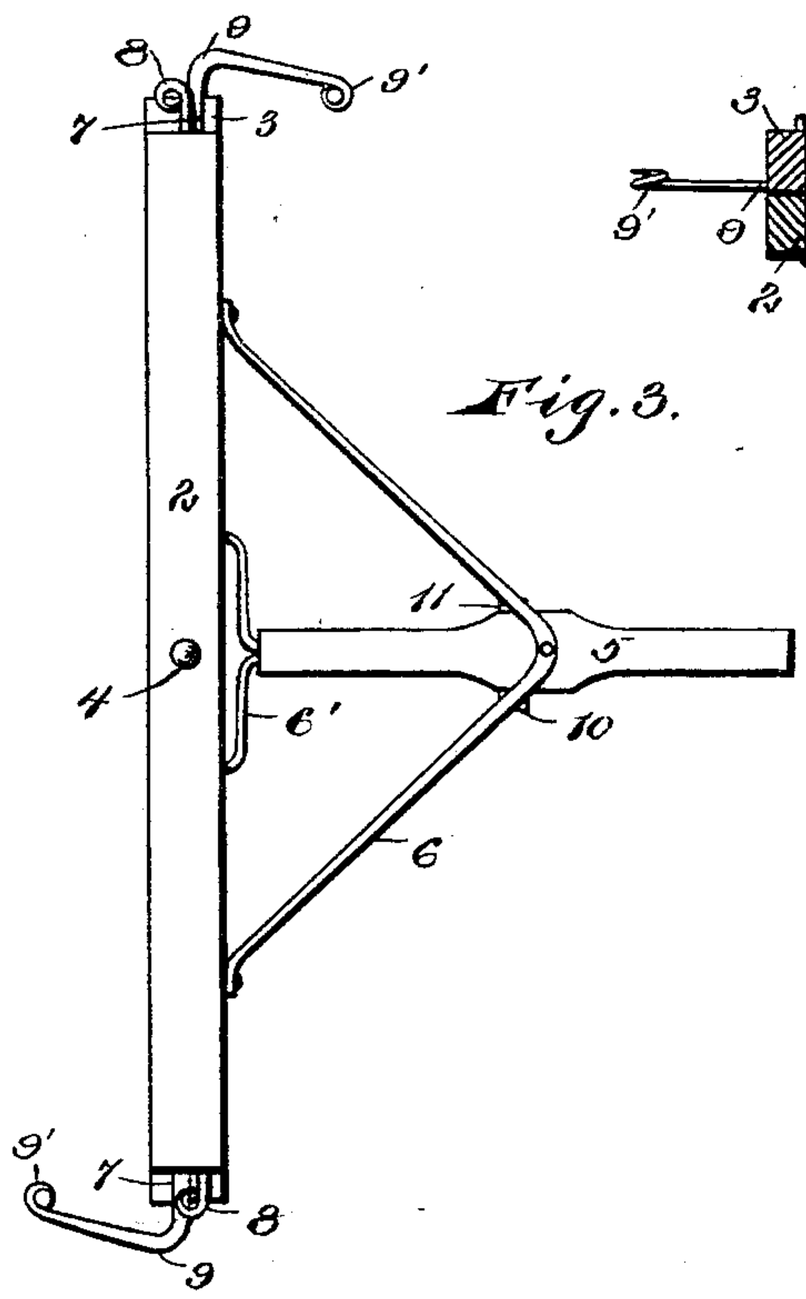
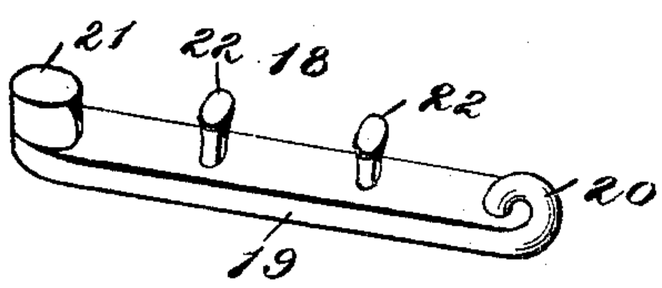


Fig. 4.



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NATHAN A. FIELDER, OF REDDEN, TENNESSEE.

FENCE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 630,875, dated August 15, 1899.

Application filed July 21, 1897. Serial No. 645,375. (No model.)

To all whom it may concern:

Be it known that I, NATHAN A. FIELDER, of Redden, in the county of Dickson and State of Tennessee, have invented certain new and useful Improvements in Fence-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in fence-machines, and more particularly relates to machines for wiring fence-pickets.

The object of the invention is to provide a machine of the character mentioned whereby after the pickets are inserted between the strands of the wires the latter are crossed, so as to secure the pickets firmly in place, and to further provide in connection with the machine an improved tension device for holding the wires, so that the operation of constructing the fence may be effected with rapidity and ease and the pickets after being placed between the wires firmly held therein.

A further object of the invention is to provide a machine of the character mentioned which shall be equally well adapted for constructing fences upon hills as upon level ground and to simplify the construction of such machine, so that the same may be manufactured at a comparatively low figure.

With these and other objects in view, which will appear as the nature of the improvements is better understood, the invention consists in the novel construction, combination, and arrangement of parts, as will be hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a portion of a fence under construction and having the herein-described machine applied thereto. Fig. 2 is a transverse sectional view taken through the pivotal point of the weaving-bars. Fig. 3 is a side elevation. Fig. 4 is an enlarged detail perspective view of one of the wire-grips employed in connection with the tension device.

Similar numerals of reference designate corresponding parts throughout the several figures of the drawings.

Referring to the drawings, 1 1 designate the wire strands constituting the line-wires of a fence, which wires are arranged in sets, one set being preferably arranged at the upper end and the other set at the lower end of the pickets; but it is of course obvious that any number of sets may be employed, and it will be observed that each of the sets comprises a pair of the wires, adapted to be crossed in a manner to be hereinafter stated.

2 designates a main weaving-bar, and 3 a supplemental weaving-bar, which bars are pivoted, preferably by means of a bolt 4, at a point midway their ends, and extending from one of the edges of each of the bars 2 and 3 is a handle-bar 5, each of which is secured to its respective weaving-bar by braces 6 and curved diverging attaching-arms 6′, inserted in one of its ends, and by means of the handle-bars 5 it is evident that the weaving-bars 2 and 3 may be swung upon the pivot 4 for the purpose of crossing the wires of each set, and thereby weaving the pickets therebetween. The inner faces of the weaving-bars 2 and 3 at their upper and lower ends are rabbeted, as at 7, and secured in each of the rabbeted portions of the main weaving-bar 2 is an eye 8, through which one of the strands of each set passes. Likewise secured in each of the rabbeted portions of the supplemental weaving-bar 3 is an angular hook 9, provided at its free end with an eye 9′, which is adapted to engage the other wires of the sets, and by reason of the eyes 8 and hooks 9 engaging the strands it is apparent that when the handle-bars 5 are operated so that the ends of the weaving-bars 2 and 3 may be moved in opposite directions the strands of each set will be crossed, and thus weave the pickets between the wires. It will also be noted that the hooks 9 project at opposite sides of the supplemental weaving-bar 3 and that said supplemental weaving-bar is of greater length than the main weaving-bar. By this construction the eyes 8 and 9′ are in substantially the same plane, so that the even weaving of the strands is positively insured.

The numeral 10 designates a contact-strip which is carried by the handle-bar 5 of the supplemental weaving-bar 3, and mounted on the adjacent face of the other handle-bar is an L-shaped stop 11. The purpose of the contact-strip 10 and the stop 11 is to lock the weaving-bars in their open position, and for accomplishing this end when the weaving-bars are spread apart the L-shaped stop 11

is seated upon the upper end of the contact-strip 10. In this position the strands of each series are twisted, and a new picket may then be inserted, the machine being held in its locked position without grasping the handle-bars 5. When, however, it is desired to twist the strands of each series so that another picket may be inserted therebetween, the stop 11 is displaced from the upper end of the contact-strip 10 and the handle-bars 5 so operated that the position of the weaving-bars will be reversed, when the lower end of the contact-strip is seated upon the stop 11, and in this position the weaving-bars are locked against movement, a sufficient play of the weaving-bars on the bolt 4 being permitted to allow the stop being positioned above and below the contact-strip 10.

A tension device is designated by 12 and comprises a standard 13, having adjacent to its upper and lower ends transverse shafts 14 journaled therein, and mounted upon one end of each of the shafts 14 is a ratchet-wheel 15, each of which is adapted to be engaged by a pawl 16, pivoted at the side of the standard 13 upon which the wheels 15 are located. For rotating the shafts 14 a suitable wrench 17 may be employed. A wire-grip 18 is applied to each of the shafts 14, and said grip comprises a shank 19, having at one of its ends an eye 20 and at its other end a terminal lug 21, and arranged between the lug 21 and the eye 20 is a series of spaced binding-lugs 22, said lugs 22 being also spaced from the terminal lug 21 and the eye 20. A loop 23, which may be of wire or other suitable material, passes through each of the eyes 20, and each of said loops 23 passes around one of the shafts 14 in order to connect the grip 18 therewith. The strands 1 are passed around the lugs 21 and 22 to secure the former to the grips, and by rotating the shafts 14 it is apparent that the grips 18 will be drawn toward the same through the medium of the loops 23 and a proper degree of tension imparted to the strands 1, the pawls 16 engaging the ratchet-wheels 15 and holding the strands 1 at the tension to which the same have been adjusted. A ring or its equivalent 24 is arranged at the upper end of the standard 13, and wire cables 25 or the like are attached thereto for retaining the standard 13 in a vertical position during the construction of the fence. The lower end of the standard 13 is sharpened, as clearly shown, to facilitate the insertion of said standard into the ground when erecting a fence.

The operation of the herein-described machine is as follows: The strands 1 being arranged in sets, as before described, and suitably secured to one of the posts of the fence, a picket is inserted therebetween and the machine then placed upon the strands, one of the strands of each set passing through the eyes 8 of the main weaving-bar 2, while the other strands are inserted into the hooks 9 of the supplemental weaving-bar 3. The strands having had the proper tension imparted thereto by means of the tension device 12, the handle-bars 5 are operated in opposite directions, so that the ends of the weaving-bars 2 and 3 may be also moved in opposite directions. This movement of the ends of the weaving-bars causes the strands in each series to be crossed close to the picket, and thus the first picket is secured between the strands of the series. A second picket is then inserted between the strands of the sets and the movement of the handles 5 reversed, and this alternate moving of the handles 5 is effected during the entire construction of the fence, the machine being gradually moved along the wires and the pickets being inserted after each crossing of the latter. As previously described, the stop 11 and the contacting strip 10 lock the weaving-bars 2 and 3 in such position that the strands of each series are retained spread apart, and hence a single person can operate the machine, it only being necessary to position the stop 11 in proper relation to the contact-strip 10, when the pickets may be successively inserted between the strands.

The invention is susceptible of various changes in the form, proportion, and minor details of construction, and hence I do not restrict myself to the precise arrangement and embodiment of the machine as herein described and illustrated, but reserve to myself the right to change, modify, or vary the device as falls within the scope of the invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a fence-machine, the combination with a series of weaving-bars pivoted together at a point midway their ends, the inner faces of said bars being rabbeted at their ends, eyes secured to one of said bars in said rabbeted ends and adapted to receive one of the strands of each pair, hooks carried by the other weaving-bar and arranged in the rabbeted ends thereof, said hooks being adapted to engage the other strands, and handle-bars carried by the weaving-bars for moving the latter in opposite directions, whereby the strands are adapted to be crossed, substantially as described.

2. In a fence-machine, the combination with a series of weaving-bars, of means carried by said weaving-bars for engaging the strands, handles also carried by said weaving-bars, a contact-strip mounted upon one of said handles, and an L-shaped stop arranged upon the other handle and adapted to engage said contact-strip, substantially as and for the purpose described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

NATHAN A. FIELDER.

Witnesses:
R. J. WORK, Jr.,
R. J. REDDEN.