(No Model.)

G. A. DENTELBECK.

FENCE MACHINE.

No. 523,975. Patented Aug. 7, 1894.

Fig. 1.

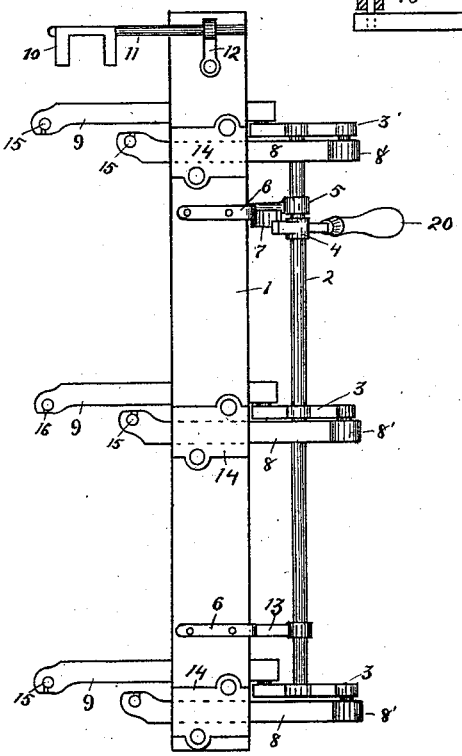


Fig. 2.

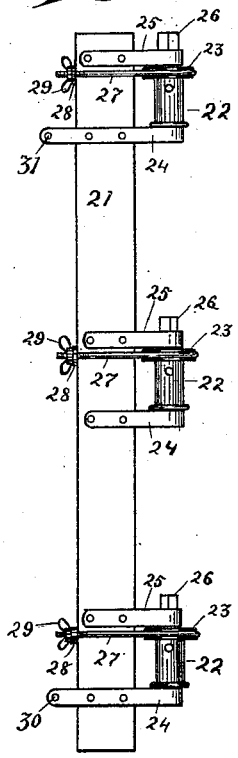


Fig. 3.

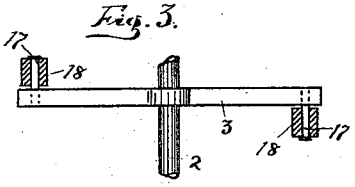


Fig. 4.

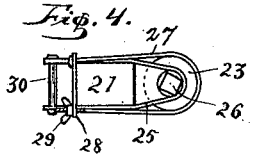


Fig. 5.

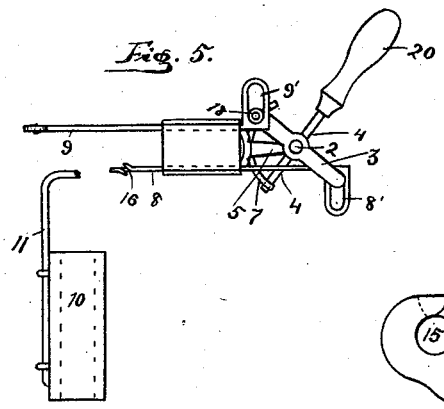


Fig. 6.

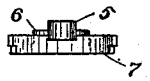
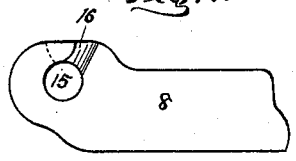


Fig. 7.



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UNITED STATES PATENT OFFICE.

GEORGE A. DENTELBECK, OF MYHART, INDIANA.

FENCE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 523,975, dated August 7, 1894.

Application filed April 9, 1894. Serial No. 506,828. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. DENTELBECK, a citizen of the United States, residing at Myhart, in the county of Allen, in the State of Indiana, have invented certain new and useful Improvements in Fence-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in hand fence machines specially adapted for use in the construction of wired-picket fences.

The object of my invention is to provide a cheap, substantial, and convenient hand-fence machine, readily placed in position and easily operated, adapted to rapidly weave the picket-holding wires about the pickets either in the place where the fence is to be used or at any other proper place, and at the same time so constructed and arranged as to keep the said holding-wires tightly stretched and the pickets uniformly even at the top.

Another object of my invention is to provide a cheap and efficient picket-wiring fence-machine adapted to be supported by the fence-wires instead of resting upon the ground and also adapted to be successfully operated by a single operator, thereby dispensing with the necessity and expense of an assistant.

My invention consists of a tension holding device, and a vertical standard having a picket-gage adjustably mounted thereon, said standard being provided with horizontal guide-ways upon opposite sides thereof, wire-crossing arms provided with wire-holding eyes and adapted to work in the said guide-ways, and an oscillating rod connected with said standard, provided with rigidly mounted lever-arms adapted to actuate the said wire-carrying arms by the oscillatory movements of the said rod, and having an operating handle pivotally mounted thereon, adapted to operate the said rod and also to lock the said reciprocating arms at the limits of their movement.

The novel features of my invention consist in the construction and arrangement by which the operator imparts a reciprocating motion to the said wire-crossing arms and locks the same at the limit of their movement and also the construction by which a single operator can readily and conveniently employ my improvement without an assistant.

The objects of my invention are accomplished by the mechanism illustrated in the accompanying drawings in which similar figures of reference indicate corresponding parts throughout the several views.

Referring now to the drawings, Figure 1 is a side view of my improvement showing the general form and arrangement of the operating parts. Fig. 2 is a side view of my tension device showing the arrangement of the winding drums and the manner of operating the same. Fig. 3 is a detail of the two-armed levers by which the wire-crossing arms are operated, showing the revoluble collars with which they are provided. Fig. 4 is a plan of Fig. 2. Fig. 5 is a plan of Fig. 1 showing the relative arrangement of the said two-armed levers, the reciprocating wire-crossing arms, the operating handle, and the sector with which it forms a locking engagement. Fig. 6 is a detail of the notched locking-sector and the integral perforated lug for the oscillating rod. Fig. 7 is a detail of the free end of one of the wire-crossing arms, showing the relative arrangement of the wire-holding eye and the slot leading thereto.

The vertical standard 1, preferably of wood, upon which the operating parts of my improvement are mounted, is provided with a suitable number of slots or guide-ways, indicated in Figs. 1 and 5, upon opposite sides thereof, inclosed by the plates 14, in which guide-ways the wire-crossing arms are adapted to work. At or near the top of the said standard is rigidly secured a slotted lug or other retaining device 12 in which the picket-gage 10 is detachably mounted by means of the bent rod 11. The said standard 1 is also provided with the perforated lugs 5 and 13, preferably two in number, in which the operating rod 2 is loosely mounted. These lugs are integral with the bifurcated plates 6 adapted to be secured upon both sides of the said standard. The upper plate 6 is provided with a forwardly curved sector 7 having terminal notches upon its lower edge, adapted to engage the inner free end of the

operating handle 20, and thereby lock the said rod 2 and the reciprocating arms connected therewith at the limit of each oscillation thereof. The said rod 2 is provided with an operating handle 20 rigidly mounted thereon, at a point opposite to and a little below the said sector 7, preferably by inclosing the said rod as seen at 4 in Fig. 1, the inner end of the said handle being adapted to automatically form a locking engagement with the notches of the said sector 7 at the limit of the oscillations of said rod, for the purpose hereinafter described. The said oscillating rod 2 is also provided with the rigidly mounted two-armed levers 3, preferably three in number, one upon each end thereof and the third midway of its extremities, as seen in Fig. 1, the said levers being arranged at right angles to the said handle 20, and are provided at each end with the rigid pins 17, one extending above the said lever and the other below, as seen in Fig. 3, the said pins 17 being preferably provided with the loosely mounted revoluble collars 18 adapted to lessen the friction in their engagement with the wire-crossing arms.

The reciprocating wire-crossing arms 8 and 9 are identical in construction, but the arms 9 are inverted when in position. The said arms have their free ends curved slightly upward, provided with eyes 15 adapted to receive and retain the picket-wires, and have a diagonal slot 16 leading to the said eyes, and have their rear ends fashioned into a horizontal transverse loop 9′, preferably closed, adapted to inclose and engage the revoluble collars 18 of the said levers 3. The said picket-gage consists of a slotted gage 10 adapted to contain the tops of the pickets, and a bent rod 11 one end of which is detachably secured in the lug 12, the said gage being adapted to keep the tops of the pickets even and of a uniform height when placed in position.

My improved tension device, comprising an important feature of my improvement, consists of a movable post 21, stayed by means of suitable guy rods, not shown, and a proper number of winding drums 22, rotatably mounted in suitable lugs or plates 24 and 25 on said post, the said drums having their upper ends 26 squared for the engagement of a wrench or other tool by which they are readily rotated for the purpose of winding the ends of the wires thereon or for tightening the same. The said drum is provided with an annular flange 23 having a grooved perimeter, adapted to contain the clamping wire 27 which has one end rigidly fixed in a proper transverse plate 28 upon said post and has the other end screw-threaded, loosely mounted in said plate, and provided with a threaded thumb-nut 29 adapted to tighten or slacken the grip of the said wire 27 upon the said flange 23. The ends of the upper and lower plates 24 are preferably rearwardly extended and united by the transverse pins 31 and 30 respectively to which suitable guy rods are secured to stay the said post 21.

The operation of my invention thus described is, briefly stated, as follows: The wires being first arranged in sets at the desired distance apart and properly stretched, in the usual manner, from a beginning post to the winding drums of the post 21, my hand machine having the picket-gage 10 mounted thereon, is placed upon, and supported by the said wires, which are placed in the eyes of the said wire-crossing arms through the diagonal slots 16, and the said machine will be further stayed and sustained in position by the picket-gage when the upper ends of the pickets are in position therein. When the said wire-crossing device is thus placed upon the said stretched wires at a proper distance from the beginning post, the operator turns the handle 20 either to the right or left as the case may be, thereby throwing all of the said arms 9 forward and all the said arms 8 rearward simultaneously, and vice versa, by which operation the members of each set of wires are uniformly and simultaneously crossed and spread for the reception of the pickets, and at the limit of each movement of the said arms, the operator places the inner end of the handle 20 in engagement with the terminal notches on the lower edge of the sector 7, thereby locking the said arms in the position shown in Figs. 1 and 5, until he places a picket in position between the said wires thus spread, when the operator again oscillates the rod 2 by means of the handle 20 thereby reversing the relative position of the said arms which again cross the wire and secure the picket as before. When the operator places a picket in position the top thereof should rest against the lower surface of the gage 10 in the said slot, thereby insuring uniformity of height of the same, the said gage being so adjusted in the lug 12 as to stand directly over the line on which the pickets are arranged.

It is obvious that the greater weight of the outer end of the operating handle 20 will by the force of gravity hold the inner end thereof in engagement with the said slots of the sector 7, thus permitting the operator to have the free use of both hands in arranging the pickets between the wires thereby obviating the necessity of an assistant for that purpose. It is also obvious that when the operator releases his hold upon the said handle at the limit of each oscillation, it will automatically form a locking engagement with the said sector. While the revoluble collars 18 upon the levers 3 may be omitted, yet I prefer to use them for the purpose of decreasing the friction against the inner surface of the loops 8′ and 9′. It is apparent that the wire on the said drums 22 may be arranged to feed at any desired tension by regulating the grip of the wire 27 upon the flange 23 by means of the thumb-nut 29. It is also obvious that my improved wire-crossing device can be used with-

out the said picket-gage, and also with any other proper tension device, though I prefer the construction shown and described.

Therefore, what I claim as my invention, and desire to secure by Letters Patent, is—

1. A fence-machine, consisting of a tension device, and a wire-crossing device comprising a vertical standard provided with horizontal guide-ways for the wire-crossing arms, and a locking-sector as shown, an oscillating rod loosely mounted in suitable lugs on said standard, provided with the rigidly mounted two-armed levers, and means for simultaneously actuating the said arms, as described, the reciprocating arms having their free ends provided with slotted eyes and the other ends forming loops adapted to engage the said two-armed levers, as shown, and an operating handle adapted to oscillate the said rod, and to engage the said sector, all substantially as described.

2. In a fence-machine, a wire-crossing device consisting of a vertical standard having slotted guide-ways upon opposite sides thereof for the wire-crossing arms, perforated lugs, as shown, for the operating rod 2, and provided with a horizontal picket-gage, as shown, an oscillating rod loosely mounted in said lugs, provided with two-armed levers having at each end a vertical pin provided with a revoluble collar adapted to engage and actuate the said reciprocating arms, as described, and a hand lever pivotally mounted upon said rod and adapted to oscillate the same, and also to lock the said rod at the limit of each oscillation, and the wire-crossing arms provided with wire carrying eyes, as shown, adapted to support the said standard upon the said wires, and adapted for a reciprocating movement by an engagement with the actuating two-armed levers, all substantially as described.

3. The combination, in a fence-machine, of a tension device consisting of a post provided with winding drums and means for regulating the rotation of the same, with a wire-crossing device consisting of a standard adapted to be mounted upon the picket-holding wires, having transverse guide-ways, and provided with perforated lugs adapted to contain the vertical oscillating rod, the uppermost of the said lugs having an integral sector, as shown, with an oscillating rod provided with the rigidly mounted two-armed levers adapted to engage and actuate the said wire-crossing arms, as described, an operating handle rigidly mounted upon said rod, and adapted to rotate said rod and lock the same at either limit of an oscillation, and the reciprocating arms having eyes for receiving and retaining the said wires, and adapted for a pivotal connection with the said two-armed levers, substantially as described.

Subscribed by me, at Myhart, in the county of Allen and the State of Indiana, this 31st day of March, A. D. 1894.

GEORGE A. DENTELBECK.

Witnesses:

MARTIN PERRY,

HARMON FREDRICK PENS.