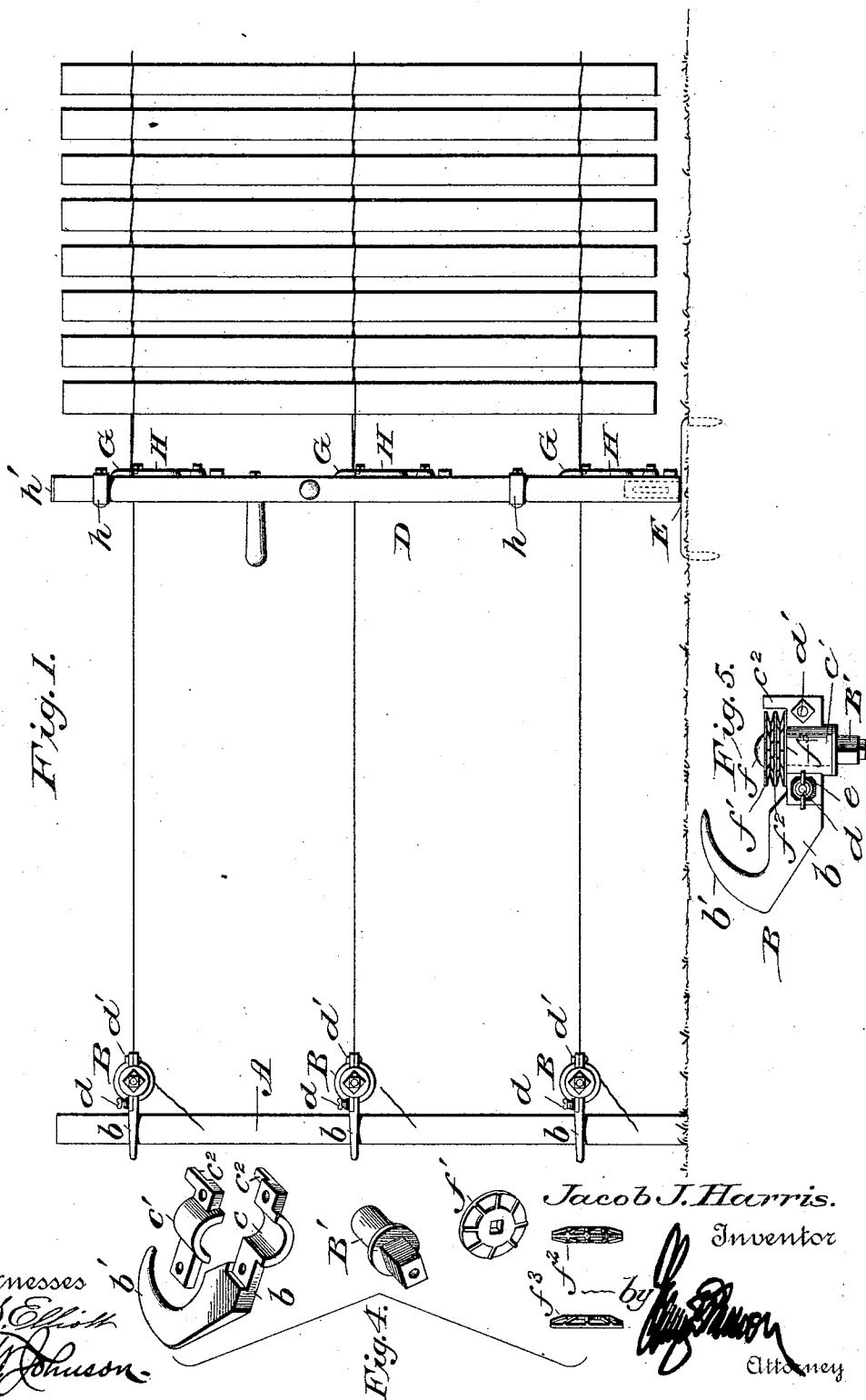


J. J. HARRIS.
WIRE FENCE MACHINE.

No. 470,047.

Patented Mar. 1, 1892.



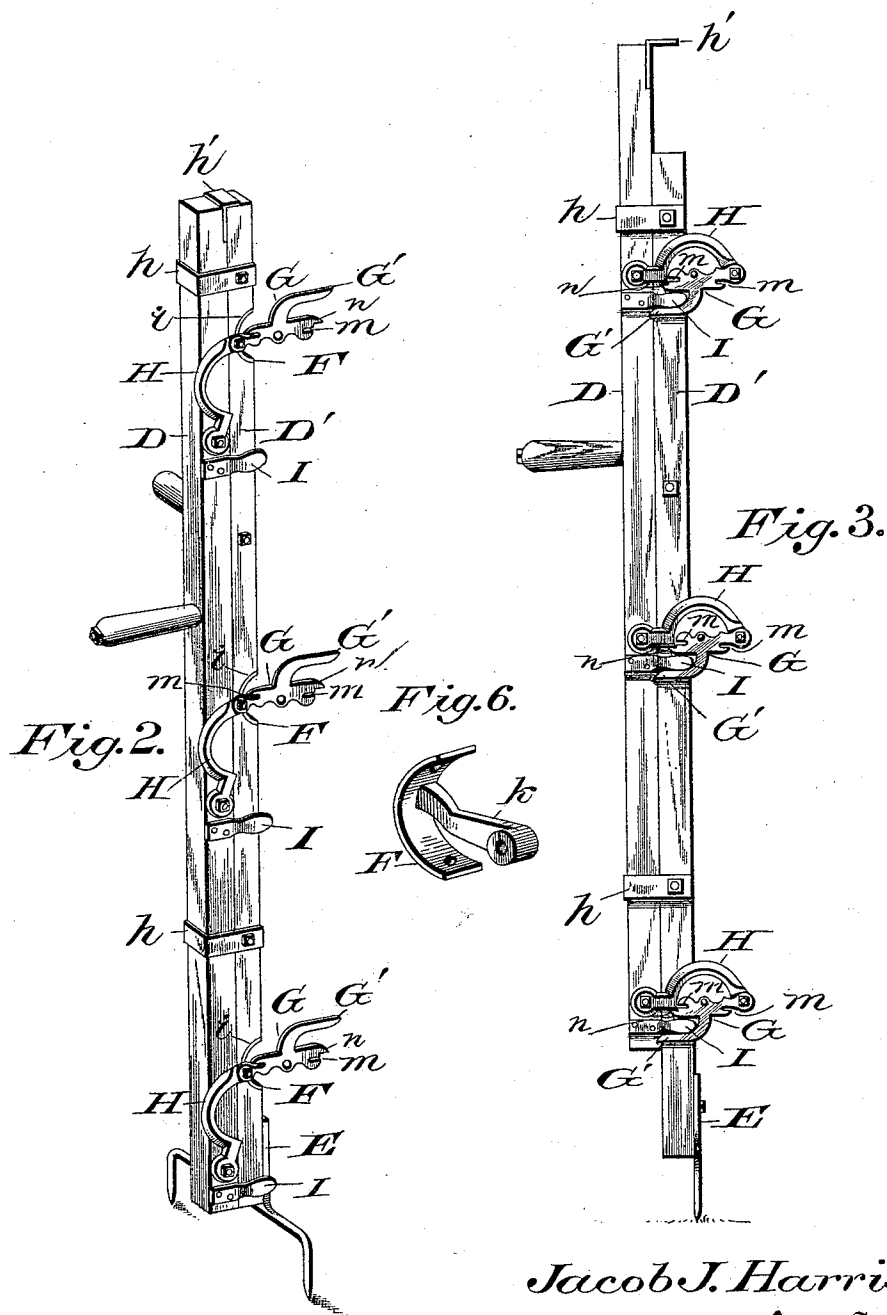
(No Model.)

2 Sheets—Sheet 2.

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Jacob J. Harris.

Inventor

Inventor
by 
Attorney

UNITED STATES PATENT OFFICE.

JACOB J. HARRIS, OF HIGHLAND, OHIO.

WIRE-FENCE MACHINE.

SPECIFICATION forming part of Letters Patent No. 470,047, dated March 1, 1892.

Application filed August 27, 1891. Serial No. 403,854. (No model.)

To all whom it may concern:

Be it known that I, JACOB J. HARRIS, a citizen of the United States of America, residing at Highland, in the county of Highland and State of Ohio, have invented certain new and useful Improvements in Wire-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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in fence-machines; and it consists in the construction and combination of the parts, as will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a side view showing the apparatus in position for use. Fig. 2 is a perspective view of the twist-ers. Fig. 3 is a side view of the same. Fig. 4 is a view showing the parts of the tension device separated. Fig. 5 is a side view showing the parts placed together. Fig. 6 is a detail perspective view of the bracket which supports the twister-head.

A designates a post, which may form a portion of the fence and with which the tension devices B are placed in engagement. The tension devices each consist of a casting *b*, having a hook *b'* formed thereon, which is adapted to engage with the post A. The portion of the casting opposite the hook is provided with a bearing *c*, the section *c'* of which is secured thereto by bolts *d* and *d'*. Each section is provided with an extension *c''*, which when the parts are clamped together form a guide for the wire or wires. The bolt *d* is preferably provided with a thumb-nut, and beneath the same is placed an elastic washer *e*. The perforations through which the bolt *d'* passes are slightly larger than the diameter of the bolt, so that the part *c'* of the bearing can have a slight rocking movement, the object of which will be hereinafter set forth.

B' designates a hub or stub shaft, which is apertured longitudinally for the reception of a bolt *f*, upon which are placed disks *f'*, *f''*, and *f'''*, as shown in Fig. 5. The disks referred

to have beveled edges, which are chamfered in order that they may have a better grip upon the wire; but it is obvious that notching or recessing the edges of the disks or even roughening them is considered the full equivalent one of the other. The apertures in the disks are preferably rectangular or square, and the bolt is provided with a corresponding shoulder, so that when the parts are brought together they will move in unison with the hub B', the outer end of said hub being key-ended for the reception of a suitable wrench for turning the parts. When it is desired to use the device as a tightener for stretching the wires prior to constructing the fence, the wires are passed between the inclined faces of the serrated disks *f'*, *f''*, and *f'''* and a wrench placed over the squared end of the hub, and by turning said hub the wires may be stretched to the desired tension. The tension at which the wires will pay out as taken up by the twisting mechanism, to be hereinafter described, is regulated by adjusting the thumb-nut *d*, which will clamp the plates of the bearing together to properly regulate the feed. It will also be observed that by providing means for adjusting the distance between the serrated disks the device is adapted to receive wires of different diameters.

D D' refer to two bars, which are held in sliding engagement with each other by means of strips *h h*, and the bar D, which is considered as the movable one of the two, carries at its upper end an angle-plate *h'*, which is adapted to contact with the upper end of the adjacent bar, so as to limit the downward movement of the bar D. To the lower end of the bar D' is secured a pronged plate E, the prongs being adapted to enter the ground when the apparatus is in operation. The edge of the bar D' is provided with concave recesses *i*, in which are rigidly secured brackets or castings F, which have projecting arms *k*, to which the twist-ers G are pivoted at approximately a central point. These twist-ers are also pivoted to curved arms H, which are in turn pivotally secured to the bar D. The twist-ers have projections G', which are adapted to engage with plates I, carried by the bar D, almost immediately beneath the point at which the curved arms H are pivoted, and

when the bar D is elevated these plates I are adapted to engage with the tongue or projection G' of the twister and the lower edge of the same, so as to move them to the position shown in Fig. 3 of the drawings. The
 5 twist-ers G are also provided adjacent to one of the notches with a projecting portion *n*, which is adapted to engage with the straight portion of the arm H adjacent to its pivotal
 10 point, so that when the pivot which connects the twist-ers G to the arm H and the pivot which secures said arm to the bar D are brought on a horizontal line with each other this projection *n* will limit the upward move-
 15 ment of the bar D.

The bars D and D' are provided with handles, as shown, which project at right angles with each other.

In operation, after the twist-ers are set up
 20 and the wires stretched, each pair of horizontal wires is caused to engage with the notches *m m* of the twist-ers G. A picket is then placed in front of the twist-ers between the wires, and by moving the bar D upwardly
 25 to its full extent the twist-ers will be given a half-turn to assume the position shown in Fig. 3 of the drawings, after which the bars D and D' are moved toward the post A, and by moving the bar D downward the twist-ers
 30 are moved so as to give the wires a half-turn in an opposite direction. The tension device in the meantime pays out the wire as it is taken up by the twists formed between the pickets.

35 I am aware that prior to my invention it has been proposed to provide a fence-making machine with movable bars carrying twist-ers, as shown in Patent No. 398,796, dated February 26, 1889, and also as shown in Patent No.
 40 352,904, dated November 16, 1886, and I do not claim what is shown therein.

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

45 1. In a wire-fence machine, a tension device made up of a hook having formed integral therewith one-half of a bearing, the other part of the bearing being secured thereto and provided with adjusting means, an apertured
 50 hub or journal secured within the bearing, and a bolt passing through the hub and carrying at one end a series of plates having adjacent serrated and beveled faces, substantially as shown, and for the purpose set forth.

55 2. In a tension device for wire-fence-making machines, the combination of a casting *b*, having a hook *b'* formed on one end thereof and a bearing *c*, a section *c'*, secured thereto by bolts, said bearing and section having lateral
 60 extensions *c²*, a hub or stud shaft B', having

a longitudinal aperture for the reception of a bolt *f*, and a series of bevel-edged or chamfered disks carried by said bolt, substantially as shown, and for the purpose set forth.

3. In combination with a casting *b*, having 65 a hook *b'* and a semicircular bearing-face *c* formed integral therewith, a part bearing *c'*, bolted thereto, each of the parts having a projection *c²* to present a guide-space between them, an apertured hub B', having a rectan- 70 gular end, a bolt *f*, adapted to pass through said hub to hold the beveled and serrated disks against the same, and a thumb-nut and elastic washer for regulating the pressure of the bearing-plate *c'* upon the hub, substan- 75 tially as set forth.

4. The combination, with the movable bar D, of the bar D', having semicircular recesses, brackets F, secured in said recesses, and twist- 80 ers G, pivoted to the brackets and pivotally connected to curved arms carried by the movable bar D, substantially as set forth.

5. In combination with the sliding bars D and D', arms I, carried by the bar D, curved 85 arms H, pivoted at one end to the bar D, and twist-ers pivoted to the arms H and to brackets carried by the bar D, said twist-ers having tongues or projections G', with which the arms I are adapted to engage, substantially 90 as set forth.

6. In a fence-making machine, the combination of the bars D and D', held in sliding 95 engagement with each other, curved arms H, pivoted to the movable bar D, brackets F, carried by the bar D', twist-ers G, having notches *m m*, and a projection *n* adjacent to one of the notches, which is adapted to en- 100 gage with the straight portion of the curved arm H when the pivoted twist-ers G and curved arms H are brought substantially on a horizontal line with each other, so as to limit the upward movement of the bar D, substantially 105 as set forth.

7. The combination, with the sliding bars D and D', the bar D' having a concave re- 105 cess, a bracket-plate F, secured within said recess and provided with a projecting portion *k*, a twister G, pivoted thereto, and a curved arm H, pivoted at one end to the twister and at the other to the movable bar D, the twister 110 G having a projecting portion G', with which a plate I, carried by the sliding bar D, is adapted to engage, substantially as shown, and for the purpose set forth.

In testimony whereof I affix my signature in 115 presence of two witnesses.

JACOB J. HARRIS.

Witnesses:

JOHN HANLEY,
 JOSEPH COHN.