

(No Model.)

2 Sheets—Sheet 1.

J. E. HOAG.
FENCE MAKING MACHINE.

No. 467,306.

Patented Jan. 19, 1892.

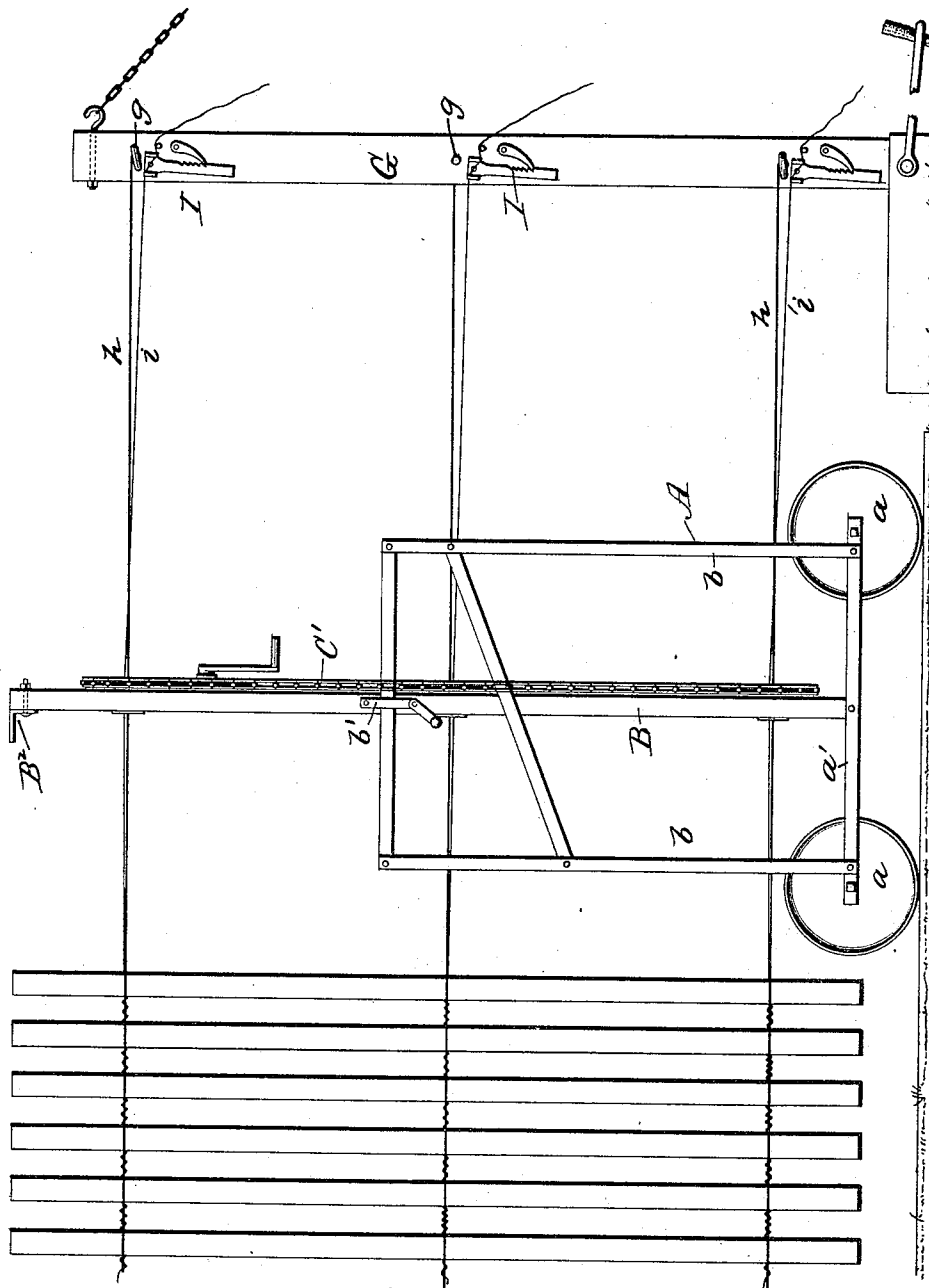


Fig. 1.

Witnesses
L. S. Elliott.
E. W. Johnson

John E. Hoag
Inventor

by *[Signature]*
Attorney

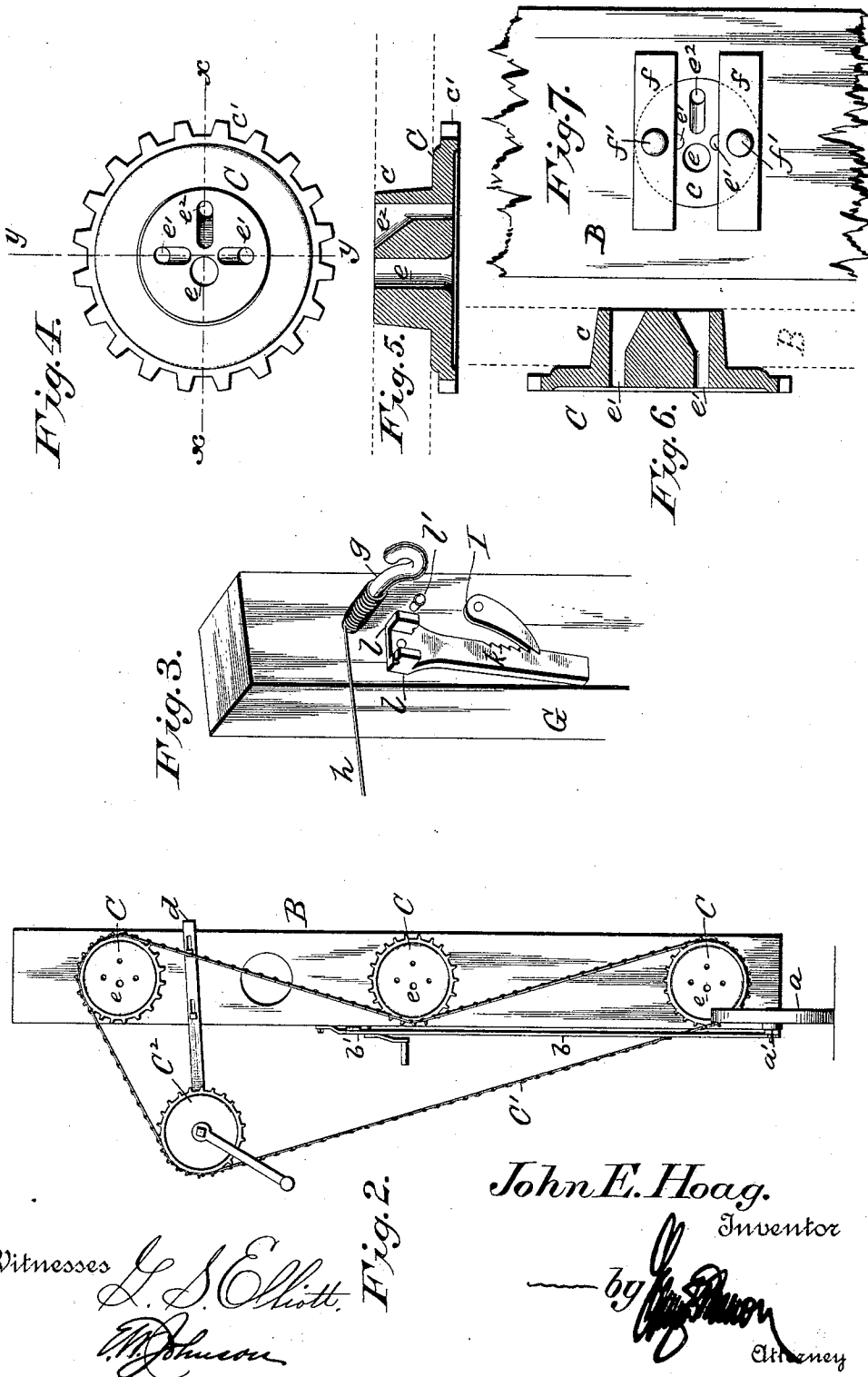
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UNITED STATES PATENT OFFICE.

JOHN E. HOAG, OF SPRINGPORT, MICHIGAN.

FENCE-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 467,306, dated January 19, 1892.

Application filed July 30, 1891. Serial No. 401,205. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. HOAG, a citizen of the United States of America, residing at Springport, in the county of Jackson and State of Michigan, have invented certain new and useful Improvements in Fence-Making 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-making machines.

The object of the invention is to provide an apparatus consisting of mechanism for twisting the wire, stretching the untwisted strand, and a tension for the wire which is twisted about the main wire and over the picket; and the invention 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 elevation showing the style of fence and the application of the twisting, stretching, and tension devices. Fig. 2 is a side view of the twisting devices detached. Fig. 3 is a perspective view of the stretcher and tension device. Figs. 4, 5, 6, and 7 are detail views of the twister.

A refers to a portable frame supported upon wheels *a a* and consisting of the vertical uprights *bb*, connected to each other by cross-bars, as shown. The supporting-bar B for the wire-twisters is pivotally attached at its lower end to the connecting-bar *a'* of the frame, and is clamped to the upper end of said frame by a plate *b'* and bolt carrying a crank-handle, so that the angle of the bar may be varied according to the inclination of the frame caused by inequalities of the ground. The bar B is provided with three or more circular apertures, in which bear the hubs *c* of the twisters C, said twisters having sprocket-teeth *c'*, over which passes a chain C' for turning them, said chain also passing over a sprocket-wheel C², supported by a slotted arm *d*, adjustably secured to the bar B. The sprocket-

wheel C² is provided with a crank-arm for turning the same.

The twisters C adjacent to their centers are provided with apertures *e* and concentric with the center with apertures *e'* *e'* and *e*², one end of each aperture being beveled, as shown in Figs. 5, 6, and 7, the beveled portions extending toward the center, so that the wires will be fed therefrom toward each other when the wires pass through the apertures *e'* or toward the larger aperture *e* when a wire, as *h*, is used in connection with the smaller wire. The twisters are held upon the supporting-bar B by plates *f f*, secured by bolts *f'*, which pass through the apertures *e'* when the apertures *e* and *e*² are used for securing the pickets by twisting the wire, as shown in Fig. 1, and when both the wires are twisted around the pickets uniformly the bars *f f* are removed and one of them secured to the twister by the bolt being passed through the aperture *e*, thus presenting two concentric apertures *e'* and *e'*, through which the wires will pass. The apertures *e'* and *e*² are extended toward the center of the twister, so that the wires fed therefrom in building the fence can be twisted close up to said twister, the frame being moved up to the picket before the twisting operation is begun. It will be noted that the aperture *e* is of a much greater diameter than the apertures *e'* and *e*², as said aperture is intended to receive a larger wire than those twisted about the same. The hubs *c* of the twisters are preferably beveled, as shown in Figs. 5 and 6 of the drawings.

G refers to a post, which is supported upon a suitable base having a link at its lower end for fastening it into the ground and a hook at its upper end for connecting a chain thereto. This post at suitable points is provided with bolts *g g*, the outer ends of which are formed into eyes or loops, and when starting a section of the fence the main wires *h h* are passed around the tighteners *g*, which are turned to give the proper tension to said wires, which have been previously passed through the apertures *e* in the twisters.

i refers to a wire of less diameter than the wire *h*, said wire being preferably passed through the aperture *e'* in the twister and from thence to the tension device I, which consists of a lever pivoted to the post G, said le-

ver having teeth k , with which a pawl engages. The upper end of the lever is provided with outwardly-projecting lugs l , which are provided with recesses, within which the wire i will lie, said wire being led therefrom over a pin l' , located slightly below the pivot of the lever and to one side thereof. By varying the angle of the lever the tension or feed of the wire i can be varied, if desired.

In operation the frame A is moved to one end of the fence and a picket placed thereon so that it will abut against the gate B^2 . The sprocket-wheel C^2 is then turned, which will cause the wire i to be twisted about the wire h . A picket is then inserted between the wires and the twisters again turned. During this operation the wire is paid out at the proper tension. When it is desired to make an ordinary fence in which both wires are twisted, the operation is the same; but wires of equal diameter are passed through the apertures e' in the twisters.

I am aware that prior to my invention it has been proposed to mount the frame of a fence-machine upon a wheeled base having a ratchet-bar; but it will be noted that my invention is distinguished therefrom by having a rectangular frame made up of straight pieces which are connected by a transverse base, and by this construction I am enabled to rigidly secure the bar B at a higher point from the base than would be practical if I employed an arched frame, and at the same time have the machine much more compact.

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 of a bar B , mounted on a suitable frame and provided with twisters C , said twisters having apertures e and e^2 , the aperture e being of greater diameter than the aperture e^2 , the lat-

ter being beveled on its inner side toward the center of the twister, substantially as shown, and for the purpose set forth.

2. The combination, in a fence-machine, of the supporting-bar B , having apertures for the reception of twisters or sprocket-wheels C C , which are operatively connected to each other, said twisters having apertures e , e' e' , and e^2 through the hubs thereof, and plates f f , connected by bolts to the twisters on the opposite side of the bar from the sprocket-wheels, so as to retain the twisters in the apertures in the bar, substantially as shown, and for the purpose set forth.

3. The combination, in a fence-machine, of a bar B , mounted on a suitable frame and provided with twisters C , the hub of which is provided with an aperture e and apertures e' e' and e^2 , with beveled portions inclining toward the center of the twister, a toothed flange providing a sprocket-wheel on the opposite side of the hub from the beveled portion of the apertures, and plates f f and bolts f' for retaining the twister on the bar B , substantially as shown, and for the purpose set forth.

4. In a tension device for use in building fences, a pivoted lever having projecting lugs, one of said lugs having a recess in its upper face, while the other is recessed in its lower face, a depending portion formed on said lever having ratchet-teeth, a pawl adapted to engage with said ratchet-teeth, and a guide-pin l' , located beyond and slightly below the pivot of the lever, substantially as shown, and for the purpose set forth.

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

JOHN E. HOAG.

Witnesses:

JAS. W. SHELDON,
E. A. BAUMAN.