

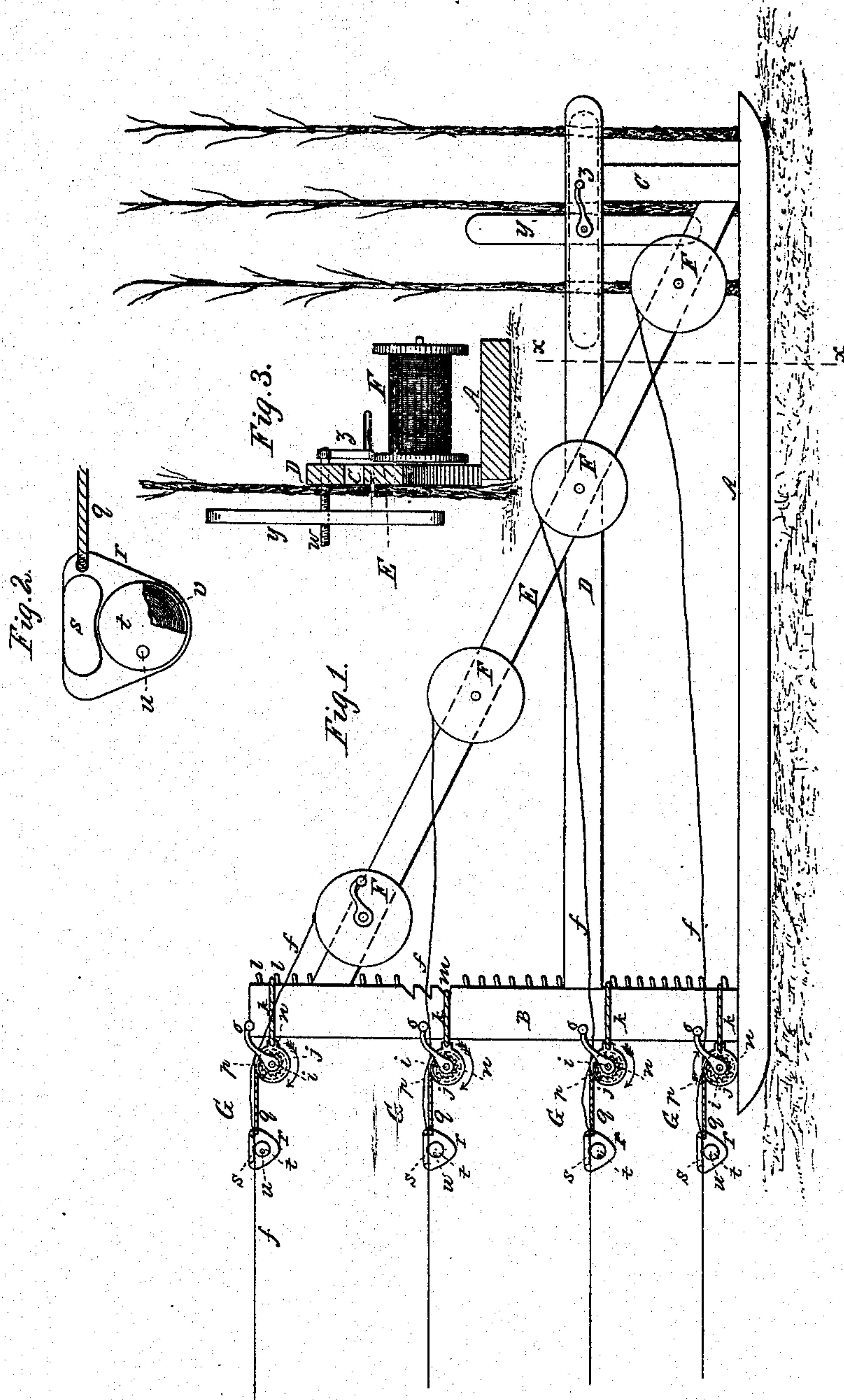
(No Model.)

D. W. NORRIS & W. YOUNG.

WIRE STRETCHING MACHINE.

No. 288,359.

Patented Nov. 13, 1883.



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UNITED STATES PATENT OFFICE.

DANIEL W. NORRIS, OF ELGIN, ILLINOIS, AND WESLEY YOUNG, OF DAYTON, OHIO; SAID NORRIS ASSIGNOR TO SAID YOUNG.

WIRE-STRETCHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 288,359, dated November 13, 1883.

Application filed April 23, 1883. (No model.)

To all whom it may concern:

Be it known that we, DANIEL W. NORRIS, of Elgin, in the county of Kane and State of Illinois, and WESLEY YOUNG, of Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Wire-Stretching Machines for Fence-Building; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the drawings forming a part of this specification, and to the figures and letters of reference marked thereon.

This invention relates to that class of machines which are employed in the construction of post and wire fences and wired hedge-fences, for the purpose of stretching the wire preparatory to its being fastened to the posts or plants, as the case may be; and it consists in certain novel improvements, which will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 represents a side view of our improved machine; Fig. 2, a detail view of one of the wire-grippers; and Fig. 3, a cross-sectional view taken on the line *x x*, Fig. 1.

Similar letters of reference in the several figures indicate the same parts.

A represents the base of the frame or body of the machine, consisting, preferably, of a timber or timbers of sufficient width to maintain the frame in an upright position, and preferably beveled or rounded off at its ends, as shown, so as to enable the machine to be readily drawn over the ground in either direction, after the manner of a sled.

At or near the forward end of the base A is mounted and secured an upright or standard, B, and at or near the rear end is secured a short standard, C, said two standards being preferably connected by a horizontal bar or timber, D, as shown.

Extending diagonally from standard B to standard C is a bar or timber, E, which serves as a brace to give strength to the frame, and also as a support for the coils F of wire, said coils being as many in number as the number of wires used in the construction of the fence.

Secured to the standard B are a series of wire-stretchers, G—one for each of the wires *f*—proceeding from the coils F. These stretchers

may be of any suitable construction, and are preferably capable of vertical adjustment upon the standard B, so that the wires can be held at any desired distance apart and stretched or drawn taut in their adjusted positions.

The stretchers which I have shown in the drawings each consist of a drum (shown in dotted lines, Fig. 1) mounted upon a shaft, *i*, which is supported in end plates, *j*, that are in turn connected to the standard B by a rope or wire, *k*, passing around said standard and engaging between pins *l l* or in notches *m* in the rear side thereof, as shown. The shaft *i* of the stretcher, on one of its ends, bears a turning crank or handle, *o*, and a ratchet, *n*, the latter engaging with a suitable pawl, *p*, which permits the rotation of the crank in one direction only.

q is a cord or chain secured at one end to the winding-drum and at the other to the plate or frame, *r*, of a gripper. The gripper plate or frame has a fixed abutment or projection, *s*, and a circular disk, *t*, which may or may not be corrugated or roughened, mounted eccentrically upon a pivot, *u*, and caused to bear normally against the abutment *s* by the force of a spring, *v*, arranged within it, as shown. When the wire to be stretched, having been fed from one of the coils F and fastened at its end to some fixed object, is inserted between the jaws of the gripper formed by the abutment *s* and the eccentric-disk *t*, and the crank then turned in the direction indicated by the arrow, Fig. 1, the grip of the jaws on the wire will be tightened, and the latter will be drawn and stretched to the requisite degree, and may then be secured to the posts or plants, as the case may be, by staples driven into said posts or plants astride the wire, or in any other suitable manner. All of the wires may be held under tension at once by operating all the stretchers together or successively.

When the wires are being put under tension, there is of course considerable forward draft upon the machine, and it becomes necessary to anchor it firmly in position, both to prevent it from being drawn along longitudinally and from tipping over on its side. As a means for effecting these objects we prefer to employ a cross bolt or shaft, *w*, passing through the horizontal bar or timber D and

carrying at one end an operating-crank, *z*, and having its opposite end screw-threaded and passed through a bar, *y*, having a screw-threaded perforation. In fixing the machine in position the bar *y* is passed in a substantially vertical position to the other side of the permanent posts, if the fence be an ordinary post and wire fence, or between and to the other side of two plants or canes if the fence be a hedge-fence, and then turned down and the crank screwed up so as to clamp the post or one or more of the plants, as the case may be, between bar *D* and bar *y*, and thus hold the machine firmly in an upright position and against longitudinal movement. After the wires have been secured the crank can be loosened, and the bar *y* can be turned up so as to be withdrawn from behind the post or from between the plants, and the machine can then be advanced along the line of the fence and re-secured in like manner as before.

Having thus described our invention, we claim as new—

1. The combination, with the portable frame, of a series of wire-stretchers and means, substantially as described, for vertically adjusting and securing said wire-stretchers upon said frame, for the purpose set forth.

2. The combination, with the portable frame, of a series of coils of wire mounted thereon, a series of wire-stretchers—one for each line

of wire—and means, substantially as described, for vertically adjusting and securing said stretchers upon the frame, as set forth.

3. The portable sliding frame, consisting of the base-piece or runner, the vertical standards and the horizontal and diagonal connecting-bars, with the series of coils of wire mounted on the diagonal bar, and the series of stretchers vertically adjustable upon the forward standard, substantially as described.

4. The combination, with the portable sliding frame carrying the coils of wire and the stretchers, of a lateral arm or shaft for engaging the posts or plants to hold the frame from longitudinal movement, substantially as described.

5. The combination, with the portable sliding frame carrying the coils of wire and the stretchers, of the laterally-projecting arm or shaft, and the movable bar on said arm or shaft, substantially as described.

6. The combination, with the portable sliding frame carrying the coils of wire and the stretchers, of the laterally-projecting arm or shaft carrying the movable bar and the crank or handle, substantially as described.

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