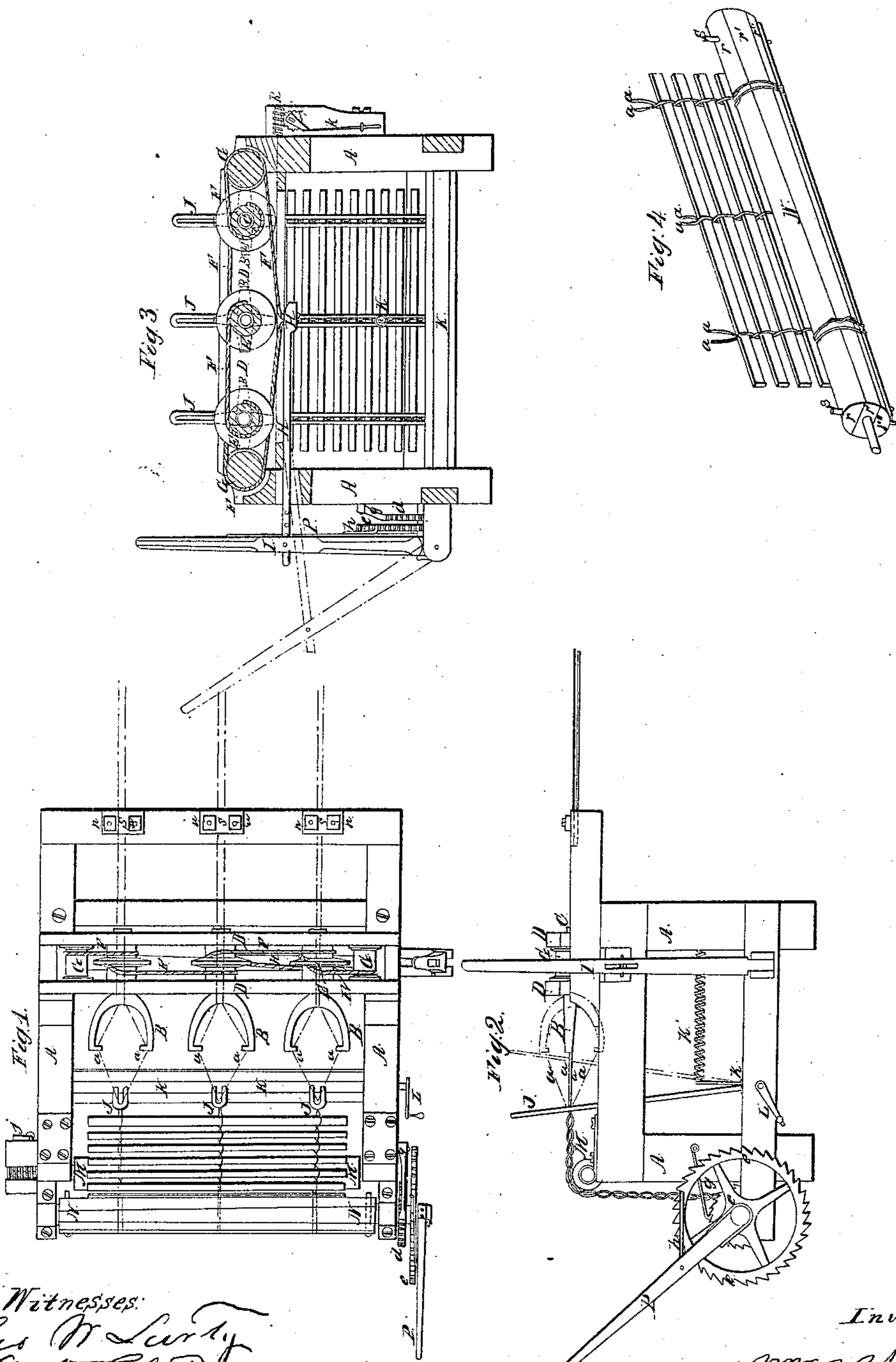


W. W. Johnson,
Making Fence Pickets.
N^o 24,029. Patented May 17, 1859.



Witnesses:
Geo W Lurty
Albion Chert

Inventor:
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UNITED STATES PATENT OFFICE.

WM. W. JOHNSON, OF CLARKSBURG, VIRGINIA.

IMPROVED MACHINE FOR MANUFACTURING PICKET-FENCING.

Specification forming part of Letters Patent No. 24,029, dated May 17, 1859.

To all whom it may concern:

Be it known that I, WILLIAM W. JOHNSON, of Clarksburg, in the county of Harrison and State of Virginia, have invented certain new and useful Improvements in Machines for Making Wood and Wire Fences; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 represents a plan of the machine, showing the fence during the operation of joining. Fig. 2 is an end elevation of the same. Fig. 3 is a sectional view taken through the red line of Fig. 1, showing the arrangement of cords and pulleys for operating the twisters, also showing the twisters in two positions, indicated by dotted red lines. Fig. 4 is a view of the segmental roller.

Similar letters of reference indicate like parts in the figures.

The nature of my invention consists, first, in the arrangement of cords and pulleys operated by a vibrating lever, so as to give a half-turn and reverse motion to a number of forks through which the wire passes, which forks act as twisters, and, in connection therewith, arranging upon a rock-shaft in front of the forks two or more vibrating fingers, which operate so as to confine the lathes in place during the operation of the twisting.

It consists, secondly, in constructing the shaft upon which the fence is wound after it is finished by the twisters and fingers, so that it can be readily taken to pieces and drawn out from the fence described, represented, and specified, as follows:

The frame of the machine is represented in the drawings by A. This supports the mechanism for manufacturing the fence as follows: A number of fork-shaped twisters, B, are arranged across the frame, which twisters have hollow shafts C, passing through and having their bearings in cross-pieces D D. Between these cross-pieces are flanged pulleys E, three being represented in the drawings, which pulleys are made fast to the hollow shafts of the twisters B and turn with them. Over these pulleys E are passed two cords, F, which also pass over two independent pulleys, G G, placed in a line with and on each side of the frame A, and bearing in cross-pieces D D. The

two cords F are passed in opposite directions over the pulleys, and are fastened to a slide-rod, H, placed under the pulleys and connecting on the outside of the frame with a lever, I, which is pivoted near the bottom of the machine and projects up a convenient distance for the hand of the operator. By giving this lever a vibratory motion, the twisters or forks B are all moved half round and back again. Through the hollow shafts of each of these twisters B pass two wires, *a a*, and thence they branch out and pass through two eyes in the bent portions of the prongs of said twisters, and are carried through the fingers J, which are connected to a rock-shaft, K, and spring K', operated by a crank, L, (with the foot,) and pass over a friction-roller, M, and down over the segmental roller N, where they are firmly secured thereto. This roller is made up of three pieces, *r r' r''*, and held together by bolts *s s*. The middle piece, *r'*, is wedge-shaped, and the bolts can be readily drawn, and the roller removed from the fence without unwinding the latter. The roller is so operated as to wind up the fence upon it as fast as the latter is manufactured by the other parts of the machine.

On the end of the roller N are fixed two ratchet-wheels, *d* and *e*. The ratchet-wheel *d* has a pawl, *g*, which prevents the roller from unwinding, while the wheel *e*, which is much larger, is operated by a lever, P, and ratchet *h*, so as to turn the roller N in winding up the fence.

On the end of the shaft of the roller M is a screw, R, which meshes into a small toothed wheel, *i*, and turns it as the roller revolves. This wheel *i* operates a small arm, *j*, which at every revolution of the wheel *i* comes in contact with a click, *k*. The object of this arrangement is to serve as an index to determine the length of the fence upon the roller N, as it is wound up. The wire passes from the reels between adjustable plates S, regulated by screw-nuts *n*, so as to adjust it to the requisite tension before it passes through the hollow shafts to the twisters.

The operation of the machine is as follows: The wire being supplied from a reel through the shafts and through eyes in each arm of the forks, and passing through the fingers and over a friction-roller, and terminating on the

roller for winding it up, all as above described, the operator moves the lever I forward with one hand. This turns the twisting-forks all at once half round. He then places between the wires a slat, or board, or piece of whatever material the fence is to be constructed of. The fingers J are then pressed against the slat, and thus keep it securely in its place, while the operator then forces the lever I back again, when the twistors make another half-revolution and confine the slat in its place. The fingers are then relieved and are drawn back by a spring, and the several parts are ready for another slat, and the same operation is again repeated. As the fence is thus made, it is wound upon the roller N by giving motion to a lever, P, as already described. In this way a fence can be made of any length required, and its strength and durability, when com-

pleted, render it very economical and generally desirable.

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

1. Operating a series of twistors, B, by means of pulleys and cords arranged, as set forth, so as to give a twist and reverse twist to the wire, in combination with vibrating fingers J, hollow shafts C, and tension-plates S, or their equivalents, substantially as and for the purposes herein above set forth.

2. The segmental roller N, constructed of three pieces, r r' r'' , for the purpose herein above explained.

WM. W. JOHNSON.

Witnesses:

GEO. W. LURTY,
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