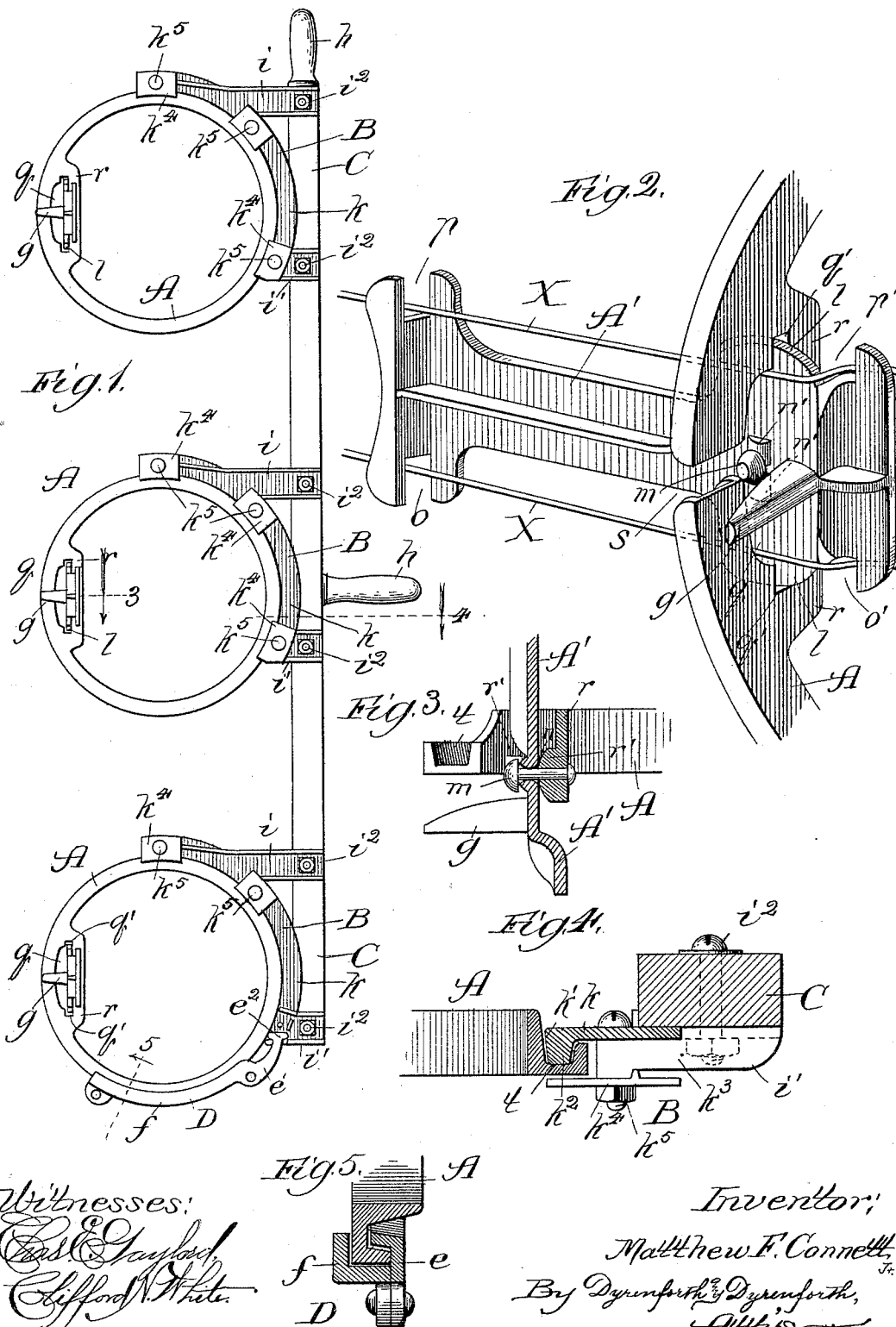


(No Model.)

M. F. CONNETT, Jr.
HAND FENCE MACHINE.

No. 491,770.

Patented Feb. 14, 1893.



UNITED STATES PATENT OFFICE.

MATTHEW F. CONNETT, JR., OF NASHVILLE, TENNESSEE.

HAND FENCE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 491,770, dated February 14, 1893.

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To all whom it may concern:

Be it known that I, MATTHEW F. CONNETT, Jr., a citizen of the United States, residing at Nashville, in the county of Davidson and State of Tennessee, have invented a new and useful Improvement in Hand Fence-Machines, of which the following is a specification.

My invention relates to improvements in machines to be operated by hand, and for use in building picket fences in which the pickets are held by strands of wire extending across their opposite sides, the strands being intertwisted between pickets to maintain the latter in rigid relation and at proper distances apart.

My improvement is in the class of machines, for the above purpose, in which twisters, one for each pair of wires, and through which the wires pass, are mounted upon a common support or operating bar, in guides which permit the twisters to revolve and twist the wires, when the operating bar is given a circular motion in the vertical plane.

In the use of machines of this class as hitherto provided, it has been necessary to exercise great care in giving motion to the operating bar, and to cause the latter to move in a plane, as nearly as possible, perpendicular to the wires, in order that the twisters might revolve freely, and not bind. My object is to provide a machine in which this defect is overcome; and it is further my object to provide other improvements in the construction of the device, which are hereinafter particularly described and pointed out in the claims.

In the drawings—Figure 1 is a view in side elevation of a machine for twisting three pairs of wires; Fig. 2, an enlarged broken perspective view of a portion of a twister, showing the manner of applying it to a pair of wires; Figs. 3 and 4, enlarged broken sections taken on lines 3 and 4 of Fig. 1, and viewed in the direction of the arrows; and Fig. 5, a section taken on line 5 of Fig. 1, and viewed in the direction indicated.

Each twister comprises a ring A formed upon one side with an annular groove *t*. At one point in the ring is an opening *s*, and on the inner side of the ring extending across the opening is a bracket *r*, formed with a round-faced rib *r'*. Between the bracket *r*

and adjacent part of the ring, which contains the opening *s*, is a space *q* which is elongated by recesses *q'*, at opposite ends, formed in the inner end portions of the bracket. Extending through the space *q* is a block or casting A' of the shape shown in Fig. 2, and provided at opposite ends, on one side, with guide-recesses *p, p'*, for one wire, and at opposite ends on the other side with guide recesses, *o o'*, for the other wire. Extending through the center of the block A', near the end provided with the recesses *p' o'*, is an opening *n*, flaring in opposite directions, as shown in Fig. 3, and flanked, upon one side of the block, by rounded projections *n'*. The block is pivoted at its opening *n* upon a bolt *m*, which extends through the rib portion *r'* of the bracket *r*. The bolt is headed at opposite ends, and holds the block against the bracket. The laterally extending edge-portions *l* of the block, as shown, are rounded in the direction longitudinally of the block, and extend loosely through the recesses *p'*. The pivotal connection between the block and bracket is in the nature of a universal joint, which permits the block to turn upon the bracket to a limited extent in different directions.

B is a segmental twister-guide and sustaining bracket, comprising a plate or casting *k* having a circular inner face *k'*, describing the arc of the outer surface of the ring A, and provided with arms *i i'* at which it is secured by bolts *i²* to the operating bar C. At its inner edge or face *k'*, the plate *k* is provided with a segmental flange *k²*, adapted to fit loosely into the annular groove *t* in the ring A. On the side of the plate *k* provided with the flange *k²*, are lugs or projections *k³*. Secured at the lugs *k³* to the plate *k* are plates *k⁴* which are held rigidly in place by bolts *k⁵*. The plates *k⁴* operate to hold the ring A with its groove *t* in engagement with the flange *k²*, in a manner to prevent disengagement of the ring without interfering with its rotation.

The operating bar, C, may be provided with any desired number of the twisters, and to facilitate handling of the bar it may be provided with the handles *h h*.

In operation, the wires X are strung in pairs, being fastened securely to a post at one end, and held at another post in tensioning de-

vices which hold the wires taut and permit them to pay out while the twisting is being done. The wires are slipped into the spaces *q* of the rings A, through the openings *s*, the upper wires of each pair being caused to extend through the guide recesses *p p'* in the pivotal blocks A', and the lower wires through the guide recesses *o o'* in the latter, as shown in Fig. 2. The operating bar is grasped by the operator in both his hands, and given a circular movement in the vertical plane, causing the twist-ers A, which move freely in their guides B, to revolve and twist the wires. Suitable pickets are placed between the wires at stated intervals in the usual manner, and the twisting of the wires between pickets holds the latter in place.

Projecting outward from the blocks A' near their pivots, are studs *g*, for use in pressing or ramming the pickets forward after they have been inserted between the wires, and before the twisting operation is resumed. In the downward movement of the operating bar, the lowest twister is apt to strike the ground, and, in doing so, pick up soil which would tend to clog the twister, and prevent its rotation. To prevent this difficulty I provide the lowest twister with a guard or shoe D, comprising segmental plates *f* and *e*. The plate *f* is L-shaped in cross section, one flange extending across the outer circumferential face of the ring, and the other overlapping the flat side of the latter. The plate *e* overlaps the grooved side of the ring and is provided with a flange which extends into the groove. The plates are provided with projections or ears at which they are secured together by bolts. On the plate *f* is an extension or finger *e'* provided with a head *e²*. The finger extends loosely through an opening in the part *z'* of the guide B, the head *e²* preventing withdrawal of the finger through said opening.

In Fig. 1, the lower clamping plate *k²* of the lower twister is left off to more clearly illustrate the manner of connecting the shoe to the guide B. When that clamping plate is in position it prevents the finger *e'* from slipping out of its bearing. The guard or shoe D, prevents the lower ring A from striking the ground, and does not interfere with the twister's rotation.

The swivel connections, described, between the blocks A' and rings A, give to the blocks limited play independent of the rings. This is an important improvement over devices hith-

erto provided, as, for example in building a fence up or down a hill-side, or over uneven ground, the operating bar may be swung in the vertical plane to produce an even twisting of the wires, without causing the twist-ers to bind in their guides, while the relative positions of the blocks in the twister-rings may be constantly changing with the angle of extent of the wires.

It is desirable that machines of this class shall be as light as possible to facilitate handling, while an increase in weight of the twist-ers tends, owing to the increased inertia, to cause them to be more easily revolved. In the present construction the guides are made as light as requirement will permit, while the principal weight is in the revolving twister-rings.

What I claim as new and desire to secure by Letters Patent is—

1. In a wire-fence machine, the combination of a rotary twister-ring having an annular groove near its circumference and provided with eccentric engaging means for the wire, and a peripheral segmental sustaining guide for the ring extending into the said annular groove and loosely embracing the circumferential edge of the ring, whereby the ring is held in the guide and is free to revolve, substantially as and for the purpose set forth.

2. In a wire-fence machine, the combination with the revolving twister and sustaining guide therefor, of engaging means for the wires, comprising a block provided with guides for the wires and secured to the revolving twister, eccentrically thereof, by a universal joint, substantially as and for the purpose set forth.

3. In a wire-fence machine, the combination of a rotary twister-ring having an annular groove *t* and provided with eccentric engaging means for the wires, a peripheral segmental sustaining guide for the ring extending into the said groove and loosely clamping the ring at its outer circumference, and a shoe D at the underside of the ring, secured to the said guide and extending into the groove *t* and loosely clamping the ring at its outer circumference, whereby the shoe is held in position and the ring is free to revolve in the guide and shoe, substantially as and for the purpose set forth.

MATTHEW F. CONNETT, JR.

In presence of—

J. B. HANCOCK,

J. W. BAKER.