(No Model.) 2 Sheets—Sheet 1.

D. H. HAZEN & D. H. KIRKPATRICK.

FENCE MACHINE.

No. 367,393. Patented Aug. 2, 1887.

Fig. 1.

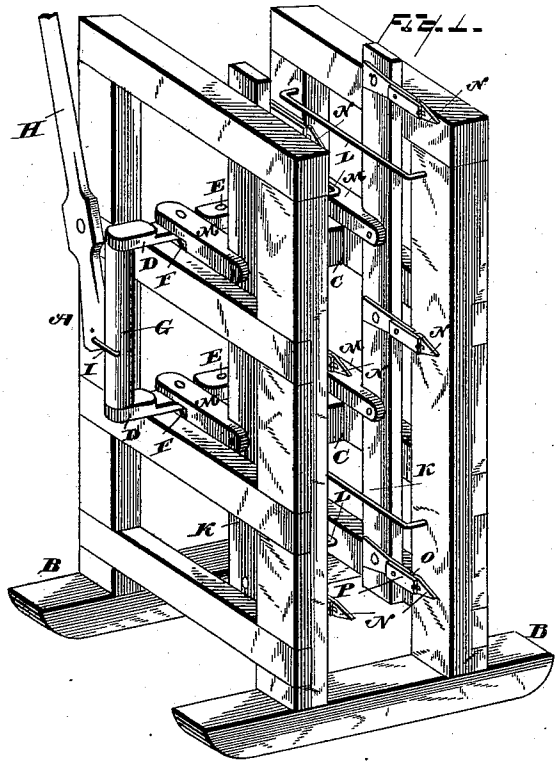


Fig. 2.

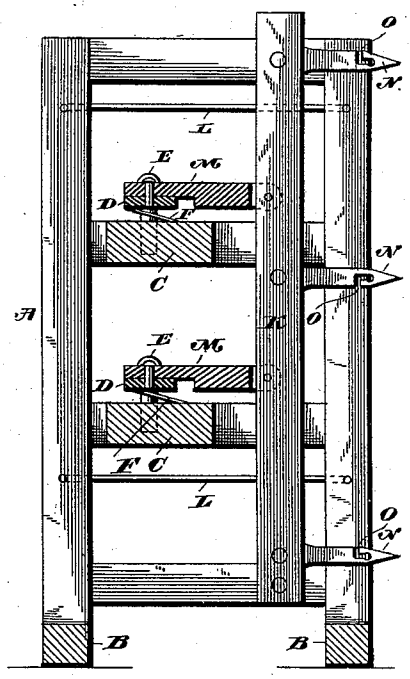


Fig. 3.

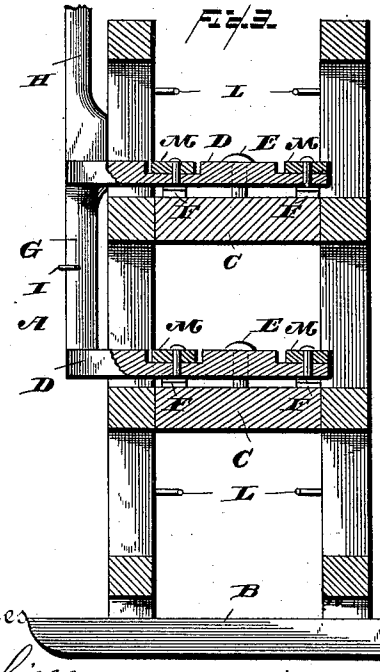


Fig. 4.

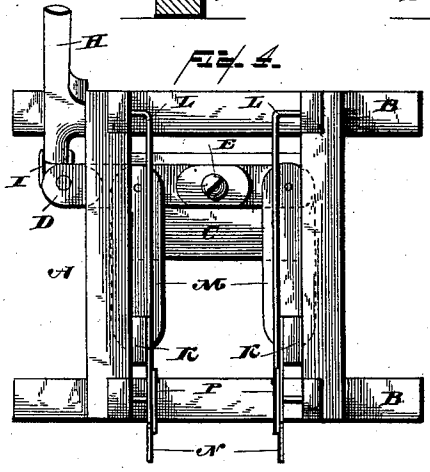
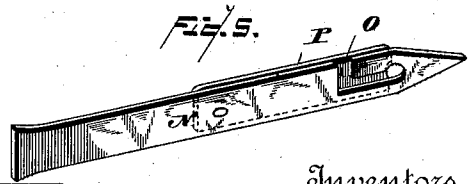


Fig. 5.



Witnesses

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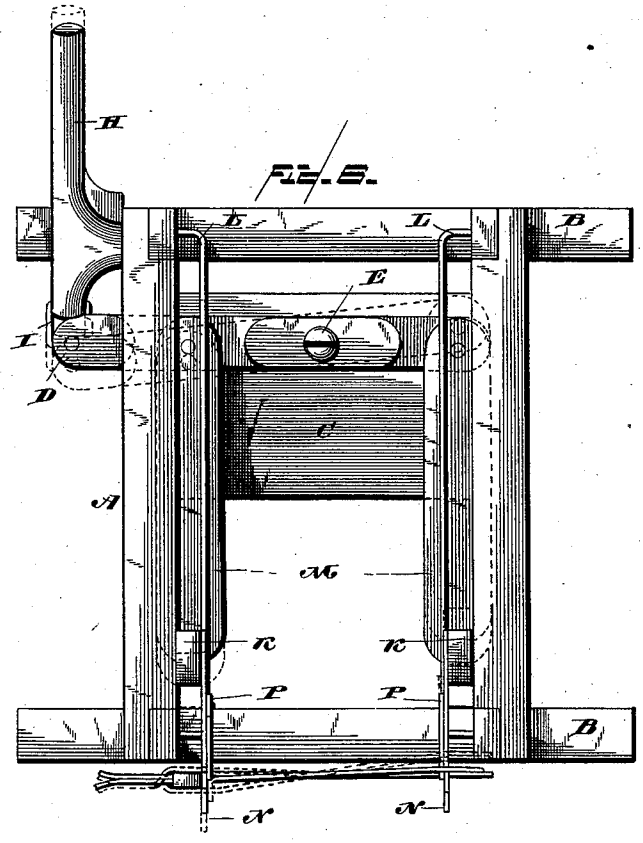
(No Model.) 2 Sheets—Sheet 2.

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Fig. 5.



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UNITED STATES PATENT OFFICE.

DAVID HENRY HAZEN AND DAVID HANNAH KIRKPATRICK, OF FRANCESVILLE, INDIANA.

FENCE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 367,393, dated August 2, 1887.

Application filed October 22, 1886. Serial No. 216,977. (No model.)

To all whom it may concern:

Be it known that we, DAVID HENRY HAZEN and DAVID HANNAH KIRKPATRICK, citizens of the United States, residing at Francesville, in the county of Pulaski and State of Indiana, have invented a new and useful Improvement in Fence-Machines, of which the following is a specification.

Our invention relates to an improvement in machines for making picket fences; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of a fence-machine embodying our improvements. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a similar view taken on a plane at right angles to Fig. 2. Fig. 4 is a top plan view. Fig. 5 is a detail perspective view of one of the needles. Fig. 6 is a top plan view of a fence-machine embodying our improvements.

A represents a vertical rectangular frame, which is supported upon runners or shoes B, the function of which is to adapt the frame to be moved easily on the ground. Transverse horizontal beams C connect the sides of the frame, and are arranged one above the other and at a suitable distance apart, and on the upper sides of the said beams are fulcrumed levers D, which are adapted to turn upon their pivotal bolts E, and also to rock thereon. Inclined cams F are secured on the upper sides of the beams C and are arranged under the levers D, the said cams extending in opposite directions on opposite sides of the pivotal bolts E, so that one end of each lever D will be raised at the same time that the opposite end of the lever is lowered. When the said levers are parallel with the beams C, they are level; but when they are moved in either direction toward or from the front side of the frame, their opposite extremities are alternately raised and lowered by the inclined cams, as will be readily understood. The long ends of the levers D are connected together by a vertical bar, G, so that the said levers will move simultaneously, and a hand-lever, H, is fulcrumed to one side of the frame A and has its lower end connected to the bar G by means of a link, I.

K represents vertical needle-bars, which are arranged on the inner sides of the frame A and are guided in suitable horizontal guiding-yokes, L, with which the inner sides of the frame are provided. These needle-bars are of any suitable length, and are connected to the levers G by means of arms M.

N represents needles, which have their inner ends attached to the inner sides of the bars K and project outwardly from the said bars for a slight distance beyond the front side of the frame. Any desired number of these needles may be attached to the needle-bars, according to the number of strands of wire which are to be employed in making the fence, one needle being used for each wire. The outer end of each needle is pointed, as shown, and is provided on its upper side with a bayonet-slot, O.

P represents spring-plates, which are pivoted to the outer ends of the needles and bear against one side thereof, the function of the said spring-plates being to close the inner portions of the bayonet-slots, and thereby prevent the wires which are strung through the said bayonet-slots from becoming accidentally disengaged therefrom.

It will be understood that when the lever H is moved back and forth the needle-bars K will be caused to move simultaneously in opposite directions toward and from the front side of the frame, so that the needles attached to one bar will be withdrawn toward the frame at the same time that the needles attached to the other needle-bar will be moved outwardly therefrom, thereby causing the wires which are strung through the openings in the said needles to be crossed upon each other and against the picket which is inserted between the strands of wire.

The cams F give the needle-bars a vertical motion at the same time that they are moved backward and forward by the lever H. This action will cause the wires to bend slightly on each other, thereby preventing their slipping.

Having thus described our invention, we claim—

1. The combination, with the frame having

the transverse beams C, of the levers D, pivoted centrally on said beams, the needle-bars connected to opposite ends of the levers, and thereby moved simultaneously in opposite directions, and the needles attached to the said needle-bars and having each an opening through which one of the wires may be strung, substantially as described.

2. The combination, with the frame having the transverse beams C, of the levers D, pivoted centrally on said beams, the inclined cams arranged under the said levers on opposite sides of their pivotal points, and thereby adapted to rock the levers when they are moved, and the needle-bars connected to the said levers and carrying the needles through which the wires are strung, substantially as described.

3. The combination, with the frame having the transverse beams C, of the levers D, pivoted centrally on said beams, the needle-bars connected to the opposite ends of said levers and carrying the needles through which the wires are strung, and the bails L secured to the frame and passing around the needle-bars, substantially as specified.

4. In a machine for making picket fences, the needles having the bayonet-slots to receive the wires, and the plates to partly close the said slots, substantially as described.

5. In a machine for making picket fences, the needles having the bayonet-slots, and the spring-plates to partly close the said slots, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

DAVID HENRY HAZEN.
DAVID HANNAH KIRKPATRICK.

Witnesses:
E. DE FOREST,
JOHN H. SIGGERS.