

(No Model.)

2 Sheets—Sheet 1.

H. ELLAR.

MACHINE FOR MAKING WIRE AND SLAT FENCING.

No. 509,725.

Patented Nov. 28, 1893.

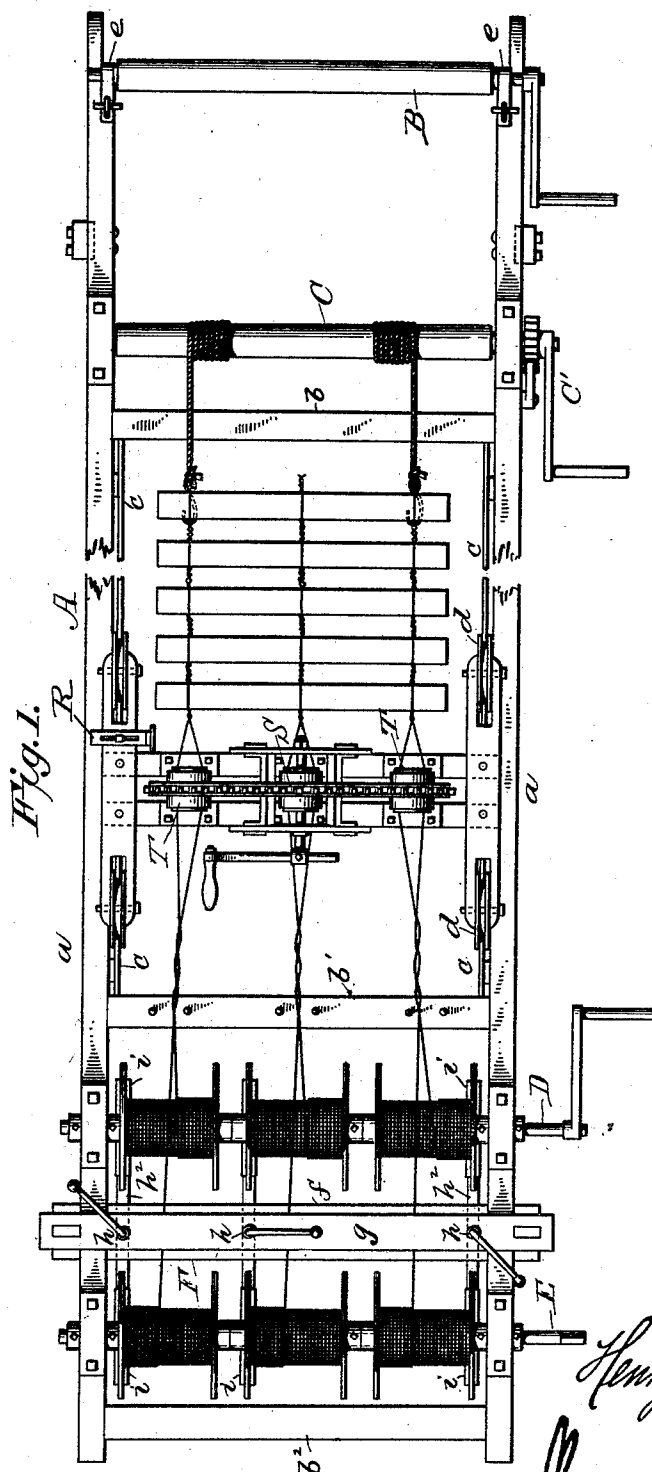


Fig. 1.

Witnesses

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By

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Fig. 2.

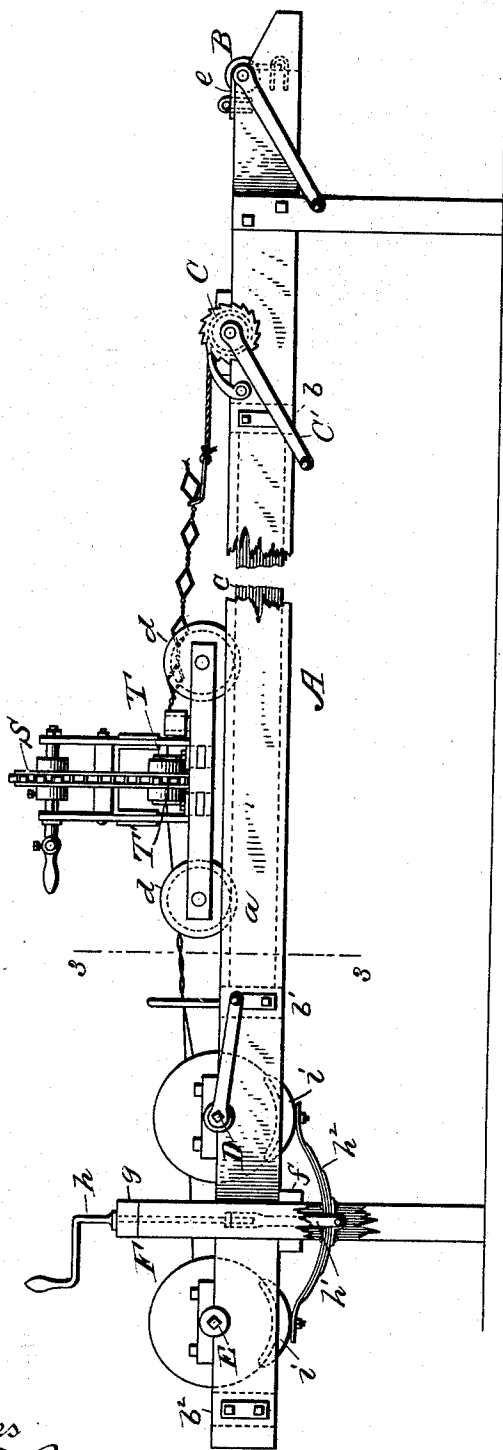


Fig. 4.

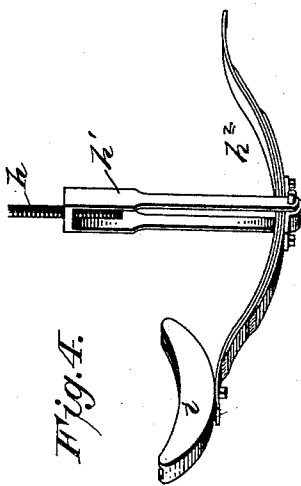
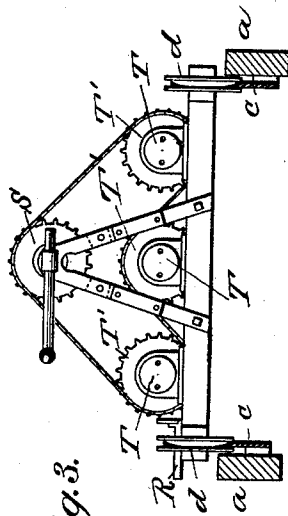


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

HENRY ELLAR, OF CLARKSDALE, MISSOURI, ASSIGNOR TO CAROLINE ELLAR,
OF SAME PLACE.

MACHINE FOR MAKING WIRE-AND-SLAT FENCING.

SPECIFICATION forming part of Letters Patent No. 509,725, dated November 28, 1893.

Application filed August 3, 1893. Serial No. 432,222. (No model.)

To all whom it may concern:

Be it known that I, HENRY ELLAR, a citizen of the United States of America, residing at Clarksdale, in the county of De Kalb and State of Missouri, 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 machines for making wire and slat fences; and it consists in the construction and combination of the parts which embody a supporting frame of considerable length provided at one end with shafts or rollers upon which the fencing is reeled and at the opposite end with spools of wire and tension devices therefor, the intermediate part of the machine having tracks upon which a carriage supporting the twister-heads move, 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 plan view, the side beams of the supporting frame being broken away. Fig. 2 is a side elevation. Fig. 3 is a sectional view, and Fig. 4 is a detail perspective view of one of the friction devices.

A designates the main frame which is supported upon legs and consists of the longitudinal beams *a a* and cross-beams *b, b'* and *b²*. Between the cross-beams *b* and *b'* and at each side of the machine is supported a track *c* upon which the carriage supporting the twisting mechanism moves. The tracks are located within the frame of the machine and the wheels *d* of the carriage are flanged to lie on each side of the same.

At one end of the machine the side beams are recessed to provide bearings for a shaft or roller B upon which the fencing is wound when sufficient has been made to extend thereto. This shaft or roller is retained in its bearings by straps *e, e*, which are secured to the side beams by means of staples and pins as shown, thus providing for the easy removal

of the roller when a length of fencing has been wound thereon. Some distance from the roller B, toward the carriage which supports the twisting mechanism, is journaled a roller C to which are connected flexible connections or ropes having hooks at their ends which engage with one of the slats of the fence, thus providing means for guiding the fencing to and winding it upon said roller when turned. The roller is turned by the crank-handle C', and backward rotation of the same is prevented by the ratchet-wheel and gravity pawl.

At the opposite end of the machine from that occupied by the rollers hereinbefore mentioned are journaled shafts D and E upon which are mounted the spools of wire used in making the fence, and between these spool-supporting shafts is located a frame F consisting of cross-pieces *f* and *g* supported by uprights attached to the side beams of the frame. Through the cross pieces of the frame pass threaded bars *h h*, the number of which correspond with the number of spools on each shaft, and the upper end of the bar is provided with a collar which bears upon the upper cross-piece and with a crank-handle by means of which it is turned. The threaded end of each bar engages with a threaded aperture in the connecting portion of a loop or bail *h'*, the lower ends of said bail or loop being attached to a block which is bolted to the central portion of a semi-elliptical leaf-spring *h²*. To the ends of this leaf-spring are attached friction shoes or pressure blocks *i* each having a grooved face which bears against the periphery of one of the heads of the spools. By means of this construction the rotation of the spools can be frictionally controlled by adjusting the spring pressure of the shoes against the heads of the spools, such adjustment being made by turning the threaded bar *h*. The wires from the spools pass between pins projecting from the cross-bar *b'* to the twisting mechanism which consists of the twister-heads T provided with the usual apertures through which the wires pass. These twister heads are supported upon the carriage in suitable bearings and are formed with sprocket wheels T' with which a sprocket-chain engages, said sprocket chain being driven by the sprocket-wheel S which is supported above the twister heads by means of

uprights attached to the carriage and is rotated by a crank-handle as shown.

In operation the carriage is moved so that it will be near the limit of its movement toward the cross-piece *b* of the frame. The wires are then threaded through the twister-heads and the wires of each pair connected to each other. A slat is now passed between the wires and the crank-handle turned to give several revolutions to the twister-heads which twist the wire adjacent to the slat. The hooks attached to the flexible connections which extend from the roller *C* are then caused to engage with the slat, and the next slat is passed between the wires and the twister-heads are given several revolutions in the opposite direction which will twist the wires and secure the slat in place. The slats are secured in proper line by means of the guide *R* against which one end of the slat is placed before the wires are twisted, said guide being attached to the carriage so that it will be adjustable thereon. The carriage is moved toward the cross-piece *b'* as each slat is secured in position, and when the carriage has reached the limit of its movement in that direction the roller *C* is turned to wind the fencing thereon and draw the carriage to the limit of its movement toward the cross-piece *b*, when the making of the fence can be proceeded with as before. When a sufficient length of the fencing has been constructed to permit it the fencing is wound upon the reel or roller *B*, and the flexible connections unwound and the hooks caused to engage with the slat nearest the twister-heads. By this arrangement the manufacture of the fence can be proceeded with continuously.

With this machine any approved style of slat can be secured between the wires.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a fence making machine, a main frame having spool supporting shafts, a reel, and tracks upon which is mounted the carriage supporting the twisting-heads, said carriage also supporting an adjustable gage against which one end of each slat is adapted to abut when placed between the wires, substantially as shown and for the purpose set forth.

2. In a fence-making machine, the combination, of a frame having mounted thereon a roller *C* with flexible connections, a movable carriage carrying the wire twisting mechanism and a gage, of shafts carrying spools from which the wires are fed to the twisting-heads, substantially as shown and for the purpose set forth.

3. In a fence making machine, the combination, of a frame having tracks, a movable carriage carrying the wire twisting mechanism mounted on said tracks, and a roller journaled on the frame and upon which the fencing is wound, substantially as shown and for the purpose set forth.

4. In a fence making machine, the combination, of a frame having mounted thereon a roller *C* with flexible connections, a carriage movable upon the frame and carrying the wire twisting mechanism, and a roller *B* journaled on the frame at a considerable distance beyond the roller *C*, substantially as shown and for the purpose set forth.

5. In a fence making machine, the combination, of a frame having mounted thereon a roller *C* with flexible connections, a carriage movable upon the frame and carrying the wire twisting mechanism, shafts journaled on the frame and supporting spools from which the wires are fed to the wire twisting mechanism, and a roller *B* journaled at the end of the frame beyond the roller *C*, substantially as shown and for the purpose set forth.

6. In a tension device for wire fence-making machines, comprising a threaded bar suitably supported and adapted to engage with a bail or loop, a spring pivotally attached to the lower end of said bail or loop and provided with shoes, substantially as shown, whereby an equal pressure is brought to bear upon each pair of spools, the wires from said spools passing through a twisting-head, for the purpose set forth.

7. In a tension device for wire and slat fence-making machines, the combination, of a pair of shafts carrying spools, a spring pivotally and adjustably attached to supporting means, said spring carrying shoes or pressure blocks, said shoes or pressure blocks having grooves, substantially as shown, and for the purpose set forth.

8. The combination with a wire and slat fence-making machine, of the shafts *D* and *E* supporting spools of wire, a frame located between said shafts, said frame supporting a semi-elliptical leaf-spring which is centrally pivoted and provided at its ends with grooved shoes each of which bears against one of the heads of the spools, substantially as shown.

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

HENRY ELLAR.

Witnesses:

WILLIAM UPHOFF,
GEORGE SEIGFRIED.