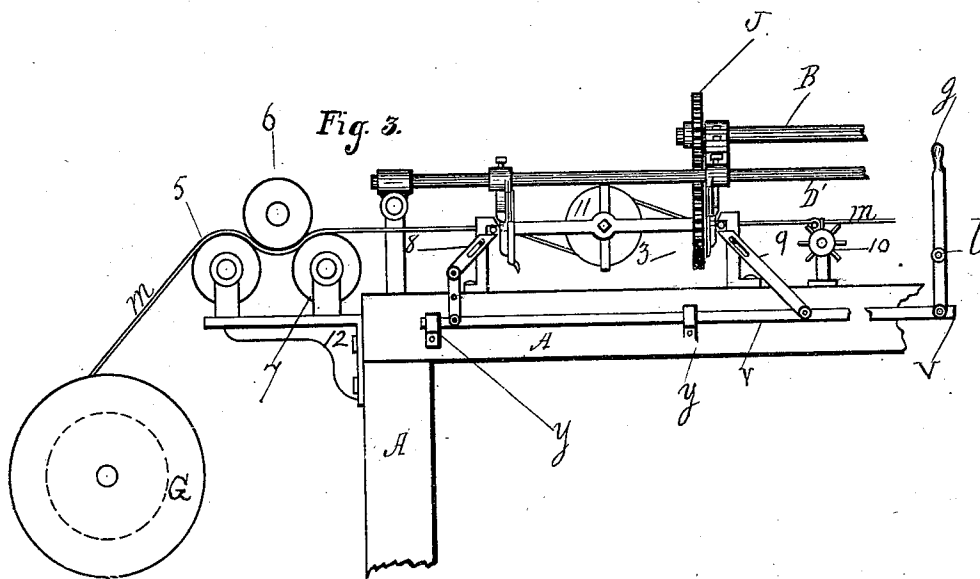
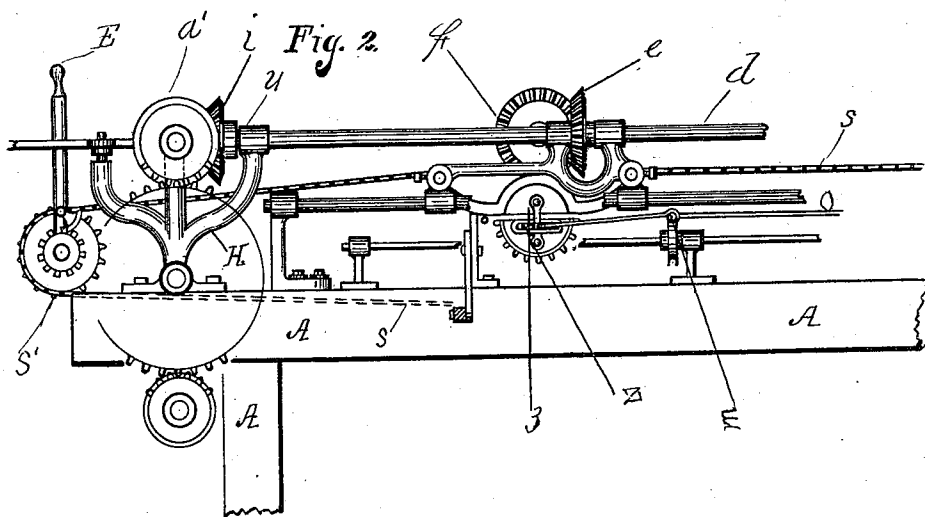




W. N. PARRISH.  
LOOM FOR WEAVING WIRE FENCING.

No. 562,094.

Patented June 16, 1896.



Witnesses.

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# UNITED STATES PATENT OFFICE.

WILLIAM N. PARRISH, OF RICHMOND, INDIANA.

## LOOM FOR WEAVING WIRE FENCING.

SPECIFICATION forming part of Letters Patent No. 562,094, dated June 16, 1896.

Application filed August 26, 1895. Serial No. 560,463. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM N. PARRISH, a citizen of the United States, residing at Richmond, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Looms for Weaving Wire Fences; 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.

My invention relates to that class of looms intended for weaving wire fencing in a continuous body ready to be attached to fence-posts.

The object of my invention is to weave a fence of the desired height by the use of parallel horizontal wires and vertical wires of the same or less size by wrapping the vertical wire once or more around the horizontal wire at such distance between the vertical wires and the horizontal wires as may be desired, by which rectangular meshes are formed of any desired size vertically or longitudinally. The web or body of the fence when so woven is taken up on a cylinder in such length as may be desired and is divided by severing the horizontal wires.

My invention consists in a series of revolving shafts and bevel-gearing in connection with spools and spool-frames secured in a movable frame and in the means for operating the same, all mounted upon and secured to a suitable frame.

In the drawings, Figure 1 is a top plan view of my improved loom as it rests upon a rectangular framing in a horizontal position. Fig. 2 is a side elevation of the same. Fig. 3 is an end elevation.

In Fig. 1, *a'* represents a spur-wheel mounted on a shaft *a*, the bearings of which are secured to the framing A.

*i* is a bevel gear-wheel rigidly mounted on shaft *a*, which meshes into a similar wheel *i'*, loosely mounted on a shaft *d*, which has its bearing and is permitted to revolve in a collar-support *u*, which is attached to the framing A. On the opposite end of the shaft *a* a bevel gear-wheel *i<sup>2</sup>* is fixed, which is in mesh with the similar wheel *i'<sup>2</sup>*. The wheels *i' i<sup>2</sup>* have movable collars *c c'*, the inner ends of which are provided with beveled shoulders

forming a clutch actuated by a lever *n*, pivoted upon a stud-pin *n'*. When the wheel *i'* is in mesh with *i*, the shaft *d* is revolved in one direction and when in mesh with *i<sup>2</sup>* it is revolved in the opposite direction.

The shaft *d* is provided with a spline or groove *d'*, in which a feather or projection on the inside of the hub of the bevel-wheel *e* travels as the wheel *e* is moved backward or forward on the shaft *d*, by which it is thrown out of or into mesh with a bevel-wheel *f*, which is rigidly mounted on a shaft B, which has its journal-bearings in suitable boxing C, which are secured to end pieces D' D' of a sliding frame D D D D, which carries the spool-frames 2 2 2 2 and the spools 4 4 4 4, on which the wires *o o o o* are wound, which constitute the vertical portions of the fence as they are coiled one or more times around the horizontal wires.

*h h* are longitudinal rods or bars, which are parallel to each other and to the shaft *d* and are supported by collar-posts *w w* and serve as guides upon which the collars *k k k k* of the sliding frame D D D D are permitted to move while carrying the spool-frames and spools containing the wires *o o o o* to and from the horizontal wires *m m m* previous to and after the wrapping or coiling of the wire *o* around the wire *m*. The frame D D D D is moved to and fro by means of a sprocket-chain S, operated by a sprocket-wheel S', to the shaft of which a lever E, Fig. 2, is attached and by which the sprocket wheel and chain are operated. The sprocket-wheel S' is provided with a pawl and ratchet, which operates to retain the frame D D D D in any required position.

My loom is arranged to weave a fence in lengths or panels of preferably sixteen feet, and the movable frame D D D D extends from side to side of the framing A, so that when the allotted longitudinal space is filled by the vertical wires *o o o o* these wires are cut at either top or bottom at such lengths as may be desired for the height of the fence when put in position. When this is done, the finished fence is coiled around or wound around a cylinder provided with a crank by which it is revolved, and which is located on one side of the framing A and supported by the same parallel with the vertical wires *o o o o* and at

right angles to the horizontal wires  $m m m$ . The horizontal wires  $m m m m$  are paid out from the reel G, Fig. 3, passing over rolls 5 6 7 at right angles to roll 11. Rolls 5, 6, and 7 are placed on a bracket 12, which is secured to the framing A in such manner as to be adjustable vertically, by which the requisite tension of the wire  $m$  is produced.

$g$ , Fig. 3, is a lever pivoted at  $l$  and secured to a horizontal bar  $v$ , said bar  $v$  being attached to the framing A by ears  $y y$ , in which it is permitted a lateral motion when actuated by the lever  $g$ . Attached to the sliding bar  $v$  are diagonal arms 8 and 9, the upper ends of which are provided with beveled edges to serve as cutters to sever the wire  $m$  when desired.

The spool-frames 2 2 2 2, Fig. 1, are composed of curved side pieces provided with openings midway of their length, in which the journals of the spool 4, which carries the wire  $o o$ , have their bearing and in which the spool is permitted to revolve freely. The spool-frame is provided with a circular head-plate, to which one end of the curved side pieces, respectively, is secured by a screw-bolt. This circular head 3 is provided with spur gearing or cogs on its periphery, which meshes into a pinion of the same dimensions, which is mounted rigidly on the cross-shaft B, which has attached to one end of it a bevel-wheel  $f$ , which meshes into bevel-wheel  $e$  on shaft  $d$  and is revolved by it. The outside surface of the spool-frame head 3 has an annular rib or projection on the edge of its circumference and has on its face a curved boss  $z$ , in which are placed wheels 13 and 14, between which the wire  $o$  passes out from the spool 4. The spool-head is also provided with slot or opening extending from circumference to the center of sufficient width to admit the horizontal wire  $m$  and in which said wire is held during the process of winding the wire  $o$  around it by the revolutions of the spool-frame. The spool-frame is revolved by a pinion J on the cross-shaft B, and the shaft B is revolved by the action of bevel-wheel  $e$  on shaft  $d$ , which is revolved by bevel-wheels  $i^2$  or  $i'$  as they may be in position and operated by spur-wheel  $a'$  on shaft  $a$ . Power is given spur-wheel  $a'$  by a main driving-wheel H, Fig. 2. The opposite head of the spool-frame is circular and is similarly provided on its outer circumferential edge with an annu-

lar rib or projection, also with a curved boss  $z$ , in which are placed two wheels 13' and 14', through which or between which the wire  $o$  passes as it is coiled around the wire  $m$  from the spool 4. It is also provided with a slot or opening extending from circumference to the center of dimensions sufficient to admit the wire  $m$ .

The construction and operation of the spools and spool-frames are more fully set forth, described, and claimed in Letters Patent granted me December 19, 1893, No. 511,059, excepting only that the head-plate of the spool-frame in my improved loom is provided with spur-cogs instead of bevel or miter gear.

It will be noticed that in my loom as now shown and described the frame D D D D moves the whole series of spools and spool-frames, which extend from one side of the loom to the opposite side, moves them all at the same time as actuated by the sprocket-chain S, so that the wires  $m m m m$  are embraced and wound simultaneously.

The driving-wheel 4 is constructed in such manner as to give two and one-half revolutions to the shafting and bevel-wheels which it puts in motion to each revolution of its own, thereby giving two and one-half revolutions to the spool-frame, thus making two and one-half wraps around the horizontal wires  $m$  instead of one and a half, as indicated by the drawings. A wheel 10, composed of a hub and spokes, is mounted on a post and revolves on its axle, allowing wires to rest between the spokes and, as it is turned by the wires as they pass it, releases it, drops one, and receives another.

Having thus fully described my said improved loom, what I claim as new, and desire to secure by Letters Patent, is—

The combination of a horizontally-movable frame D D D D with the cross-shaft B upon which are mounted a spur-wheel J and bevel-wheel  $f$ ; spool-frames 2 2 2 2 and spools 4 4 4 4 attached to and carried by frame D D D D; the shaft  $d$  upon which is placed the wheel  $e$ , constructed and operating in the manner and for the purpose herein set forth and described.

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

WILLIAM N. PARRISH.

Witnesses:

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