

(No Model.)

J. & C. LANE.

SPREADER AND TWISTER FOR FENCE MACHINES.

No. 555,453.

Patented Feb. 25, 1896.

Fig. 1.

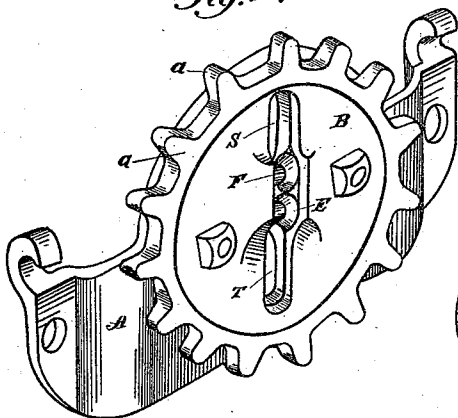


Fig. 2.

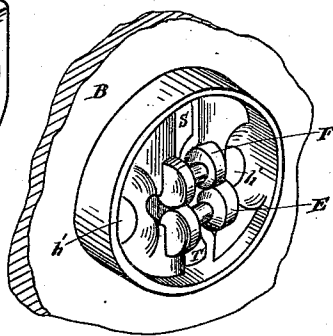


Fig. 3.

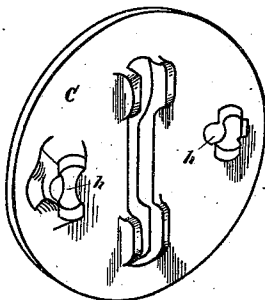
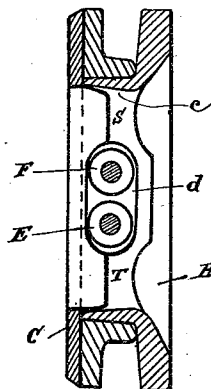


Fig. 4.



WITNESSES

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JOHN LANE AND CORNELIUS LANE, OF HOLLY, MICHIGAN.

SPREADER AND TWISTER FOR FENCE-MACHINES.

SPECIFICATION forming part of Letters Patent No. 555,453, dated February 25, 1896.

Application filed June 8, 1895. Serial No. 552,068. (No model.)

To all whom it may concern:

Be it known that we, JOHN LANE and CORNELIUS LANE, citizens of the United States, residing at Holly, county of Oakland, State of Michigan, have invented a certain new and useful Improvement in Spreaders and Twisters for Fence-Machines; and we 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to fence-making machines, and has for its object an improvement in the spacing and twisting mechanism by which the two strands that are ultimately employed to form the cable of a fence are held definitely spaced from one another and twisted into the cable.

In the drawings we show only a single twister, of which there are in each machine a number, duplicates of the one shown.

Figure 1 shows the twister and its immediate support in perspective. Fig. 2 shows the middle part of the cog-wheel shown on Fig. 1. Fig. 3 shows the back plate lying opposite the cog-wheel. Fig. 4 shows in sectional elevation the two rotating parts of the twister.

A indicates the frame, which consists of a plate having a circular aperture through it and provided with means for attaching it to the main frame of the machine. Within the opening of the ring through this plate A is the rotating mechanism, which consists of the two plates B and C, one of which is made in the form of a cog-wheel having teeth *a*, which extend beyond the periphery of the ring part of the plate A, and are arranged to engage with a driving sprocket-chain. On the back or interior of the plate B is a flange *c* that fits within the interior of the ring part of the plate A, passing through the plate A and engaging on the rear with the inner face of the plate C. There is also on the rear face of the plate B a recess *d*, into which are received the two rollers E and F. Each of these rollers is finished with conical ends, which are adapted to press against the end walls of the seat *d*, and they are preferably finished with circumferential grooves, although the circum-

ferential grooves may be omitted and the rollers, instead of being spool-shaped, as shown in the drawings, may be plain cylinders with conical ends. At right angles to the axes of these cylinders, through both the plates B and C, are oblong slots for the passage of the wire. The two rollers F and E rest in the seat *d* in contact the one with the other.

The parts are assembled by placing the plates B and C together with the rollers between them and with the supporting-ring of the plate A between the extending flange of the two plates B and C, and all the parts are then secured together by bolts, which traverse the bolt-holes *h h' h'*.

In use the wires to be twisted are threaded through the slots S and T, one on either side of the rollers E and F, the parts shown in the drawings being all secured to the main frame. A rotary movement is then given to the rotary parts by means of a sprocket-chain (which is not shown) and the wires threaded through the slots are twisted. The twisted part of the wires on one side tends to close them in against the rollers E and F. The twisting motion, which is usually first in one direction and then in the other direction, tends to press the rollers endwise against the walls of the seat *d*. The grooves in the two rollers serve to hold the wires from frictional contact with the sides of the slots S and T, and the grooved style of rollers is, for this reason, preferable to the ungrooved style, but either style will produce satisfactory results.

The rollers are arranged with conical end bearings and are in contact. When so arranged the construction is much more simple and inexpensive than where the rollers are provided each with its separate bearing. There is always a strong end-thrust of the rollers against the bearings and the conical ended rollers work to better advantage than a square-ended roller.

What we claim is—

1. In a spreader and twister for fence-machines, the combination of the rotative twisting-wheel, perforated as described, and a pair of grooved friction-wheels seated within the twisting-wheel and provided with conical end bearings.

2. In a spreader and twister for fence-ma-

chines, the combination of the frame, a ro-
tative twisting-wheel provided with a cen-
tral elongated perforation, and friction-rolls
seated to rotate in contact, substantially as
5 described.

3. In a spreader and twister for fence-ma-
chines, a twisting-wheel provided with a cen-
tral recess adapted to receive the spreading-
rolls, and the spreading friction-rolls pro-
10 vided with conical end bearings, seated in

said cavity and adapted to rotate in contact,
substantially as described.

In testimony whereof we sign this specifi-
cation in the presence of two witnesses.

JOHN LANE.

CORNELIUS LANE.

Witnesses:

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WILLIAM A. PATTERSEN.