(No Model.)

W. J. JACOBS.

DEVICE FOR ATTACHING STAY WIRES TO WIRE FENCES.

No. 590,042. Patented Sept. 14, 1897.

Fig. 1.

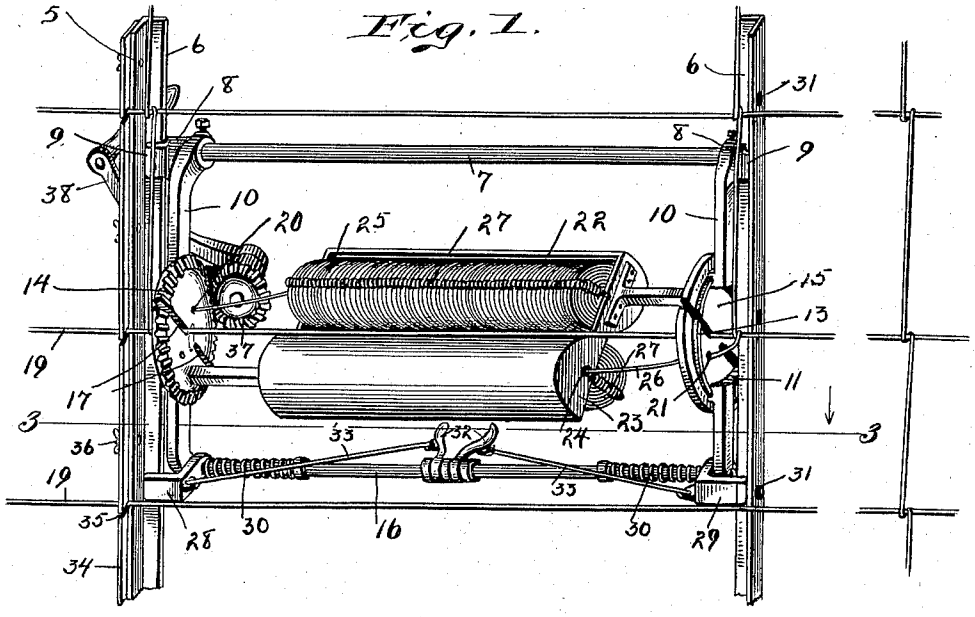


Fig. 3.

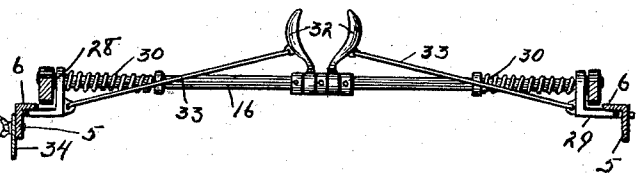


Fig. 2.

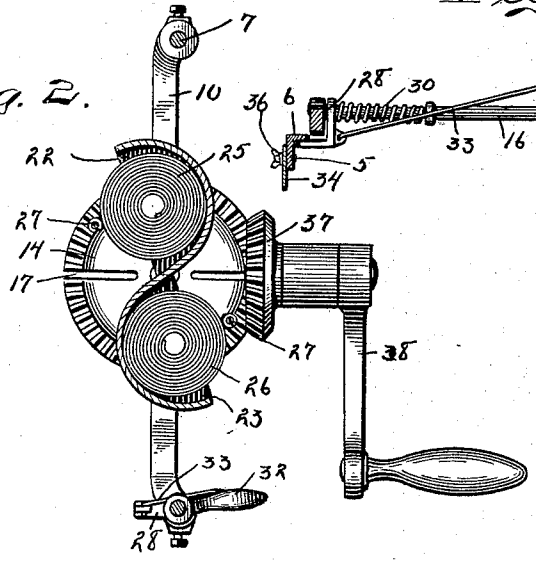
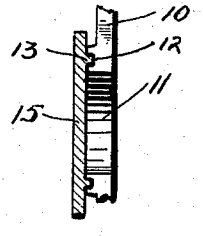


Fig. 4.



WITNESSES:

H. P. Neale

H. H. Bass

INVENTOR

William J. Jacobs

BY

H. T. Woodbridge

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM J. JACOBS, OF BARGERSVILLE, INDIANA, ASSIGNOR TO JAMES M. JACOBS AND BENNETT JACOBS, OF INDIANAPOLIS, INDIANA.

DEVICE FOR ATTACHING STAY-WIRES TO WIRE FENCES.

SPECIFICATION forming part of Letters Patent No. 590,042, dated September 14, 1897.

Application filed March 20, 1897. Serial No. 628,408. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. JACOBS, a citizen of the United States, residing at Bargersville, in the county of Johnson and State of Indiana, have invented a new and useful Fence-Machine, of which the following is a specification.

My invention relates to an improvement in looms for attaching stay-wires to wire fences.

The accompanying drawings illustrate my invention.

Figure 1 is a perspective view of the loom together with a portion of the supporting-frame. Fig. 2 is a central vertical section. Fig. 3 is a section on line 3 3 of Fig. 1, and Fig. 4 is a detail of the connection between the loom-frame and disk 15.

In the drawings, 5 indicates a supporting-frame provided with a pair of opposite vertical ways 6. Mounted between ways 6 is a bar 7, upon each end of which is a boss 8, each of which is provided with a pair of ears 9, adapted to straddle ways 6.

Pivotally mounted upon bar 7 are two similar side bars 10, each of which is provided with a semiannular central portion 11, in which is formed a groove 12, which is adapted to receive the annular rib 13, formed upon the outside of twisting-gear 14 and on the outside of twisting-disk 15. The lower ends of side bars 10 are rigidly connected by means of a bar 16. Gear 14 and disk 15 are each provided with a pair of oppositely-extending radial slots 17, which extend from the periphery nearly to the center, and each of said slots is adapted to receive any one of the horizontal wires 19 of a wire fence. Formed through gear 14, to one side of the center thereof, is a hole 20, and formed through disk 15 is a similar hole 21.

Mounted between gear 14 and disk 15 and secured thereto in any suitable manner is an S-shaped wire-receiver provided with a pair of wire cups 22 and 23. Instead of using wire wound upon bobbins, as has heretofore been customary, I use wire which has been wound into a ball or coil, much as wrapping-twine is wound. A coil of wire of this description is placed in each wire cup 22 and 23, and the inner end of the wire of each coil is drawn out through opening 24, formed through one of the end walls of each cup, the wire 25 from cup 22 passing through hole 20 of gear 14 and wire 26 from cup 23 passing through hole 21 of disk 15. The coils may be held in the cups in any suitable manner—as, for instance, by means of a coiled spring 27, secured at each end to the end walls of the cup.

In order to hold the loom-frame in position upon the ways, I mount upon bar 16 a pair of catches 28 and 29, which are held normally outward by means of the springs 30 30. Catch 28 engages the inner side of one of the ways 6, while catch 29 engages any one of a series of holes 31, formed in one side of the supporting-frame 5, the said holes being arranged so that the loom-frame may be held opposite any one of the horizontal wires of the fence. For the purpose of withdrawing catches 28 and 29 from engagement with frame 5 I provide a pair of handles 32, pivoted upon bar 16, between suitable collars, and connected one to each of said catches by means of the wire or rod 33.

For the purpose of holding the horizontal wires 19 of the fence the proper distance apart during the application of the stay-wires I secure to one side of the frame 5 any one of a series of plates 34, each of which is provided upon one edge with a series of notches 35, the arrangement of notches on each plate being such as to engage the wires 19 of the fence being built. Plates 34 are detachably secured to the frame by means of the thumb-nuts 36 or in any other suitable manner.

For the purpose of holding the fence-wires in notches 35 any suitable means, such as the common arrangement of a rod (not shown in the drawings) passing down outside of the wires, may be used.

In operation the frame 5 is placed against the wire fence, the horizontal wires of which have already been strung, and the said wires are secured in notches 35 of plate 34. The operator then grasps bar 7 and raises the whole loom-frame to the top of frame 5 until the top wire 19 may be placed in one of the slots 17 of gear 14 and disk 15. Wires 25 and 26, which have been previously passed through

holes 20 and 21 of the gear and disk, are secured to said top wire. Gear 14 is then rotated by any suitable means, such as gear 37 and crank 38, the rotation of said gear causing the wire cups and disk 15 to rotate and thereby twist wires 25 and 26 around the wire 19. When a sufficient number of turns of the stay-wire have been made around the fence-wire, the operator withdraws catch 29 and allows the loom-frame to drop down between ways 6 until the gear and disk engage the next lower wire, catch 29 at the same time engaging another hole 31, when the operation is repeated. When the bottom wire 19 is reached and the stay-wires properly twisted around it, the operator grasps bar 16, withdraws catches 28 and 29, and swings side bars 10, together with the wire cups 22 and 23, outward away from the fence, the operation causing the wires 25 and 26 to be drawn from their coils. The operator may then reach in with a pair of nippers and cut the wires. When this is completed, frame 5 is moved along the fence into the position for the attachment of another pair of stay-wires and the operation is repeated.

By forming the stay-wires into coils and withdrawing the wire from the interior thereof no tension device is required.

I claim as my invention—

1. In a loom for attaching stay-wires to wire fences, the combination with means for twisting the stay-wire about the fence-wire, of a cup carried by said twisting means and adapted to receive a coil of stay-wire, the arrangement being such that the stay-wire may be drawn from the interior of the coil, substantially as described.

2. In a loom for attaching stay-wires to wire fences, the combination with the twisting-disks 14 and 15, provided with means for engaging the fence-wires, of a pair of cups 22 and 23, each adapted to receive a coil of wire, mounted between and secured to said disks, the arrangement being such that the wire may be withdrawn from the center of the coil, and means for rotating said disks and cups, substantially as described.

3. In a loom for attaching stay-wires to wire fences, the combination with the supporting-frame provided with suitable ways, of a bar mounted between said ways and provided with means for engaging said ways, a pair of side bars pivoted upon said bar, a pair of twisting-disks mounted so as to rotate upon said side bars and each provided with means for engaging the fence-wires, a pair of cups 22 and 23 mounted between and secured to said twisting-disks and each adapted to receive a coil of wire, and means for rotating said disks and cups about the fence-wire, substantially as described.

4. In a loom for attaching stay-wires to wire fences, the combination with the supporting-frame provided with suitable ways 6, of a bar mounted between said ways and provided with means for engaging said ways, a pair of side bars pivoted at their upper ends upon said bar and connected at their lower ends, a pair of twisting-disks mounted so as to rotate between the side bars and each provided with means for engaging the fence-wires, a pair of cups 22 and 23 mounted between and secured to said twisting-disks and each adapted to receive a coil of wire, means for rotating said disks and cups, and a catch carried by the pivoted portion of the loom and adapted to engage the supporting-frame, substantially as described.

WILLIAM J. JACOBS.

Witnesses:
A. M. HOOD,
H. L. BASS.