

(No Model.)

C. W. HOLM.

DEVICE FOR APPLYING STAY WIRES TO WIRE FENCES.

No. 588,065.

Patented Aug. 10, 1897.

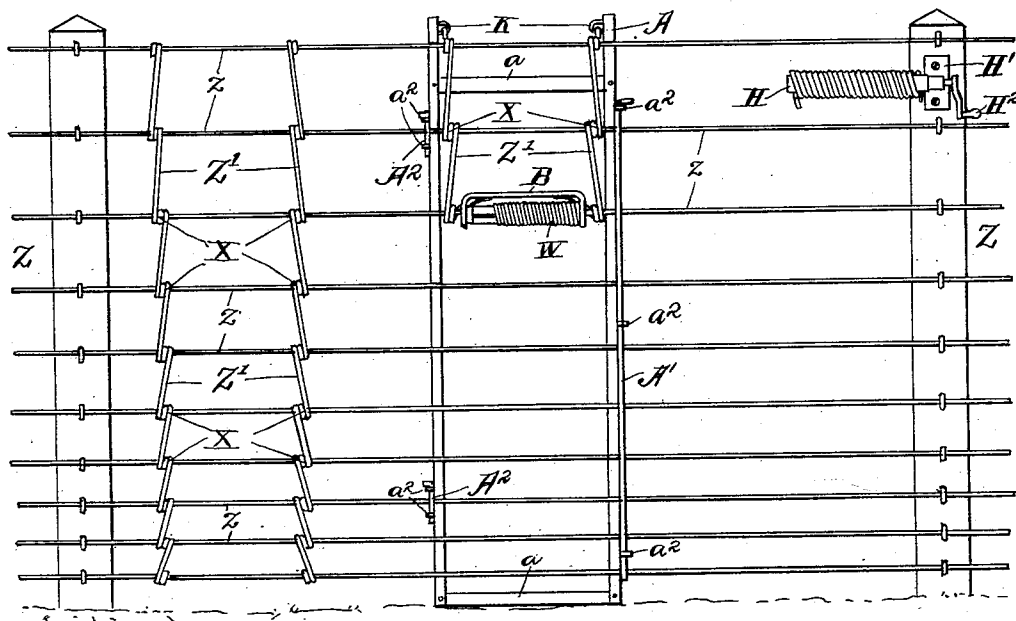


Fig. 1

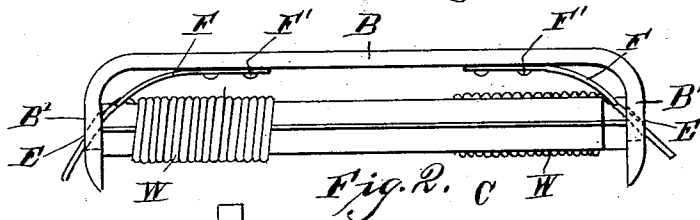


Fig. 2.

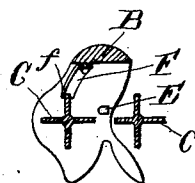


Fig. 3

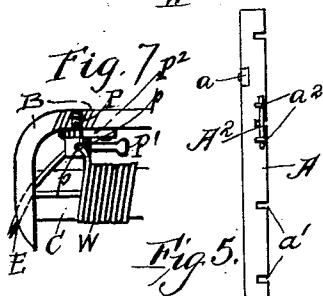


Fig. 4.

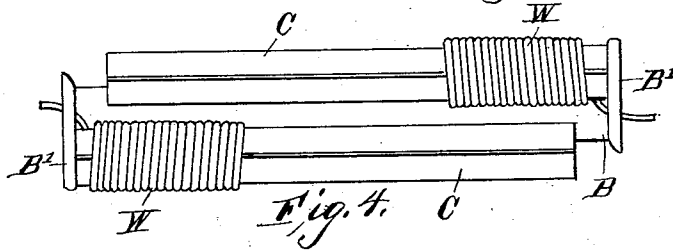


Fig. 5.

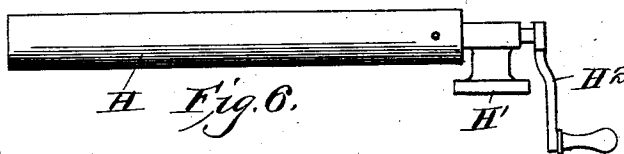


Fig. 6.

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UNITED STATES PATENT OFFICE.

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DEVICE FOR APPLYING STAY-WIRES TO WIRE FENCES.

SPECIFICATION forming part of Letters Patent No. 588,065, dated August 10, 1897.

Application filed December 19, 1896. Serial No. 616,286. (No model.)

To all whom it may concern:

Be it known that I, CHARLES WESLEY HOLM, a citizen of the United States, and a resident of Troy, in the county of Miami and State of Ohio, have invented certain new and useful Improvements in Means for Applying Stays to Wire Fences; and I do 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.

Figure 1 of the drawings is a side view of a section of fence and illustrating the use of the twisting tool or implement. Fig. 2 is a side view of the twisting tool or implement. Fig. 3 is a transverse section of the same. Fig. 4 is an inverted plan view of said tool. Fig. 5 is a side view of the frame A. Fig. 6 is a view of a wire-coiling device. Fig. 7 is a detail view showing a different tension device.

This invention has relation to means for applying stay-wires to wire fences, and is designed to provide a tool or implement which can be operated in a rapid, convenient, and effective manner, and which will apply two stays at once.

With this object in view the invention consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claims.

Referring to the accompanying drawings, the letter Z designates a section of a wire fence, in which z are the horizontal wires, and Z' the vertical stays, which are applied by means of this invention and which consist each of a single piece of wire which is twisted around each of the horizontal wires.

A designates a frame which is used in connection with the twisting tool or implement for the purpose of holding the wires z in proper relation to each other while the stays are being applied and which prevents sagging of the said wires under the operation of the said tool. This frame is the height of the fence and is usually from eighteen to twenty inches wide. It consists of parallel side bars connected at intervals by cross-bars a . The side bars have notches a' cut therein, one

above the other, at distances equal to the distance between adjacent wires z , for the purpose of engaging said wires. The frame is also held to the wires by means of a rod A' and short rods or wires A². The rod A' is held over or in front of the wires z in staples a^2 of the frame and is not removed except when the frame is to be taken from the fence. The rods or wires A² are held in similar staples, and when after a pair of stays has been applied in the manner hereinafter described and it is desired to move the frame along the fence into position for applying the next pair these rods are removed and the frame swung away from the wires z sufficiently to permit that side of it to pass the stays which have just been applied.

The twisting tool or implement comprises a bar B, whose end portions B' are bent downwardly and are slotted or forked to give them a bearing on the wires z , upon which the tool rests and rotates when in operation. Projecting from each end portion B' is a longitudinally-extending wire-holding arm C, each of which extends to a point near the opposite end portion, short of which it terminates, in order to permit a coil W, of wire, to be slipped thereon. These two wire-holding arms extend parallel with each other, as best seen in Figs. 3 and 4, and when the tool is placed upon one of the wires z , as shown in Fig. 1, one of said arms lies upon each side of and parallel with said wire.

By reference to Fig. 4 it will be observed that the two end portions of the bar B are not in the same longitudinal plane, but that they are offset laterally with respect to each other a sufficient distance to permit the coils to be readily slipped upon the respective arms C.

In each end portion B' is formed an opening E, through which the wire passes from the coil in forming and applying the stay.

F F are tension-springs which are arranged to bear upon the wire from the two coils as it passes out through the openings E. Said springs are secured to the bar B by screws F', and their free end portions may have notches f or other suitable guides for the wire.

The operation is as follows: The wire for the stays is first prepared or formed into coils,

which may be conveniently done by means of a device such as shown in Fig. 6. This device comprises a mandrel H, journaled in a block or other support H' and fitted with a crank H². The block H' may be fastened to a post or other suitable object. (See Fig. 1.) The coils formed on this mandrel or in any other suitable manner are removed and slipped upon the arms C, one coil on each arm. The tool is then placed upon the upper wire *z* in the frame A, and one end of each wire is made fast to a staple K of said frame after being passed out through the adjacent opening E. The tool is now rotated around the wire *z* and makes a twist such as indicated at X in Fig. 1. The springs F are now raised to relieve the tension on the wires and the tool is moved down to the next wire *z*, when the operation is repeated, and so on to each wire. At the bottom the wires are cut, the frame A is moved along, and the operation repeated. The tension of the springs on the wire can be adjusted by means of the screws F'.

In the manner above described two stays are simultaneously applied to the fence in a rapid manner and are properly stretched and secured. In working with barbed wire or with cable wire a simple tension device, such as the springs F, above described, will be sufficient. In working with plain wire, however, it is desirable to provide means for giving a greater tension, and for this I provide the device shown in Fig. 7. Although in this figure I have only shown the device at one end of the implement, a similar device may be used at both ends. In this figure, P is a screw which engages the under side of the bar B and has an enlarged head portion through which is an aperture *p*. P' is a handle-lever by means of which the screw may be turned. P² is a spring pawl or brake device which engages said head portion to hold the screw from turning except when desired. The wire is threaded through the aperture *p* before passing out through the opening E, and it will be readily understood that by turning the screw more or less any desired degree of tension may be obtained. In moving the implement from one fence over to another this tension must be relieved.

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

1. A tool or implement for the purpose described, comprising essentially a bar having downwardly-bent end portions offset laterally with respect to each other adapted to rest and rotate upon a wire fence, and a pair of parallel elongated wire-holding arms arranged side by side, one of which extends longitudinally from each of said end portions toward

but not to the opposite end portion, substantially as specified.

2. A tool or implement for the purpose described, comprising a bar B having the forked and downwardly-bent end portions B' offset laterally with respect to each other, each of which has an opening E, and a wire-holding arm C extending from each of said end portions toward but terminating short of the opposite end portion, the two arms being arranged side by side, substantially as specified.

3. A tool or implement for the purpose described, comprising a bar B having downwardly-bent end portions, each of which is formed with a bearing portion adapted to rest and rotate on a fence-wire, and two elongated parallel wire-holding arms located upon opposite sides with respect to said bearing portions and with respect to the fence-wire, one of said arms extending longitudinally from each of said end portions, and means for imparting tension to the wire, substantially as specified.

4. In a device for applying stays to wire fences, the combination with a frame adapted to hold the fence-wires from sagging, of a twisting tool or implement adapted to work within said frame, and comprising a bar adapted to rest and rotate upon the fence-wires, and carrying two parallel wire-holding arms, said arms being arranged side by side and upon opposite sides with respect to the fence-wire, together with guides and tension devices for the wire, substantially as specified.

5. A tool or implement for the purpose described, comprising a bar B having the forked and downwardly-bent end portions B' offset laterally with respect to each other, each of which has an opening E, and a wire-holding arm C extending from each of said end portions toward but terminating short of the opposite end portion and to one side thereof, together with tension devices adapted to bear on the wires as they pass through said openings, substantially as specified.

6. A tool or implement for the purpose described, comprising a bar having downwardly-bent and forked ends, each of which has an opening therein, the oppositely-extending wire-holding arms, the perforated tension-screws, means for actuating the same, and means for holding the same, substantially as specified.

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

CHARLES WESLEY HOLM.

Witnesses:

GEORGE W. PAUL,
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