(No Model.)

G. W. PERRY.

WIRE STRETCHER.

No. 341,273. Patented May 4, 1886.

Fig. 1.

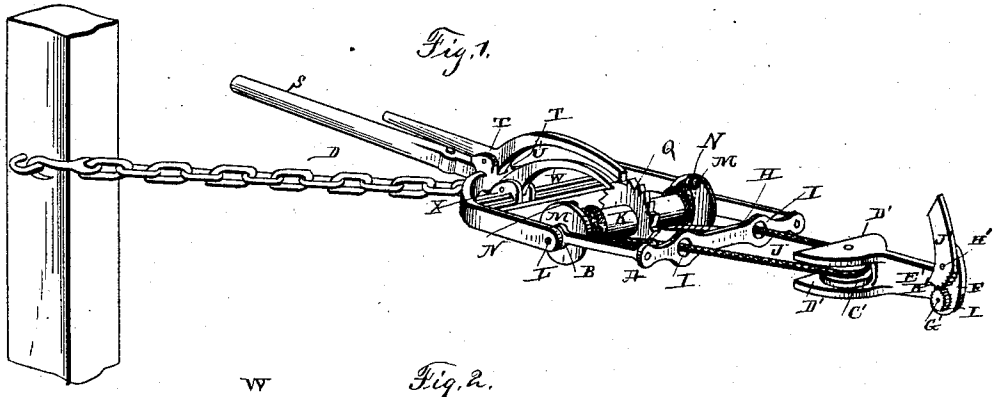


Fig. 2.

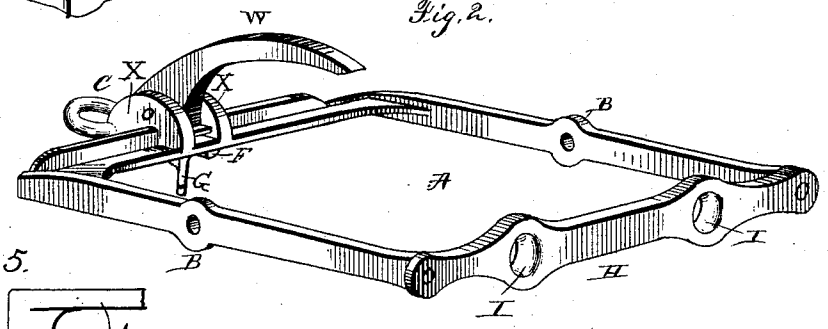


Fig. 5.

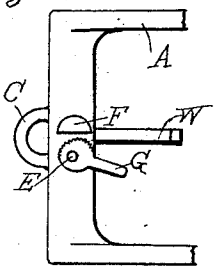


Fig. 3.

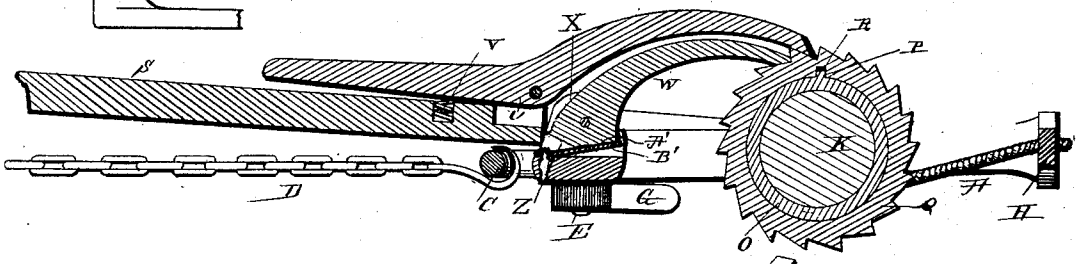
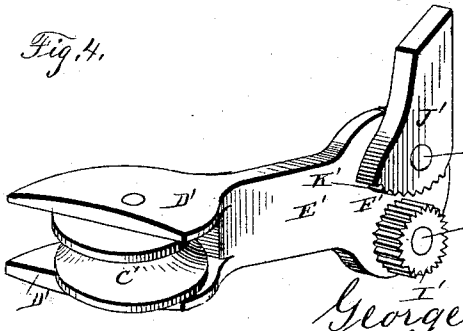


Fig. 4.



WITNESSES

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GEORGE W. PERRY, OF BURLINGTON, ILLINOIS.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 341,273, dated May 4, 1886.

Application filed February 8, 1886. Serial No. 191,176. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. PERRY, a citizen of the United States, and a resident of Burlington, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Wire-Stretchers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved wire-stretcher, showing it in position. Fig. 2 is a similar view of the frame of the same. Fig. 3 is a longitudinal sectional view of the device taken through the ratchet-wheel of the drum. Fig. 4 is a perspective detail view of the wire-clamp; and Fig. 5 is a view of the under side of one end of the frame.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to wire-stretchers for stretching fence-wire in building or in repairing fences; and it consists in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates a U-shaped frame closed at both ends and formed with transverse bearings B B in the middles of its side pieces. One end piece of the frame is provided with an eye, C, into which a chain, D, is secured at one end, which chain may serve to secure the frame to a fence-post, and one side of this end piece is formed with a stud, E, and a lug, F, having a flat face toward the stud, upon which a cam-lever, G, is pivoted, bearing with its serrated cam portion against the face of the lug. The other end piece, H, of the frame is formed with two perforations, I I, for the passage of a rope or cord, J, which has its ends secured to the two halves of a drum, K, which is journaled upon a shaft, L, secured in the bearings in the side pieces of the frame. This drum has flanges M M at its ends, and eyes N, projecting inward from these flanges, for the reception of the knotted ends of the rope, and the middle of the drum is formed with a rim, O, of the same or slightly greater diameter than one of the end flanges, and formed with a feather, P, integral with the rim. A ratchet-rim, Q, having a groove, R, in its bore, fits upon the rim and has its groove fitting upon the feather, and this ratchet-rim is preferably shrunk upon the rim, being placed upon the same while hot.

The bifurcated ends of a lever, S, are pivoted upon the outwardly-projecting ends of the shaft in the frame, and one side of this lever, at the point where the ends are forked, is provided with two lips, T T, between which a pawl-lever, U, is pivoted, the said pawl-lever engaging the ratchet wheel or rim with its inner end, and having a spring, V, bearing against the inner side of its outer arm, forcing it outward, and consequently forcing the pawl into engagement with the ratchet-rim.

A pawl, W, is pivoted at its inner end between two lips, X X, upon the end piece of the frame having the eye, and the inner end of the pawl is provided with two faces, Z and A′, at an obtuse angle to each other and bearing against the free end of a spring, B′, which is secured at its end between the lips.

The doubled portion of the rope passes over a sheave, C′, which is journaled between two lips, D′ D′, united by a shank, E′, having a flat head, F′. This flat head is provided upon one side with two projecting studs, G′ and H′, and a serrated disk, I′, is pivoted upon one of the studs, G′, while a cam-lever or clamping-lever, J′, is pivoted with its cam-head upon the other stud, and this clamping-lever has a serrated edge, K′, upon its eccentric-head, which edge may hold the wire between it and the serrated edge of the disk.

It will now be seen that when the frame is either secured to a post by means of the chain or to the end of a wire by means of the wire-clamp F G, and the rope has been unwound from off the drum, and the wire-clamp I′ J′ upon the head of the pulley-block has engaged the wire to be stretched, the said wire may be drawn toward the frame by revolving the drum, which is done by rocking the bifurcated lever, and the pawl upon the frame will stop the ratchet-rim and the drum, when the lever is tilted back to get a new grip.

The pawl upon the frame may be placed either with the inner oblique edge bearing

against the spring, when the spring will force the pawl to engage the ratchet-teeth, slipping over the same, but always engaging them after having slipped over them; but when the pawl is tilted outward, so as to bring the outer oblique edge to bear against the spring, the pawl will be held disengaged from the ratchet-rim, allowing the drum to be reversed, unwinding the rope, the pawl-lever upon the handle being disengaged by pressing the handle of the said pawl-lever toward the handle of the lever.

The serrated disk, forming the rigid jaw of the wire-clamp upon the pulley-block, will enable the clamp to be useful and sharp for a considerable length of time, the disk having a new surface to offer at each fraction of a revolution of the disk, and the disk will allow the wire to be drawn into it with greater ease than a rigid serrated jaw would, the disk revolving with the wire when it is inserted between the jaws, but at the same time biting with its serrations in the wire when the strain comes in the opposite direction.

The frame having the perforations in its end piece for the passage of the ends of the rope winding upon the drum will guide the said rope to the drum and prevent the two ends or portions of the rope from becoming tangled up.

I am aware that wire-stretchers have been provided heretofore with clamping-jaws having convenient handles, so that they may operate as levers, and I do not claim that construction, broadly; but

I claim and desire to secure by Letters Patent of the United States—

In a wire-stretcher, the combination of a frame having an eye at one end piece and a chain attached to the same and provided with a wire-clamp upon one side of that end piece and with two lips at the other side of the end piece and having two perforations in the other end piece, a drum journaled upon a shaft secured to the side pieces of the frame and provided with a ratchet-rim upon the middle, a spring-pawl engaging the ratchet-rim, a bifurcated hand-lever provided with a pawl having its outer end formed into a handle forced outward by a spring and having its inner end engaging the ratchet-rim, a pulley-block having a wire-clamp at its outer end, and a rope passing over the sheave of the pulley-block and having its ends passing through the perforations in the end piece of the frame and having its ends secured to the drum at both sides of the ratchet-rim, as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

GEORGE W. PERRY.

Witnesses:
JEROME ANDREWS,
ROMULUS ANDREWS.