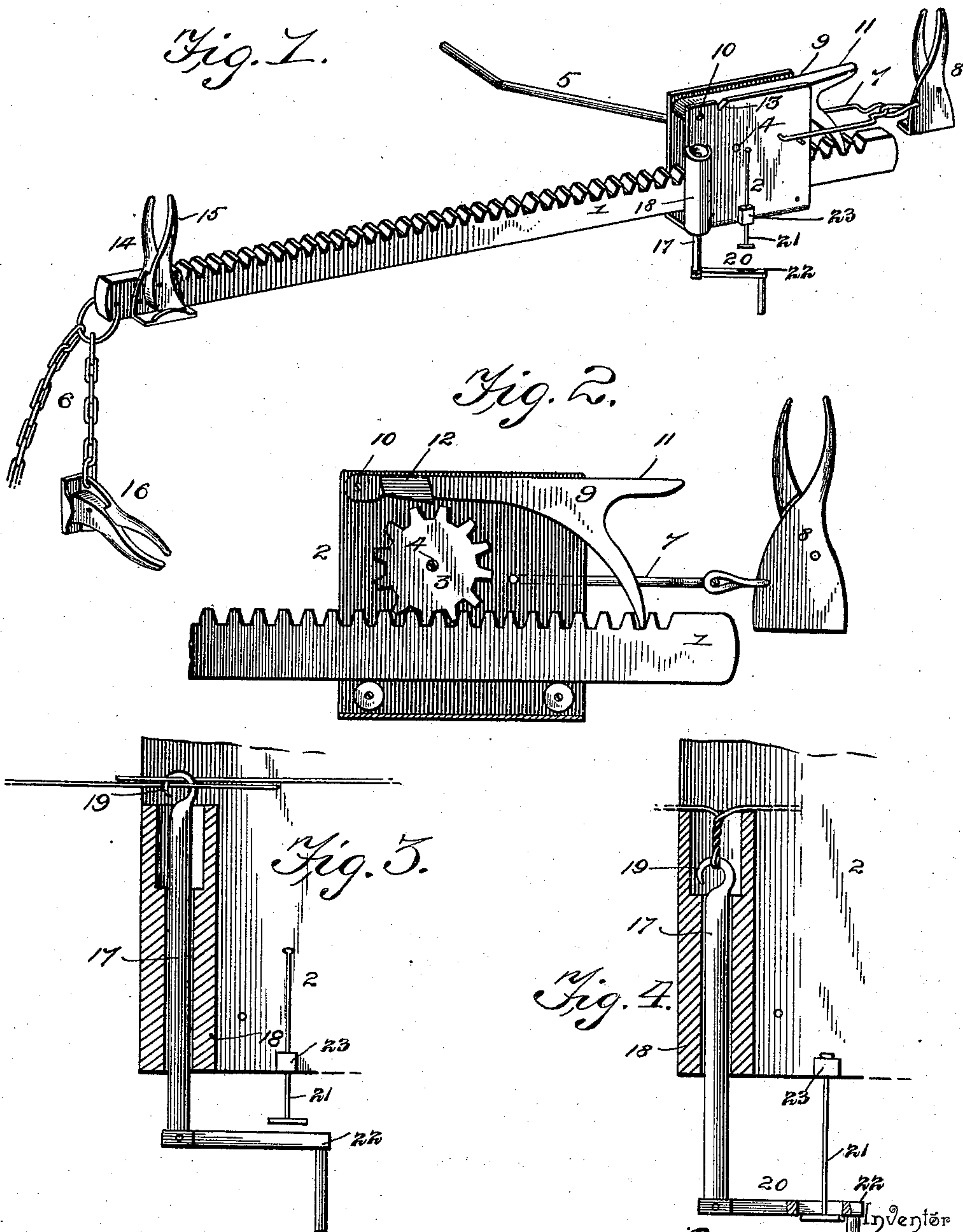


(No Model.)

W. I. MORROW.
WIRE STRETCHER.

No. 572,349.

Patented Dec. 1, 1896.



Inventor
William I. Morrow.

Witnesses

E. H. Morrow
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By *his* Attorneys.

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UNITED STATES PATENT OFFICE.

WILLIAM I. MORROW, OF PINE GROVE, TEXAS.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 572,349, dated December 1, 1896.

Application filed May 28, 1895. Serial No. 551,015. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM I. MORROW, a citizen of the United States, residing at Pine Grove, in the county of Henderson and State of Texas, have invented a new and useful Wire-Stretcher, of which the following is a specification.

The invention relates to improvements in wire-stretchers.

10 The object of the present invention is to improve the construction of wire-stretchers, and to provide a simple and inexpensive one which will be strong and durable and which will enable fence-wires to be readily stretched
15 for securing them to fence-posts and for connecting the ends of a broken wire.

Another object of the invention is to provide simple and efficient means for twisting the terminals of a broken fence-wire together for connecting them, and also to enable a wire to be readily severed when desired.

25 The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a wire-stretcher constructed in accordance with this invention. Fig. 2 is an enlarged sectional view of the sliding frame, the section being taken longitudinally of the wire-stretcher. Figs. 3 and 4 are enlarged detail sectional views illustrating the construction of the twisting device.

35 Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a ratchet or rack bar provided on its upper face with teeth, and having sliding on it a frame 2, provided with antifriction-rollers and carrying a cog-wheel 3 for meshing with the teeth of the rack-bar. The sliding frame 2 is constructed of a single piece of metal, and consists of parallel sides and a bottom piece arranged beneath the rack-bar.

45 The pinion, which meshes with the teeth of the rack-bar, is located beneath the parallel sides of the frame 2, and is mounted on a shaft 4, which is extended and bent to form a crank-handle 5, whereby the wire-stretcher is operated.

The rack-bar is provided at one end with chains 6 to enable it to be readily secured to a post or to be connected with one of the ends of a broken wire when desired. The sliding frame is provided with a link or bail 7, to which is connected a clamp 8, adapted to be secured to or connected with a fence-wire, and as the sliding frame is advanced along the rack-bar by the rotation of the gear-wheel it is automatically locked against retrograde or backward movement by a pivoted pawl 9.

65 The pawl 9 is arranged between the parallel sides of the frame 2 and is pivoted at 10 at one end, and its other end is extended beyond the frame 2 and depends from the top thereof at an inclination and is arranged to engage the teeth of the rack-bar. This pawl is provided with a projecting handle 11, and it has intermediate of its ends a blade 12, arranged to cooperate with a notch 13 of one side of the frame 2 to sever a wire. The notch 13 forms a shoulder or stop for the wire to be severed, and by forcing the pivoted pawl downward the blade is carried into contact with the wire and is adapted to sever the same.

80 The rack-bar is provided at one end with a clamp 14, having a pivoted member 15, and adapted to engage a fence-wire similar to the clamp 8 of the frame 2 when it is desired to connect the two portions of a broken wire. The clamp 14 is adapted to cooperate with the clamp 16 of one of the chains 6 when it is adapted in the process of stretching to obtain a fresh hold on the wire without losing any of the acquired tension. After the ends of a wire have been drawn together they may be readily connected by a twisting device consisting of a vertically-disposed shaft 17, mounted in a cylindrical sleeve or bearing 18 of the frame 2 and provided at its upper end with a hook 19 for engaging the ends of the wire. The sleeve or bearing 18 is formed integral with the frame 2 and is provided at its top with an annular recess or enlargement of its bore or opening to enable the wire to be drawn into it, as illustrated in the drawings, to facilitate twisting. A crank-handle 20 is detachably secured to the lower end of the shaft or spindle 17, and is adapted, when not in use, to be held by a key 21, which is substantially T-shaped, being composed of a stem

and a head located at the lower end of the stem and adapted to be passed through a slot 22 of the crank-handle and to be turned transversely thereof to prevent the handle from accidentally swinging under the rack-bar and getting in the path of the handle 5 and interfering with the operation of the wire-stretcher. The stem of the key 21 is disposed vertically on the casing or frame 2, and is arranged in a perforation of a lug 23, and is adapted to be raised and lowered, as desired.

The wire-stretcher may also be employed for enabling two wires under high tension to be readily disconnected without injuring either of them by drawing the wires together and loosening them at their connected ends and enabling the operator to readily untwist or otherwise separate them.

It will be seen that the wire-stretcher is exceedingly simple and inexpensive in construction, that it is adapted to be readily operated for stretching a wire in fence construction or for connecting the terminals of a broken wire, and that it will enable a wire to be readily severed when desired.

It will also be apparent that the terminals of a broken wire may be readily twisted together, and thereby connected, and that the twisting device is exceedingly simple and may be readily arranged to prevent it from interfering with the operation of the main crank.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention, such as constructing the frame 2 of one or more pieces and the like.

What I claim is—

1. In a wire-stretcher, the combination of a sliding frame provided with parallel sides and having at one of its sides a wire-receiving notch, a rack-bar arranged within the frame

between the sides thereof and provided at its upper edge with teeth, gearing mounted on the sliding frame and meshing with the rack-bar, a pawl arranged between the sides of the frame, pivoted at one end to the same and having its other end engaging the rack-bar, said pawl being provided at a point intermediate of its ends with a cutting edge cooperating with the wire-receiving notch, and a handle 11, projecting horizontally from the pawl at a point intermediate thereof and located at the top of the casing substantially as described.

2. The combination of a wire-stretcher provided with a sleeve or bearing, a shaft arranged in the sleeve or bearing capable of a limited longitudinal movement therein and provided with a hook for engaging the two portions of a wire to be connected, a crank-handle for rotating the shaft to twist the wire, and a locking device for preventing the shaft from rotating, substantially as described.

3. In a wire-stretcher, the combination of a rack-bar, a sliding frame mounted thereon and provided with a sleeve or bearing, a gear-wheel mounted on the frame and meshing with the rack-bar, a crank-handle 5 connected with the gear-wheel, a shaft arranged in the sleeve or bearing and provided with a hook for engaging the two portions of a wire to be connected, the crank-handle 20 arranged on the shaft and provided with a slot, and the substantially T-shaped key loosely connected with the frame and arranged to engage the slot of the crank-handle 20, substantially as described.

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

WILLIAM I. MORROW.

Witnesses:

S. H. ADAMS,

J. R. WILLIAMSON.