Jan. 30, 1934. F. R. RICHARDS ET AL 1,945,075

WIRE STRETCHER

Original Filed Dec. 21, 1929

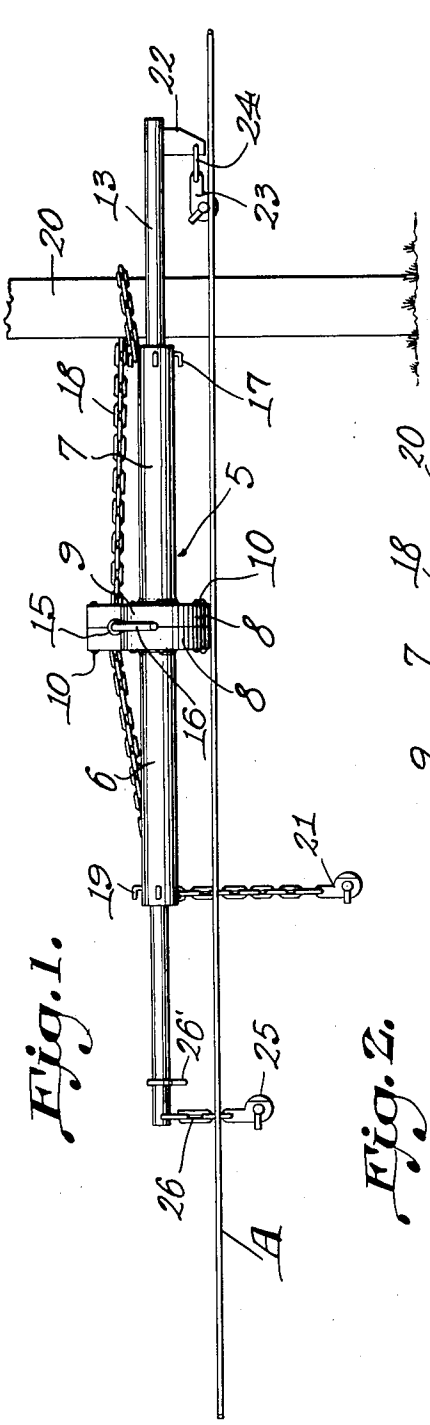


Fig. 1.

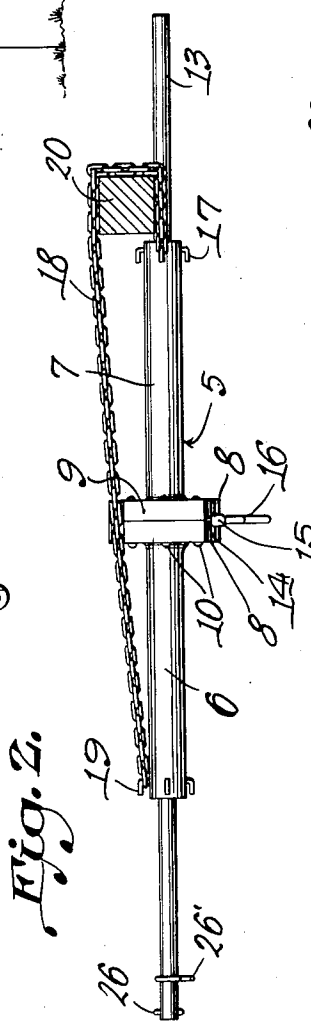


Fig. 2.

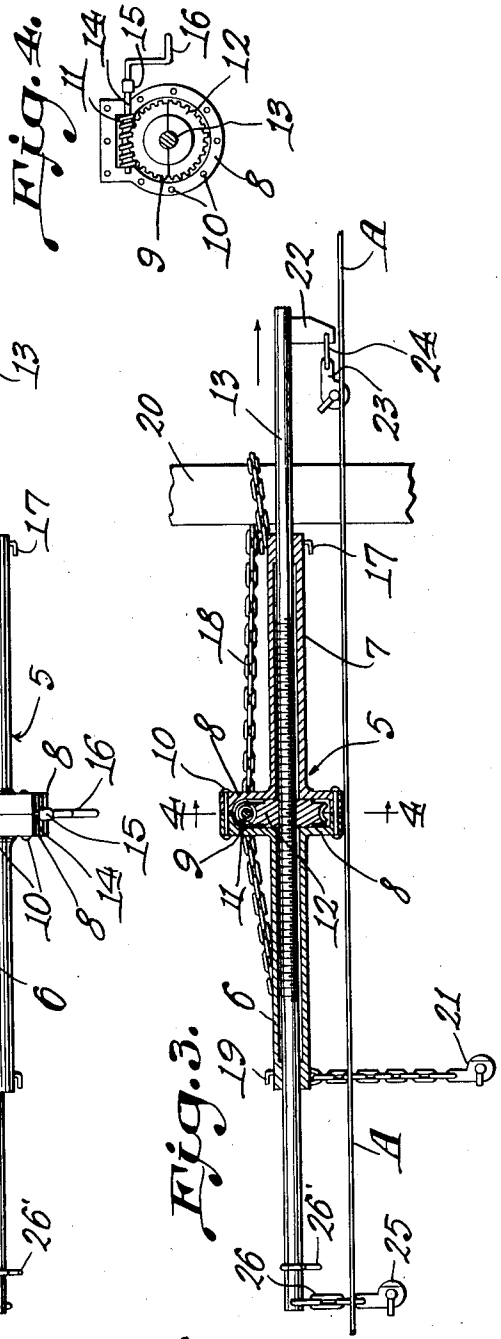


Fig. 3.

Fig. 4.

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WIRE STRETCHER

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Application December 21, 1929, Serial No. 415,744
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2 Claims. (Cl. 254—67)

This invention relates to wire stretchers, and more particularly to wire stretchers especially designed for use in building wire fences, the primary object of the invention being to provide a wire stretcher wherein the free end of the wire may be carried past the post to which it is to be secured, and held in such position for stapling.

An important object of the invention is to provide an operating means for operating the draw bar of the wire stretcher, which operating means is of a construction to permit the operation of the draw bar with little exertion on the part of the operator.

A further object of the invention is to provide wire clamps at both ends of the body portion of the stretcher, so that the strain on the wire under operation, will be distributed throughout the length of the wire, reducing the possibilities of breaking the wire, to the minimum.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

Referring to the drawing:

Figure 1 is an elevational view illustrating a wire stretcher constructed in accordance with the invention.

Figure 2 is a plan view thereof.

Figure 3 is a longitudinal sectional view through the stretcher.

Figure 4 is a sectional view taken on line 4—4 of Figure 3.

Referring to the drawing in detail, the body portion of the stretcher is indicated generally by the reference character 5 and comprises sections 6 and 7 respectively, each section having a flange 8 formed at its inner end, which flanges of the sections, when brought together provide a gear housing 9. Bolts 10 connect the flanges to secure the sections together.

The gear housing is formed with an offset portion in which the worm gear 11 operates, the worm gear 11 being provided to transmit motion to the pinion 12 that operates over the threaded portion of the draw-bar 13 which extends through the body portion 5, the ends thereof moving through bearings at the ends of the body portion 5 so that lateral movement of the draw-bar will be prevented.

Pinion 12 is formed with a threaded opening to cooperate with the threads of the draw-bar 13 so that when the pinion 12 is rotated by the worm 11, the draw-bar 13 will be fed through the body portion 5, according to the direction of rotation of the pinion 12. It is of course understood that the worm 11 is mounted on the shaft 14 that in turn is mounted within the offset portion of the gear housing, the shaft being provided with a squared end to receive the socket 15 at one end of the crank handle 16.

Formed at one end of the body portion 5, are hooks 17 over which the end link of the chain 18 may be positioned to secure the chain to the body portion, the opposite end of the body portion being provided with a plurality of hooks 19 to be hooked into one of the links of the chain 18 adjacent to the opposite end of the chain, to provide a loop in the chain to be positioned around the fence post which in the present showing is indicated by the reference character 20.

Positioned on the free end of the chain 18, is a wire clamp 21 which may be moved to a position to clamp the wire, which is indicated at A, to hold the wire while the other wire grippers, forming a part of the invention are being positioned on the wire.

Extending downwardly from one end of the draw bar 13, is an arm 22 to which the wire clamp 23 or wire gripping member, is secured, there being provided a link 24 between the arm and wire clamp, to permit the wire clamp to be swung upwardly and readily positioned on the wire under operation.

At the opposite end of the draw-bar 13 is a wire clamp 25 which is connected to the draw-bar 13 by means of the chain 26 so that this wire clamp may be readily swung to a position to engage the wire and hold the wire.

In order that the wire may be supported and held against sagging prior to its being gripped by the wire clamps, a hook 26' is provided over which the wire may be hung.

In the use of the device the stretcher is placed adjacent to the fence post to which the wires are to be secured, and the chain is placed around the post in a manner as shown by the drawing, one of the links of the chain being positioned over a hook 19. The clamp 23 is now positioned on the wire and the shaft 14 is rotated to rotate the pinion 12 to feed the draw-bar in a position as indicated by the arrow in Figure 3 of the drawing,

whereupon the wire will be drawn taut and held at a point beyond the post, for stapling.

The wire clamp 25 may be used in conjunction with the clamp 23 so that the strain caused by the movement of the draw-bar 13, may be distributed throughout various points of the wire.

Wire clamp 21 may be used as a holding clamp, should it be desired to hold the wire while the clamp 23 is being adjusted.

We claim:

1. A wire stretcher comprising a body portion including a pair of tubular sections placed end to end, each section having a circular flange, means for securing the flanges together and providing a gear housing, a draw bar extended through the body portion and having a threaded section intermediate its ends, a gear having threads mounted on the threaded section of the draw bar, a worm gear extended into the gear housing and meshing with the gear to rotate the gear and feed the draw bar through the body portion, means for operating the worm, means for securing the device to a post, and means carried by the draw bar for gripping a wire to be stretched.

2. In a wire stretcher of the class described, the combination of a tubular body, a draw bar fitted within said body and extending through and beyond the ends thereof, said draw bar having a portion of its surface threaded, a gear housing attached to said body, a gear within said housing and mounted on the draw bar and provided with threads adapted to mesh with the threads of said draw bar, a worm gear meshing with the gear, means for rotating the same whereby the draw bar is fed through the body, means attached to the body for securing the device to a post, and means carried by the draw bar for gripping a wire to be stretched.

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