

951,963.

Patented Mar. 15, 1910.

2 SHEETS—SHEET 1.

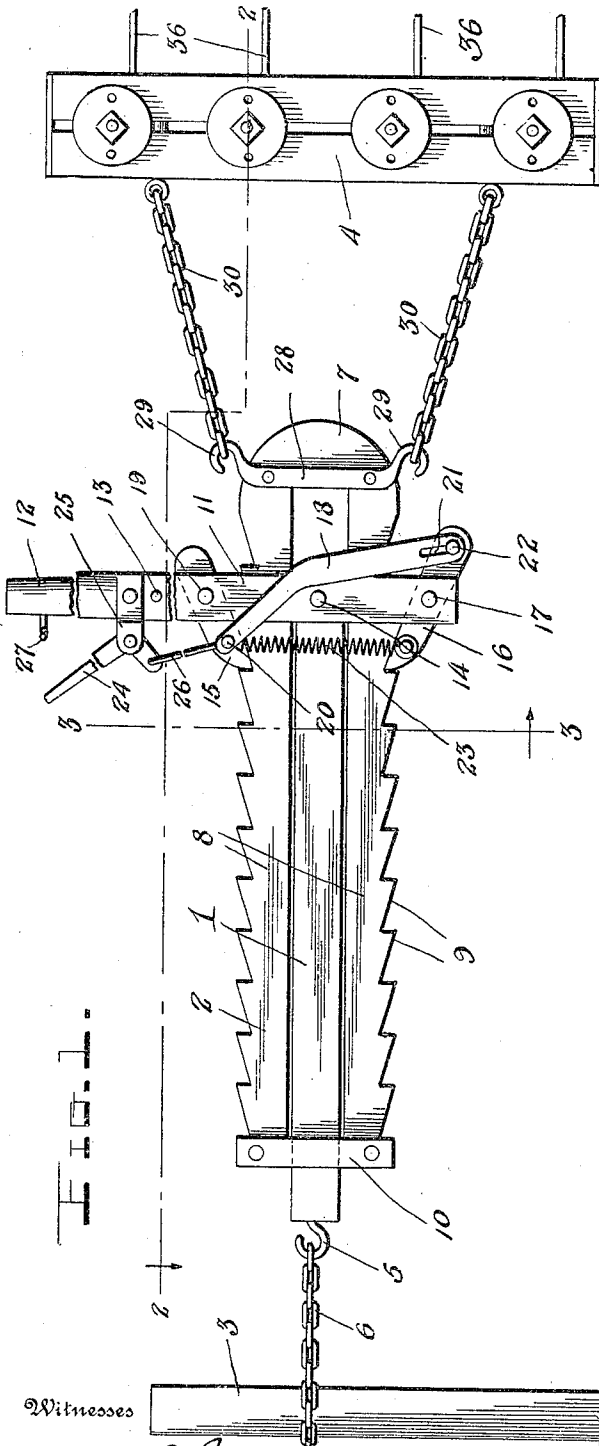


Fig. 1.

Witnesses

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E. M. Ricketts.

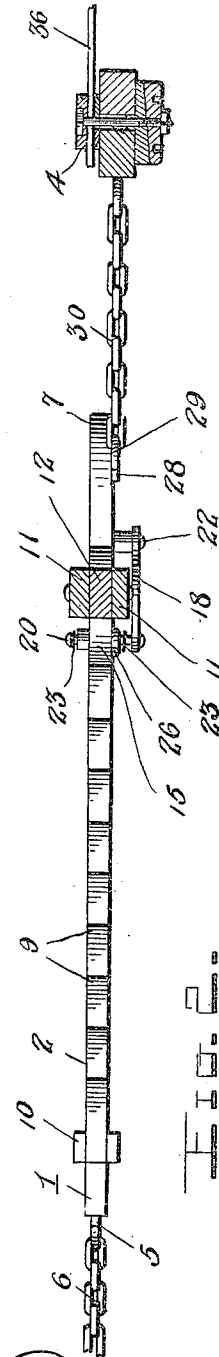


Fig. 2.

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WIRE STRETCHER.  
APPLICATION FILED MAY 11, 1909.

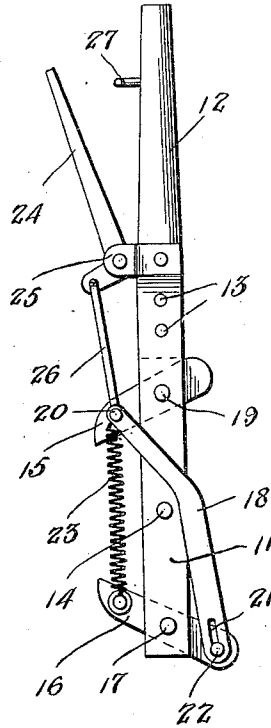
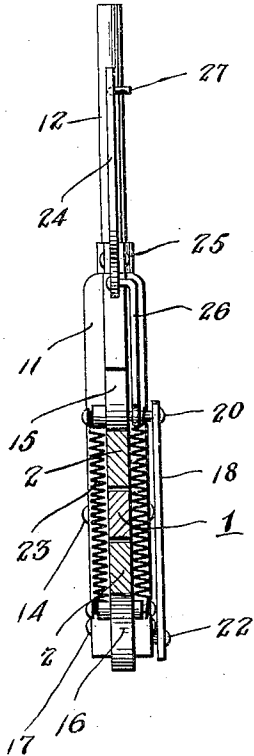
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2 SHEETS—SHEET 2.

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FIG. 3.

FIG. 4.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## WIRE-STRETCHER.

951,963.

Specification of Letters Patent. Patented Mar. 15, 1910.

Application filed May 11, 1909. Serial No. 495,286.

*To all whom it may concern:*

Be it known that I, EDWARD JOHN McCAIN, a citizen of the United States, residing at Sanford, in the county of Lee and State of North Carolina, have invented certain new and useful Improvements in Wire-Stretchers, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in wire stretchers and wire clamps.

The object of the invention is to provide an improved wire stretcher of the ratchet bar type which will be simple, strong, durable and comparatively inexpensive in construction, convenient in use and effective in operation.

A further object of the invention is to provide an improved wire clamp for use in connection with the stretcher.

With the above and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the invention showing it in use in stretching a wire fence; Fig. 2 is a horizontal section taken on the plane indicated by the line 2—2 in Fig. 1; Fig. 3 is a detail vertical section taken on the plane indicated by the line 3—3 in Fig. 1; Fig. 4 is a detail view of the lever and the parts which it carries.

The improved wire stretcher comprises two members 1, 2 which are slidably engaged with each other and one of which is adapted to be anchored to a fence post or other stationary object 3 and the other of which carries the improved clamp 4. The member 1 which will be termed the body member, is in the form of a rectangular bar and has one of its ends shaped to form a hook 5 with which is engaged an anchoring chain 6. The other member 2 is in the form of a frame adapted to slide upon the member 1 and preferably formed from a metal bar by bending the same upon itself at its center, as shown at 7, or into U-form to provide parallel bars or arms 8 to receive the body member between them and which have their outer edges notched to provide ratchet teeth 9. The members 1, 2 are held together and guided in their sliding movement with respect to each other by cross pieces 10 se-

cured upon the opposite sides of the free ends of the ratchet bars 8 and by the spaced plates 11 of an operating lever 12. The latter has its outer end shaped to provide a handle and its inner end is secured by bolts or similar fastenings 13 between the plates or bars 11, which latter are pivoted intermediate their ends at 14 to the opposite sides of the body member 1 adjacent the inner end of the latter. The pivot 14 forms a fulcrum for the lever which carries two pawls 15, 16 which engage and actuate the ratchet bars 8. The pawl 16 is pivoted intermediate its ends at 17 between the outer ends of the lever plates 11 and has one end shaped to engage the teeth 9 of one of the ratchet bars and its other end is connected by a link 18 to the other pawl 15, which latter is pivoted at one end, as shown at 19, between the inner portions of the lever plates 11 and has its free end shaped to engage the teeth of the other ratchet bars. The link 18 has one of its ends pivoted at 20 to the pawl 15 and its other end formed with a slot 21 which receives a pin 22 on the pawl 16 so that a loose connection is provided between the last mentioned pawl and the link. The pawls are actuated toward their ratchet bars by a coil spring 23 which connects them and they are retracted by means of a lever or bell crank 24 pivoted at its angle to bearing ears or brackets 25 upon the lever 12 and having its short arm connected by a link 26 to the pivot pin 20 on the pawl 15. It will be seen that when the other end or arm of the bell crank 24 is swung inwardly toward the lever 12 the pawl 15 will be moved away from its ratchet bar and owing to the link connection 18 between said pawl and the other pawl 16, the latter will be simultaneously disengaged from its ratchet bar. The pawls may be retained in their retracted position by springing the handle or free end of the bell crank 24 under a keeper hook 27 provided on the lever 12. The closed end 7 of the sliding frame or member 2 is reinforced by a cross plate or strap 28 the ends of which are shaped to provide two hooks 29 for the engagement of adjusting chains 30 carried by the clamp 4.

The clamp 4 may be of any form and construction but as illustrated it is especially adapted for engaging a plurality of fence wires, or wire fencing, indicated at 36.

In use, the body member 1 is anchored to a post or other support by means of the chain 6 and the clamp 4, after being attached to the wire fencing 36, has its chains 5 30 engaged with the hooks 29 on the sliding ratchet frame or member 2. When the pawls 15, 16 are engaged with the ratchet teeth 9 of the bars 8 and the lever 12 is oscillated they will successively move the 10 frame or member 2 longitudinally upon the member 1 toward the anchored end of the latter and thereby draw or stretch the wire fabric 36.

From the foregoing it will be seen that 15 the invention provides an exceedingly simple, strong and durable stretcher which may be produced at a comparatively small cost and which will be convenient in use and powerful and effective in operation.

20 Having thus described the invention what is claimed is:

1. A wire stretcher comprising two members slidably engaged, one member having ratchet bars, a lever pivoted intermediate its 25 ends to the other member, pawls carried by said lever for engagement with said ratchet bars, one of said pawls being pivoted intermediate its ends, a coil spring between the

operative ends of said pawls, a link pivoted to one of said pawls and having a slot and 30 pin connection with one end of the pawl which is pivoted intermediate its ends, a bell crank upon the lever, and a link connecting said bell crank to one of said pawls.

2. A wire stretcher comprising two mem- 35 bers slidably engaged, one member having ratchet bars, a lever pivoted intermediate its ends to the other member, pawls carried by said lever for engagement with said ratchet bars, one of said pawls being pivoted 40 intermediate its ends, a coil spring between the operative ends of said pawls, a link pivoted to one of said pawls and having a slot and pin connection with one end of the pawl 45 which is pivoted intermediate its ends, a bell crank upon the lever, a link connecting said bell crank to one of said pawls and a keeper upon the lever for engagement by said bell crank.

In testimony whereof I hereunto affix my 50 signature in the presence of two witnesses.

EDWARD JOHN McCAIN.

Witnesses:

CLARA WOMBLE,  
W. H. PROCTOR.