

No. 833,324.

PATENTED OCT. 16, 1906.

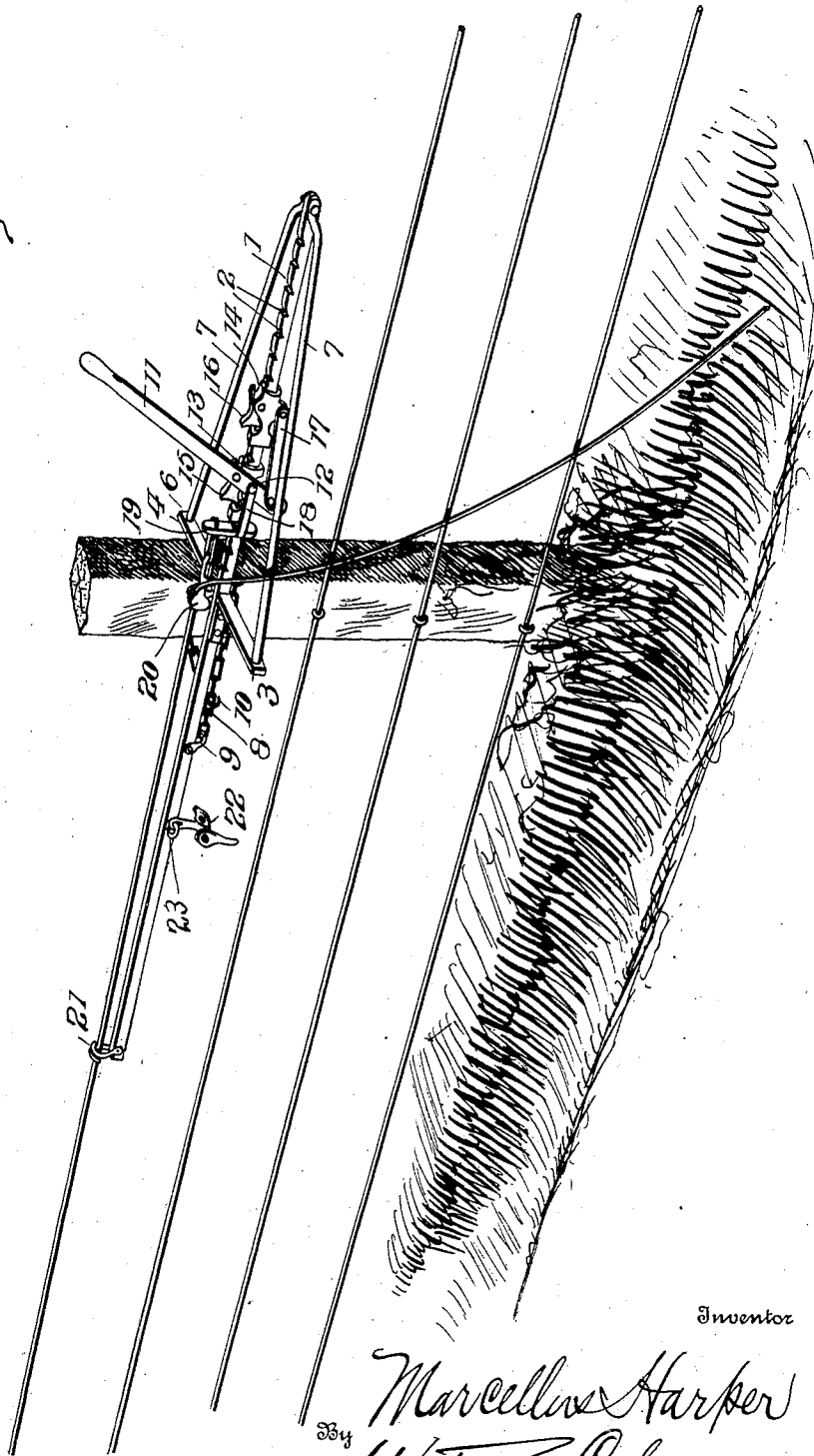
M. HARPER.

WIRE STRETCHER.

APPLICATION FILED APR. 20, 1906.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 2.

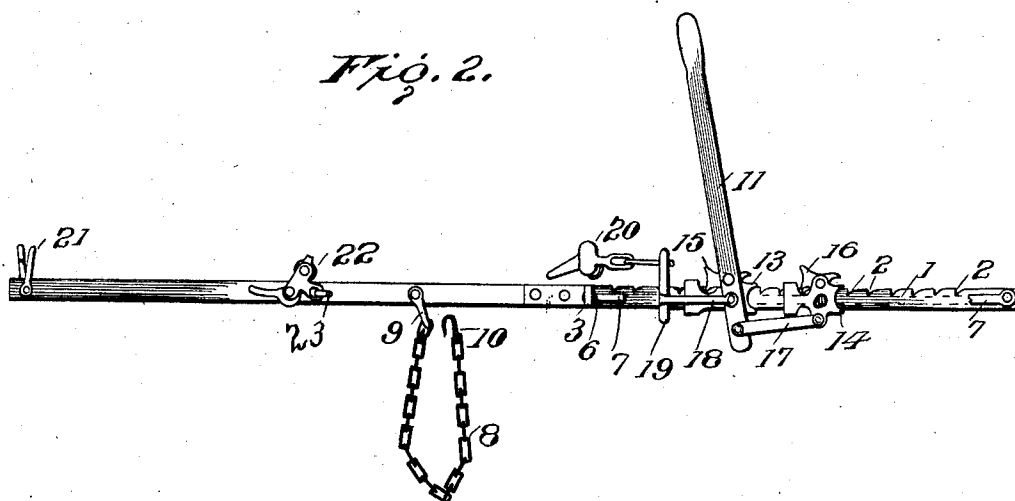


Fig. 3.

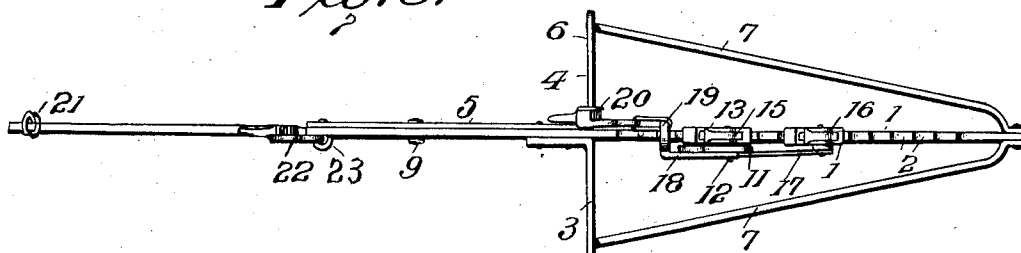
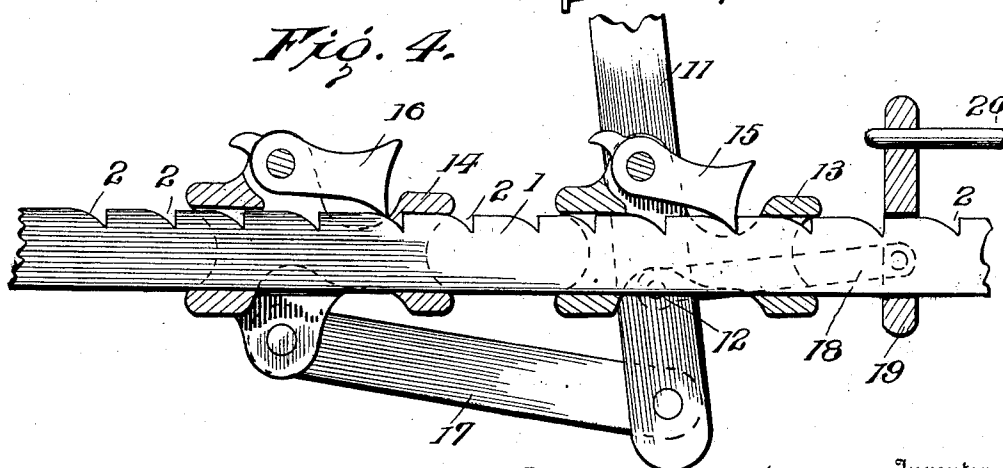


Fig. 4.



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UNITED STATES PATENT OFFICE.

MARCELLUS HARPER, OF CAINESVILLE, MISSOURI.

WIRE-STRETCHER.

No. 833,324.

Specification of Letters Patent.

Patented Oct. 16, 1906.

Application filed April 20, 1906. Serial No. 312,873.

To all whom it may concern:

Be it known that I, MARCELLUS HARPER, a citizen of the United States, residing at Cainesville, in the county of Harrison and State of Missouri, have invented certain new and useful Improvements in Wire-Stretchers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in wire-stretchers of the ratchet-bar type used on fence-posts for stretching fence-wires.

The object of the invention is to provide a device of this character which will be simple, strong and durable in construction, comparatively inexpensive to produce, and very efficient and powerful in operation.

Further objects and advantages, as well as the structural features by means of which they are attained, will be made clear by an examination of the following specification, taken in connection with the accompanying drawings, in which similar reference characters denote corresponding parts throughout the several views, and in which—

Figure 1 is a perspective view of the wire-stretcher, showing it in use on a fence-post. Fig. 2 is a side elevation of the device. Fig. 3 is a top plan view of the same, and Fig. 4 is a detail longitudinal sectional view showing the operation of the two pawls or dogs upon the ratchet-bar.

The wire-stretcher comprises a ratchet-bar 1, which is straight and has formed upon its upper edge adjacent to one of its ends ratchet-teeth 2. Secured upon its opposite sides adjacent to its center are right-angular brackets 3 and 4, which are adapted to be placed against a fence-post when the device is in use, as seen in Fig. 1. The longitudinal arm or end 5 of the bracket 4 is comparatively long, so as to strengthen the bar 1, and the transverse or lateral arms 6 of both of the brackets are strengthened by braces 7, which latter also serve as handles. The ratchet-bar is secured upon the post by a chain or similar flexible connection 8, which has one of its ends attached to a clip 9 upon the bar 1, and upon its other end is a hook 10. The chain 8 is of sufficient length to be passed around the post, and it is secured by engaging the hook 10 with one of its links or with any other portion of the device.

The stretching of the fence-wire is effected by rocking a hand-lever 11, which is pivoted at 12 upon a sliding pawl-carrier 13. The

latter and a second pawl-carrier 14 slide upon the ratchet-bar 1, and upon them are mounted pivoted pawls or dogs 15 and 16, which engage the notches between the teeth 2 in said bar. The carrier or carriage 14 is connected by a link 17 to the lower end of the lever 11, and upon the latter between the pivot of the link 17 and the pivot 12 is a link 18, which connects said lever to a slide 19, mounted upon the ratchet-bar. Said slide is connected by a link to a wire-clamp 20, which is of the usual form, comprising a fixed jaw and a pivoted cam-jaw. The wire to be stretched is engaged by this clamp 20 after being passed through a guide 21, provided upon the forward end of the ratchet-bar and preferably consisting of two oppositely-projecting overlapping hooks mounted on opposite sides of said bar, as shown.

In order to hold the stretched wire while the stretching mechanism is shifted from the rear to the forward end of the toothed portion of the ratchet-bar for the purpose of permitting the clamp 20 to take a fresh hold upon the wire, I provide a clamp 22 upon said bar adjacent to its forward end. This clamp 22 consists of two pivoted cam-jaws mounted upon a plate which is loosely connected to an eye 23 upon the bar 1, as shown.

The operation of the device is as follows: After it has been secured upon the post by passing the chain around the latter, as shown in Fig. 1, the wire to be stretched is engaged with the guide 21 and the clamp 20. The lever 11 is then rocked or oscillated. As it is swung to the right from its position shown in Fig. 4 the pawl 15 will prevent it from moving longitudinally on the ratchet-bar, and the link 18 will draw the slide 19, and hence the clamp 20, rearwardly to stretch the wire. This movement of the lever also slides the carrier 14 and its pawl 16 rearwardly to cause the latter to engage the next tooth. The lever is then swung in the opposite direction, whereon its fulcrum changes from the pivot 12 to the pivot of the link 17, so that the pawl-carrier 13 will slide rearwardly to cause its pawl 15 to engage the next tooth, and the slide 19 will also be moved rearwardly to further stretch the wire. This operation is repeated as the lever is oscillated until the stretching mechanism moves to the rear end of the ratchet-bar. The clamp 22 is then engaged with the wire to hold it while the stretching mechanism is returned to the forward or inner end of the

toothed portion of the bar 1, so that the clamp 20 may take a fresh grip upon the wire and the stretching of the latter thus continued. It will be noted that the wire is stretched upon each stroke or movement of the lever, and hence the stretching will be both rapid and powerful. The device is of simple, strong, and durable construction and may be manufactured at a comparatively small cost. It is easy and convenient to handle and may be used upon any fence-post or similar support.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention as defined by the appended claims.

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

1. A wire-stretcher comprising a ratchet-bar, the open sleeves 13, 14 independently slidable longitudinally on said bar, the pawls 15, 16 pivoted in said sleeves for engagement with the teeth of said bar, the lever 11 carried by the sleeve 13 and mounted intermediate its ends on the pivot of the pawl 15, the link 17 connecting said lever and the sleeve 14, the plate 19 apertured to receive said bar and slidable longitudinally upon the latter, the link 18 connecting said plate 19 and said lever 11, and a wire-engaging device carried by said plate 19, substantially as shown and for the purposes set forth.

2. A wire-stretcher comprising a ratchet-bar, a wire-guide at one end thereof, angle-metal brackets secured upon opposite faces of said bar intermediate its ends and having their transversely-extending post-engaging arms in alinement, diagonal braces on opposite sides of said bar connecting the outer ends of said arms and the opposite end of said bar, a flexible connection for holding said bar and

one of said arms in engagement with a post, a wire-engaging device carried by said bar, and a wire-stretching mechanism mounted upon the toothed portion of said bar between said diagonal braces, substantially as shown and described.

3. A wire-stretcher comprising a ratchet-bar, a wire-guide at one end thereof, angle-metal brackets secured upon opposite faces of said bar intermediate its ends and having their transversely-extending post-engaging arms in alinement, diagonal braces on opposite sides of said bar connecting the outer ends of said arms and the opposite end of said bar, a flexible connection for holding said bar and one of said arms in engagement with a post, a wire-engaging device carried by said bar, a wire-stretching mechanism mounted upon the toothed portion of said bar between said diagonal braces, said mechanism comprising pawl-carriers engaged with said bar for independent longitudinal sliding movement thereon, pawls pivoted upon said carriers to coact with said bar, a lever carried by one of said carriers and mounted intermediate its ends upon the pivot of the pawl of said carrier, a link connecting the other of said pawl-carriers and one end of said lever, a plate apertured to receive said bar and slidable thereon, a wire-engaging device carried by said plate, and a link pivoted at one end to said sliding plate and at its other end to said lever at a point intermediate the pivot of said lever and the pivot of the first-mentioned link on said lever, substantially as shown and for the purposes set forth.

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

MARCELLUS HARPER.

Witnesses:

W. PELIKAN,
W. A. LEWIS.