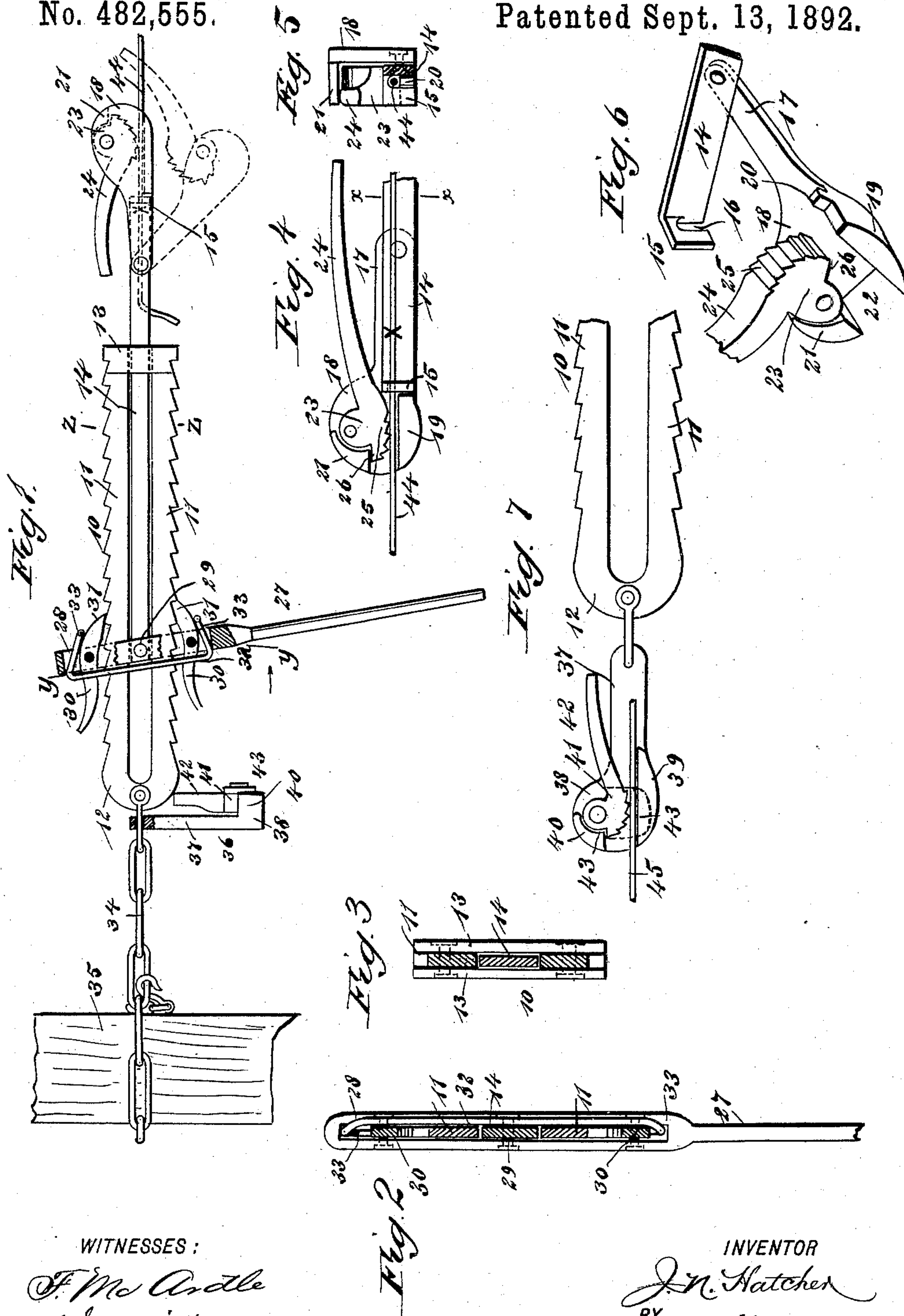


(No Model.)

J. N. HATCHER.
WIRE STRETCHER.

No. 482,555.

Patented Sept. 13, 1892.



WITNESSES:

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JUDSON N. HATCHER, OF MONTGOMERY, MISSOURI, ASSIGNOR TO HIMSELF
AND ROBERT J. WILSON, OF SAME PLACE.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 482,555, dated September 13, 1892.

Application filed March 30, 1892. Serial No. 427,091. (No model.)

To all whom it may concern:

Be it known that I, JUDSON N. HATCHER, of Montgomery, in the county of Montgomery and State of Missouri, have invented a new and Improved Wire-Stretcher, of which the following is a full, clear, and exact description.

My invention relates to improvements in wire-stretchers such as are adapted for use in stretching fence-wire; and the object of my invention is to produce a cheap, strong, and effective machine of the character described which may be quickly and securely fastened to a wire, which may be rapidly and easily operated so as to stretch the wire to the desired tension, and which has no side draft, thus enabling the entire power used in operating it to be applied directly to the wire.

To this end my invention consists in certain features of construction and combinations of parts, as will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation, partly in section, of the wire-stretcher embodying my invention, showing it in position for use. Fig. 2 is a cross-section on the line *yy* in Fig. 1. Fig. 3 is a cross-section on the line *zz* in Fig. 1. Fig. 4 is a detail side elevation of the wire-clamp, showing it as secured to a wire. Fig. 5 is a cross-section on the line *xx* in Fig. 4. Fig. 6 is a broken detail perspective view of the wire-clamp, and Fig. 7 is a detail side elevation of the wire-clamp used for splicing an old wire or when the machine is used to stretch a wire in both directions.

The machine is provided with a double ratchet-bar 10, consisting of two parallel toothed members 11, united at one end, as shown, at 12, and connected together at the opposite end by the cross-head 13. A draw-bar 14 is held to move longitudinally between the members 11, the bar extending outward through the cross-heads 13, as shown in Fig. 3, and terminating at its outer end in a right-angled lateral bend 15, having a notch 16 therein, which notch is adapted to receive the

wire and is also adapted to engage a lug on the wire-clamp, as described below.

Pivoted to one side of the draw-bar near its free end is the shank 17 of the wire-clamp, the free end of the shank terminating in a flat head 18, which has a laterally-extending fixed jaw 19 near the under side, this jaw having a flat top surface and having at its inner end a lug 20, which is adapted to enter the notch 16 of the draw-bar, and the draw-bar thus serves to brace the clamp. On the upper side of the head 18 and projecting parallel with the jaw 19 is a lug 21, and a space 22 is thus formed between the lug and jaw, through which the wire may extend.

A cam 23 is pivoted on the inner side of the head 18 and immediately behind the lug 21, this cam having a lever 24 secured to it and serving as a handle, and by means of this lever the cam may be operated. The cam has its lower face toothed, as shown at 25, so that its teeth will impinge upon a wire and bind it against the fixed jaw 19, and it will be seen that as the wire is drawn it will serve to tighten the clamp or cam and the wire will be held firmly in place. The cam has at its front end a shoulder 26, adapted to strike the lug 21, by which the strain when the cam is used will be taken from its pivot. The wire is made to extend through the notch 16 also, and thus the notch by engaging the barb of a wire will prevent it from slipping into the clamp.

A lever 27 is used for working the machine and tightening the wire, this lever having an enlarged end or head 28, which is slotted longitudinally so that the lever may ride upon the double ratchet-bar 10. The lever is pivoted to the inner end of the draw-bar 14, as shown at 29 in Fig. 1, and in the upper and lower portions of the head 28 are pawls 30, which are pivoted to the lever and which have their front ends 31 arranged to engage the teeth on the members 11. The rear ends of the pawls diverge and by pressing the rear ends together the front ends may be freed from the ratchet-bar, so that the lever may be moved freely upon it. A rod 32 extends on one side of the ratchet-bar and parallel with the head 28, the ends of the rod being bent to form springs 33, which by pressing

upon the pawls 31 hold them in engagement with the ratchet-bar.

A chain 34 is pivoted to the rear end of the ratchet-bar 10 and is adapted to be secured to a post 35 or other support. The first link of the chain has pivoted to it a clamp 36, which may be secured to a wire when necessary. The clamp 36 has a shank 37 connected with the chain, this terminating at its free end in a head 38, on which is a laterally-extending fixed jaw 39, substantially like the jaw 19 above described, and above the jaw 39 is a lug 40. A toothed cam 41 is pivoted on the head, so that the teeth will swing down on the jaw 39, this cam having a handle 42 and a shoulder 43 to engage the under side of the lug 40.

When the wire-stretcher is used to stretch a new wire, the chain 34 is secured to the post 35, the draw-bar 14 is pulled out, the lever 27 is advanced to the front end of the ratchet-bar 10, and the wire 44 is made to extend through the notch 16 of the ratchet-bar and above the jaw 19 of the wire-clamp, the clamp being swung up so as to lie nearly parallel with the draw-bar, as in Fig. 4, and the wire is fastened in place by pressing the cam 23 upon it, the wire being held securely between the toothed portion of the cam and the jaw 19. The lever 27 is then worked backward and forward, and the pawls 31 will alternately engage the members 11 of the ratchet-bar, and the lever will be moved toward the rear end of the bar by a step-by-step movement, and the draw-bar will thus be drawn into the ratchet-bar and the wire tightened. When a wire is also to be tightened at the opposite end of the bar, the clamp 36 is secured to the wire 45 and the machine operated as above.

Having thus fully described my invention,

I claim as new and desire to secure by Letters Patent—

1. A wire-stretcher comprising a double ratchet-bar having parallel members toothed on their outer edges, a draw-bar held to slide in the ratchet-bar and having its outer end bent and notched, a wire-clamp pivoted to the outer end of the ratchet-bar, the clamp having a movable and fixed jaw, the latter of which is provided with a lug to enter the notch of the draw-bar, a lever mounted loosely on the ratchet-bar and pivoted to the draw-bar, spring-pressed pawls pivoted in the lever on opposite sides of the ratchet-bar, and a fastening device to secure the ratchet-bar to a support, substantially as described.

2. In a wire-stretcher, the combination, with the draw-bar having a notched end and a lever mechanism for operating the same, of the wire-clamp pivoted on the draw-bar, the clamp having a fixed jaw on one side with a lug to enter the notch of the draw-bar, and a cam-lever pivoted adjacent to the jaw and adapted to impinge thereon, substantially as described.

3. In a wire-stretcher, the combination, with the double ratchet-bar having teeth upon its outer edges, the draw-bar held to slide therein, and the recessed lever mounted on the ratchet-bar and pivoted to the draw-bar, of pawls pivoted in the lever on opposite sides of the draw-bar and adapted to engage the teeth of the latter, the said pawls having rearwardly-extending ends which serve as handles, and the spring-rod extending transversely across the ratchet-bar and draw-bar and having its ends bent and held to press upon the pawls, substantially as described.

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Witnesses:

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