No. 651,890. Patented June 19, 1900.

F. M. RUSSELL.

WIRE STRETCHER.

(Application filed Nov. 22, 1897. Renewed Jan. 25, 1900.)

(No Model.)

Fig. 1.

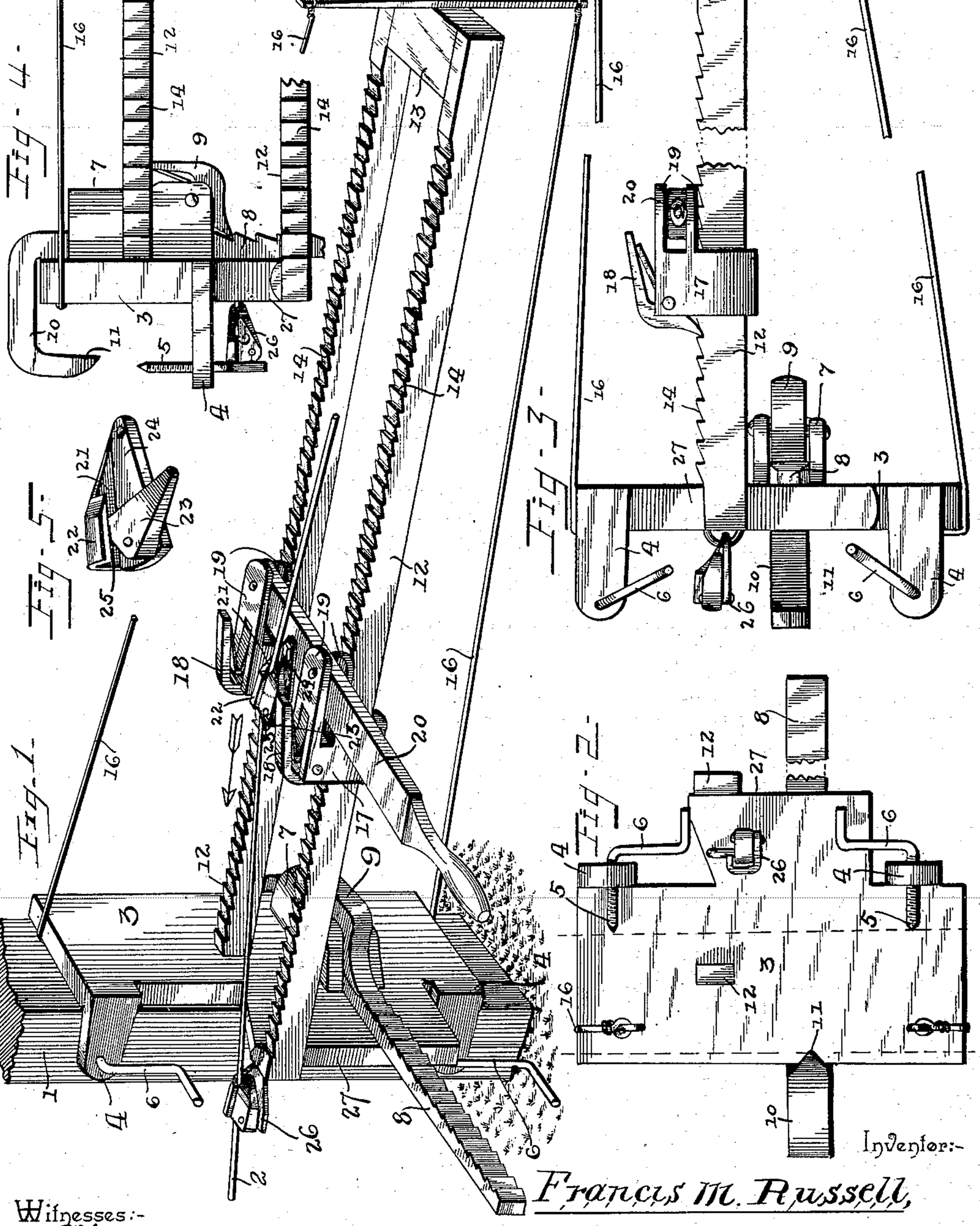

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

Witnesses:-
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UNITED STATES PATENT OFFICE.

FRANCIS M. RUSSELL, OF SHINN, OHIO.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 651,890, dated June 19, 1900.

Application filed November 22, 1897. Renewed January 25, 1900. Serial No. 2,773. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS M. RUSSELL, a citizen of the United States, residing at Shinn, in the county of Morgan and State of Ohio, have invented a new and useful Wire-Stretcher, of which the following is a specification.

This invention relates to wire-stretchers, its object being to provide a simple and efficient device of this character adapted to be supported on posts of varying sizes, to which the wires are designed to be secured.

The invention consists of the several details of construction, combination, and arrangement of parts, as will be hereinafter fully described, and the novel features of which will be carefully defined in the subjoined claims.

In the drawings, Figure 1 is a perspective view of a wire-stretcher made in accordance with my invention secured in position upon a fence-post. Fig. 2 is an end view of the same. Fig. 3 is a side elevation partly broken away. Fig. 4 is a sectional plan view of a portion of the device. Fig. 5 is a perspective view of the wire-clamp detached.

Similar reference-numerals indicate similar parts in the several figures.

1 indicates a fence-post which may be of any usual or preferred construction, and 2 indicates a fence-wire.

3 indicates a vertically-disposed supporting-plate which carries all the operative parts of the device and is adapted to seat against one side of the fence-post, as clearly indicated in Fig. 1. 4 indicates arms secured to the front edge of said plate near its upper and lower ends and projecting at a right angle thereto. A threaded locking-pin 5 is supported in a threaded opening in each of the arms 4, and each pin is provided with a crank-handle 6 for conveniently turning it. To the outer face of the plate 3 a supporting-guide 7 is secured and is provided with a horizontally-disposed rectangular opening, in which the ratchet-bar 8 is slidably supported. A spring-actuated pawl 9 is pivoted on the guide 7 to normally engage the teeth of the bar 8 and lock it against longitudinal movement in one direction, but permit it to move freely in the opposite direction. One end of the bar is bent at a right angle to form a locking-arm 10, the end of which is preferably hook-shaped, as indicated at 11. The hook 11 opposes the locking-pins 5 and is intended to engage the rear face of the post, while the pins engage the front face, and thus securely clamp the supporting-plate to the post, and the plate will lie vertically against one of the side faces, as will be readily understood. As the bar 8 and pins 5 can be adjusted, the supporting-plate can be secured to posts of varying dimensions.

A pair of spaced parallel horizontal bars 12 are firmly secured at one end to the supporting-plate 3 and at their other ends to a spacing-block 13, and these bars are each provided with a series of teeth 14 on their upper faces.

15 indicates a vertically-disposed rod secured intermediate to its ends to the spacing-block 13 and from the opposite ends of which braces 16 extend and are firmly secured to the supporting-plate at its upper and lower ends, respectively.

17 indicates heads mounted to slide on the bars 12, and each is provided with a spring-actuated pivoted pawl 18, which will normally engage the teeth of its respective bar and lock the head against movement on the bar toward the supporting-plate. Each head is provided with a pair of horizontally-disposed spaced ears, (indicated by 19,) between which the operating-lever 20 is pivotally supported. A wire-clamp is pivotally connected to the lever intermediate to the heads 17, and the fixed jaw of the clamp consists of an angle-plate the vertical member 21 of which has an overhanging lip 22. The movable jaw 23 is substantially in the form of a right-angled triangle pivoted at its right-angled corner on the horizontal member 24 of the fixed jaw in such manner that its other base-corner 25 will swing into close proximity to the vertical member of the fixed jaw below the overhanging lip. When the wire is inserted between the corner 25 of the movable jaw and the vertical member of the fixed jaw, the greater the strain on the wire in the direction of the arrow in Fig. 1 the more tightly the clamp will hold the wire. At the same time the clamp will automatically op-

erate to release its grip on the wire when the sliding heads 17 are moved toward the supporting-plate. Another clamp 26, similar to the one described, is pivotally connected to the projection 27, extending forwardly from the front edge of the supporting-plate, and the clamp 26 will be in substantially the same horizontal plane as the clamp of the lever and is intended to hold the wire after the slack has been partly taken up by the stretching devices if it should be necessary to move the latter back toward the supporting-plate in order to get a fresh hold on the wire to complete the stretching. The clamp 26 will also hold the stretched wire should it be accidentally released by the clamp on the lever, but will permit the wire to pass freely through it while being stretched by the stretching devices.

In operation the supporting-plate will be firmly secured to a post and the wire passed through the clamp 26 and also the clamp on the lever, when by operating the lever the sliding heads will alternately act as fulcrums upon which the lever will rock and be alternately advanced step by step along the bars 12 until the wire is sufficiently stretched, and it is obvious that should the wire become accidentally detached from the clamp on the lever the clamp 26 will hold it and prevent it from springing back.

It is obvious that by the use of a stretcher made in accordance with my invention the wire can be stretched and secured to the last post of the series, and I am therefore enabled to dispense with an additional post, which is frequently necessary in order to stretch the wire and secure it to the last post in the series.

It will be understood that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, I claim—

1. In a wire-stretcher, the combination with a vertically-disposed supporting-plate to abut against one side of a fence-post and adjustable devices to clamp the plate to the post, of a pair of spaced, parallel toothed bars extending horizontally from said plate, sliding heads on said bars, a lever pivotally connected to both heads, a locking-pawl on each head to engage the teeth of its supporting-bar, and a wire-clamp connected to said lever intermediate to the heads, substantially as described.

2. In a wire-stretcher, the combination with a vertically-disposed supporting-plate to abut against one side of a post, and adjustable devices to clamp the plate to the post, of a pair of spaced, parallel toothed bars extending horizontally from said plate, a spacing-block to which the outer ends of the bars are secured, braces extending from said block to the supporting-plate, sliding heads on said bars, a lever pivotally connected to both heads, a locking-pawl on each head to engage the teeth of its supporting-bar, and a wire-clamp connected to said lever intermediate to the heads, substantially as described.

3. In a wire-stretcher, the combination with a vertically-disposed supporting-plate to abut against one side of a post, and adjustable devices to clamp the plate to the post, of a pair of spaced, parallel toothed bars extending horizontally from said plate, sliding heads on said bars, a lever pivotally connected to both heads and adapted to move them alternately step by step along their respective bars, a wire-clamp connected to said lever intermediate to the heads, and a wire-clamp connected to the supporting-plate to hold the wire when released by the clamp on the lever, substantially as described.

4. In a wire-stretcher, the combination with a vertically-disposed supporting-plate to abut against the side of a post, of a ratchet-bar slidably supported in a guide secured to the plate and having an arm extending at a right angle thereto to engage one side of the post, arms projecting from the edge of the plate at a right angle thereto, threaded locking-pins secured in the said arms to oppose the arm on the ratchet-bar, a spring-actuated pawl pivoted in said guide to engage the teeth of the ratchet-bar, and wire-stretching devices supported by said plate, substantially as described.

5. In a wire-stretcher, the combination of a vertically-disposed supporting-plate, means to lock it on a post, spaced, parallel toothed bars supported by the said plate and extending horizontally therefrom, sliding heads supported on said bars, means to adjustably lock the heads on the bar, a lever pivotally connected to both heads and a wire-clamp pivotally connected to the lever intermediate to the heads, said clamp comprising a fixed jaw formed of an angle-plate having an overhanging lip on its vertical member, and a movable jaw in the form of a right-angled triangle pivoted at its right angle on the horizontal member of the fixed jaw to permit its other base-angle to swing into close proximity to the vertical member of the fixed jaw, substantially as described.

6. In a wire-stretcher, the combination of a pair of parallel toothed bars designed to be connected with a post, sliding heads mounted on the bars and engaging the teeth, and an operating-lever pivotally connected to both of the heads and designed to be connected with a fence-wire, substantially as described.

7. In a wire-stretcher, the combination of a pair of parallel toothed bars designed to be connected with a fence-post, sliding heads mounted on the bars and provided with pawls engaging the teeth thereof, and an operating-lever pivoted to each of the heads and designed to be connected with a fence-wire, substantially as described.

8. In a wire-stretcher, the combination of a supporting-plate provided with an arm ar-

ranged at one side of a fence-post, a ratchet-bar slidingly mounted on the plate and having an arm engaging the opposite side, a pawl mounted on the supporting-plate and engaging the teeth of the ratchet-bar, and wire-stretching devices, 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.

FRANCIS M. RUSSELL.

Witnesses:
GEO. LANE,
J. A. WILSON.