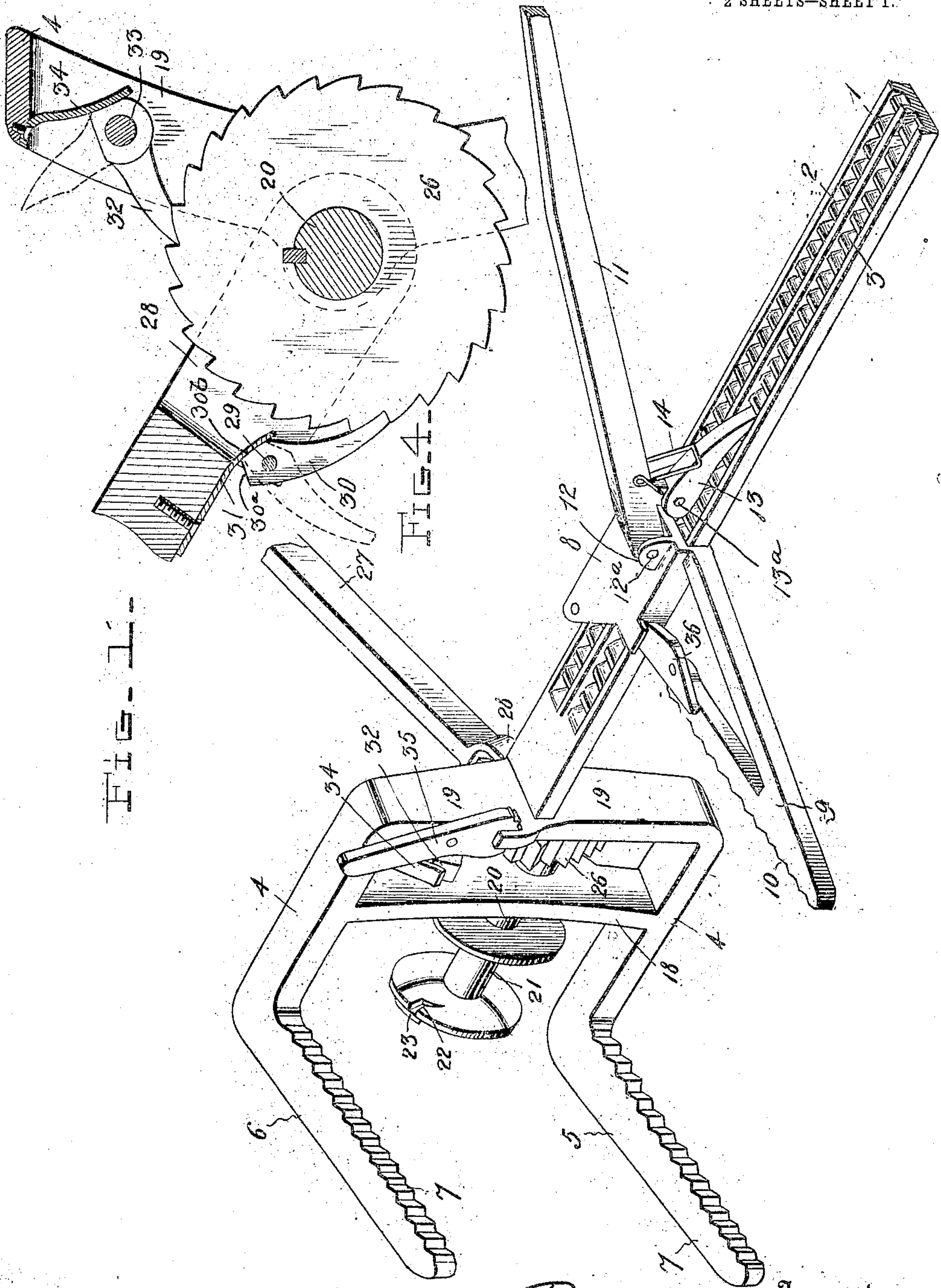


No. 832,337.

PATENTED OCT. 2, 1906.

R. D. NEEL.
WIRE STRETCHER.
APPLICATION FILED JUNE 23, 1906.

2 SHEETS—SHEET 1.



Witnesses
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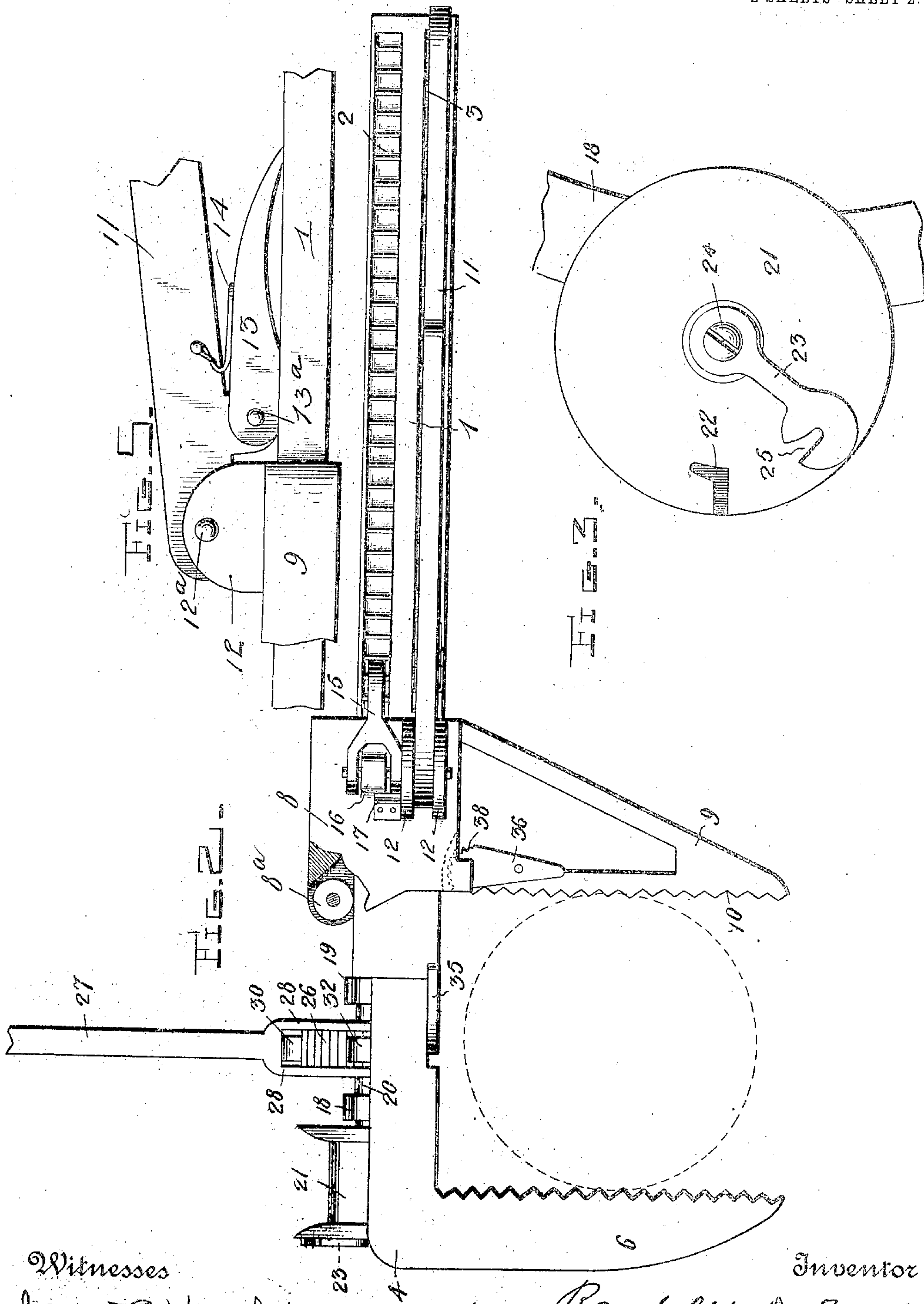
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UNITED STATES PATENT OFFICE.

RANDOLPH D. NEEL, OF TOPAZ, TEXAS.

WIRE-STRETCHER.

No. 832,337.

Specification of Letters Patent.

Patented Oct. 2, 1906.

Application filed June 23, 1906. Serial No. 323,082.

To all whom it may concern:

Be it known that I, RANDOLPH D. NEEL, a citizen of the United States, residing at Topaz, in the county of Erath and State of Texas, have invented new and useful Improvements in Wire-Stretchers, of which the following is a specification.

My invention relates to wire-stretchers; and my object is to provide a construction of this character which will be simple, compact, and efficient and which may be easily and quickly operated, first, to tightly grasp the post or other convenient support and then to wind the wire up to tighten the same.

With these objects in view my invention consists in the improvements described in the following specification and claimed in the claims, reference being made to the accompanying drawings, in which—

Figure 1 is a perspective view of my device. Fig. 2 is a top plan view of the same. Fig. 3 is a detail view of the winding-spool and means for holding the end of the wire. Fig. 4 is a detail view of the pawl-and-ratchet arrangement for rotating the winding-spool. Fig. 5 is a detail view of the lever and pawl of the clamping-frame hereinafter referred to.

Referring to the drawings, 1 indicates a longitudinal bar having racks 2 and 3 formed on its upper face adjacent one end below the surface of the bar. At the outer end of the bar is a U-shaped extension-frame 4.

5 and 6 are arms extending at right angles from the U-frame 4 and provided with serrated inner faces 7.

8 is a frame slidably mounted on the bar 1 and provided with an antifriction-roller 8^a and having the lateral extension-arm 9, provided with a serrated inner face 10 and adapted to cooperate with the arms 5 and 6 in securely grasping the post or other support.

11 is an operating-lever pivoted between cheeks 12, and 13 is a pawl pivoted on the under side of the lever 11 and adapted to be forced into engagement with the rack 3 by means of the spring 14.

15 is a pawl pivotally mounted on a standard 16, rising from the frame 8, and 17 is a spring-plate secured on frame 8 and operating to force the pawl 15 into engagement with rack 2 of bar 1. I have shown the spring 17 operating upon the rear of the pawl 15 in order that said pawl may be moved to an up-

right position and locked to move the frame 8 toward the end of the bar 1.

The teeth of the racks 2 and 3 are not in alinement, but one is a half-space in advance of the other, so that the frame 8 can be moved a half-step, if desired, whereby a more efficient clamping action is had. When the lever 11 is swung downwardly toward the bar 1, the pivot 13^a of the pawl 13 will be below the plane of the pivot 12^a of the lever 11, whereby the latter is prevented from flying up and the frame 8 is locked in adjusted position, as shown in Fig. 5.

The vertical wall 18 and the vertical portion 19 of the U-frame 4 are provided with holes in which is mounted the rotatable shaft 20, extending beyond said wall 18. Mounted on this extended portion of shaft 20 is a winding-spool 21. 22 is a slot in one of the flanges of said spool, adapted to receive the end of the wire to be stretched, and 23 is a latch pivoted to the end of shaft 20 by the screw 24 and provided with a slot 25, said latch being adapted to be swung around so that the slot 25 embraces the wire when same has been introduced into the slot 22 of the winding-spool 21. Keyed to the shaft 20 between the wall 18 and the portion 19 of the U-frame is a ratchet-wheel 26.

27 is a ratchet-operating lever having a U-shaped lower portion 28, the ends of which are provided with holes through which the shaft 20 passes, as shown in dotted lines in Fig. 4. Pivotally mounted on pin 29 in said U-shaped portion 28 is a pawl 30, held in engagement with the ratchet-teeth of wheel 26 by the spring 31, thus providing that the ratchet-wheel shall turn by a downward pressure upon the lever 27, and I provide against a backward movement by the pawl 32, mounted on pin 33 and pressed into engagement with ratchet-wheel 26 by spring 34. The pawl 30 has two adjacent flat surfaces 30^a and 30^b, respectively, on either of which surfaces the spring 31 is adapted to bear. When the spring bears on the surface 30^b, the pawl is held in engagement with the ratchet-wheel, and when the pawl is swung around so that the spring presses on the surface 30^a the pawl will be held up and out of engagement with the ratchet-wheel. The pawl 32 is constructed and operates in the same manner as the pawl 30. When both pawls are disengaged from the ratchet-wheel, as herein

described, the operator can remove the machine from the post and step back and unwind the wire from the spool, both hands being left free, as the pawls are held up by the
5 springs.

The cam clamping-levers 35 and 36, pivotally mounted on the U-frame 4 and sliding frame 8, respectively, are provided in case it is necessary to splice two wires. In this case
10 one wire is inserted under the serrated cam-face 37 of lever 35 and other wire is inserted under the serrated cam-face 38 of lever 36 and both levers moved to tightly clamp the wires. The lever 11 is then operated to move
15 frame 8 forward until the wire is drawn enough to allow for a splice, and the said splice is made before levers 35 and 36 are moved to allow the wires to disengage. The wires can be spliced between two posts with
20 the machine supported on the wire only.

In operation the arms 5, 6, and 9 are placed around a post, and the lever 11 is operated to move frame 8 forward to bring arm 9 into close engagement with said post, the lever
25 being locked, as heretofore described. The wire to be stretched is then introduced into slot 22 of the winding-spool 21 and the latch 23 moved to lock the wire therein. The ratchet-lever 27 is then alternately drawn up
30 and pressed down, transmitting rotative motion to shaft 20, the backward movement of said shaft being prevented by pawl 32, as described, and the wire will consequently be wound about the spool 21 to draw it taut.
35 As the wire is wound on the spool by pushing

down on the lever the tendency to pull up the post or to tilt it is avoided, the downward push on the lever serving to push down on the post.

I claim—

1. In a wire-stretcher, a rack-bar, a sliding jaw mounted on the bar, and a lever fulcrumed on the jaw, and carrying a pivoted pawl engageable with the rack, the pivot of the pawl being outside the line of thrust when
40 the lever is swung downwardly, whereby it is held locked.

2. In a wire-stretcher, a rack-bar having at one end a fixed jaw, a sliding jaw mounted on the bar, and a lever fulcrumed on the jaw,
50 and carrying a pivoted pawl engageable with the rack.

3. In a wire-stretcher, a rack-bar, a sliding jaw mounted on the bar, a lever fulcrumed on the bar, and carrying a pivoted pawl engageable with the rack, and wire-holding
55 means on the bar and the jaw.

4. In a wire-stretcher, a rack-bar having at one end a fixed jaw, and carrying a wire-stretching mechanism, a sliding jaw mounted
60 on the bar, and a lever fulcrumed on the jaw, and carrying a pivoted pawl engageable with the rack.

In testimony whereof I have signed my name to this specification in the presence of
65 two subscribing witnesses.

RANDOLPH D. NEEL.

Witnesses:

A. C. LONG,
J. N. BOWEN.