No. 837,447. PATENTED DEC. 4, 1906.

J. W. ACTON.

WIRE STRETCHER.

APPLICATION FILED FEB. 24, 1906.

2 SHEETS—SHEET 1.

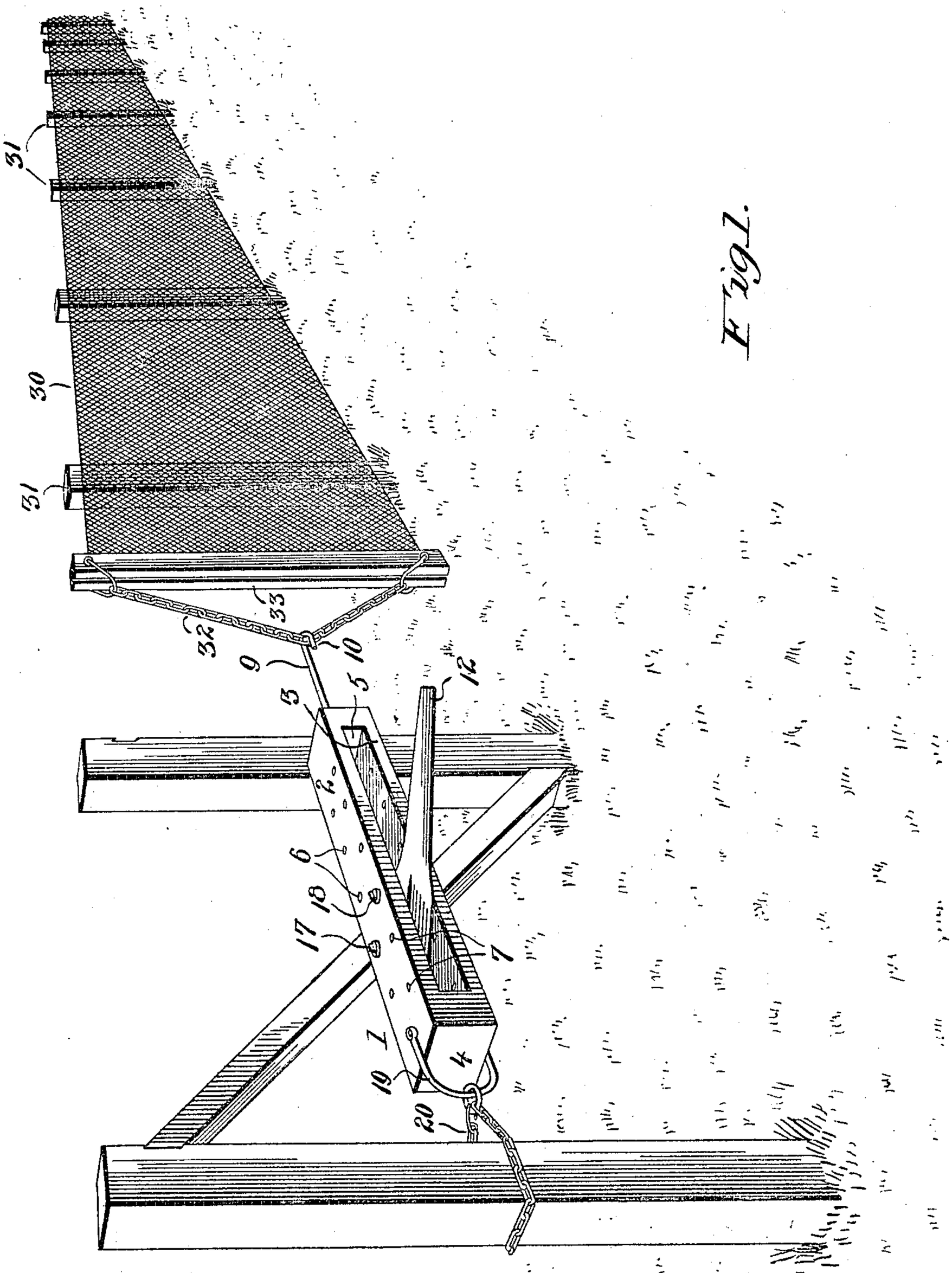

Fig. 1.

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2 SHEETS—SHEET 2.

Fig. 2.

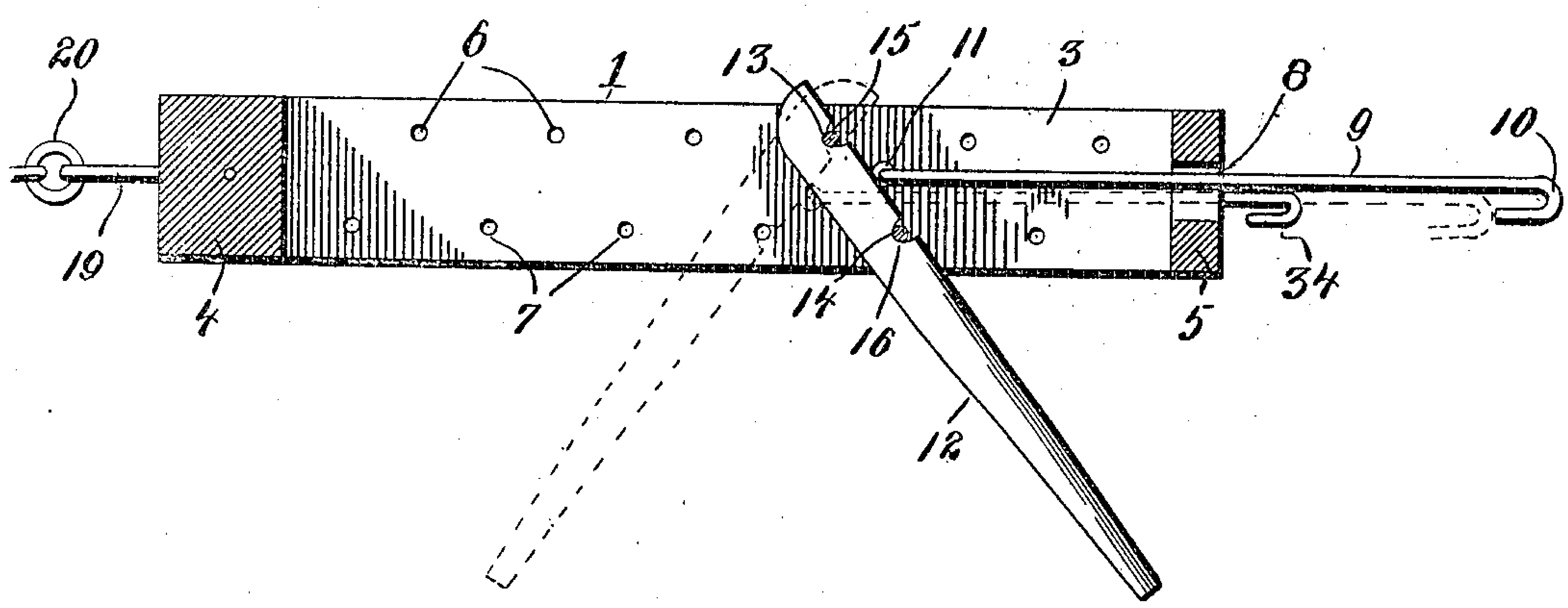


Fig. 3.

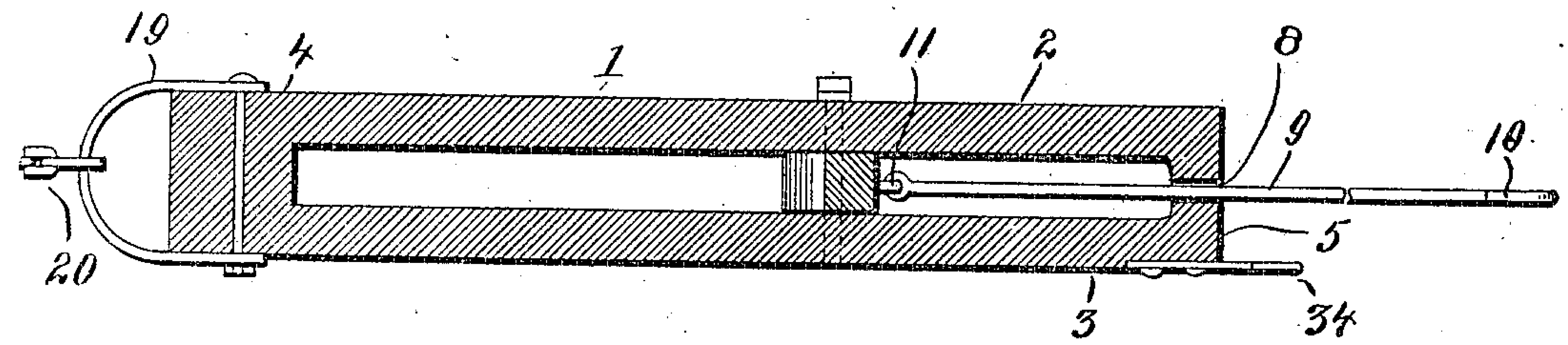
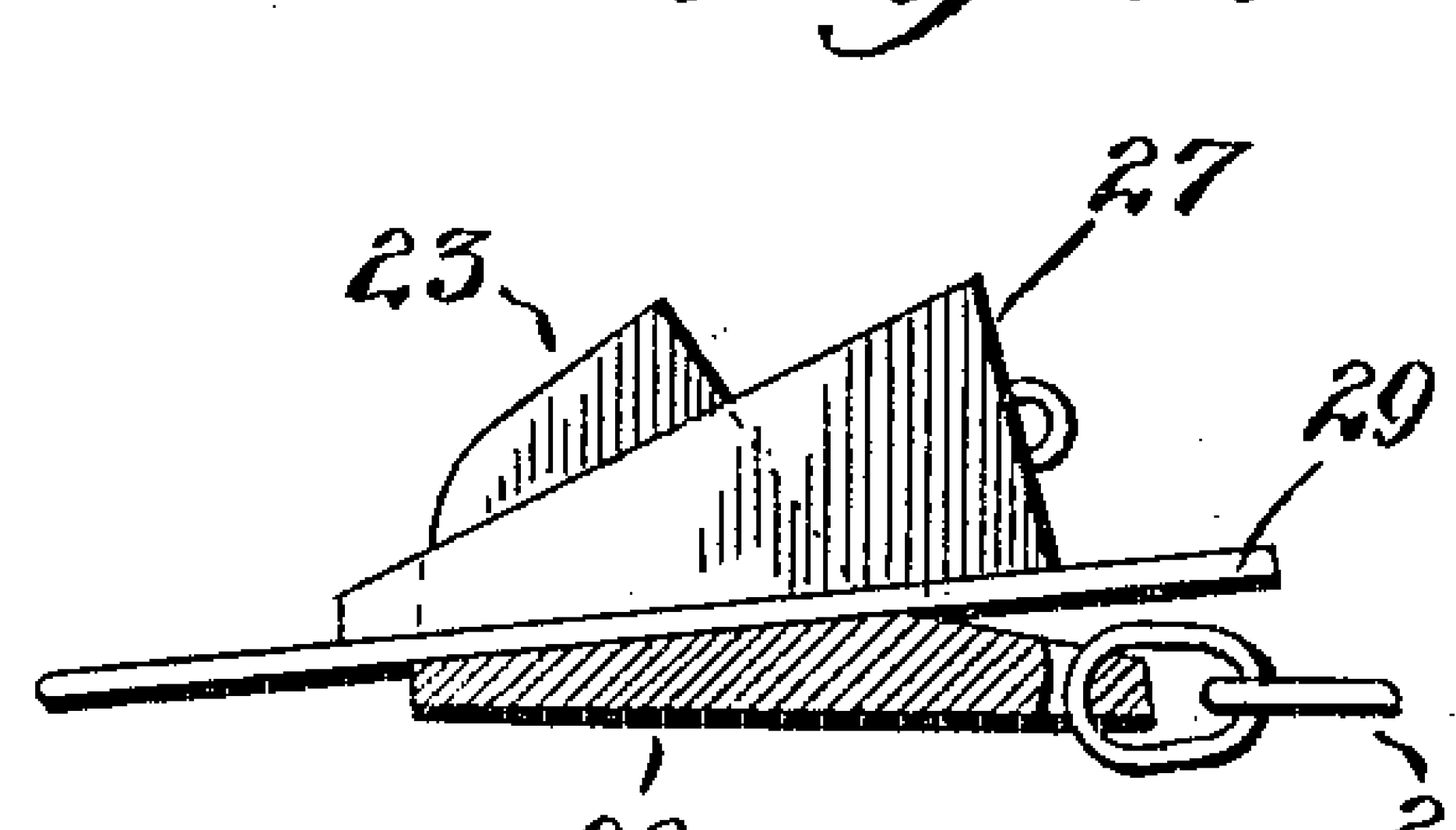
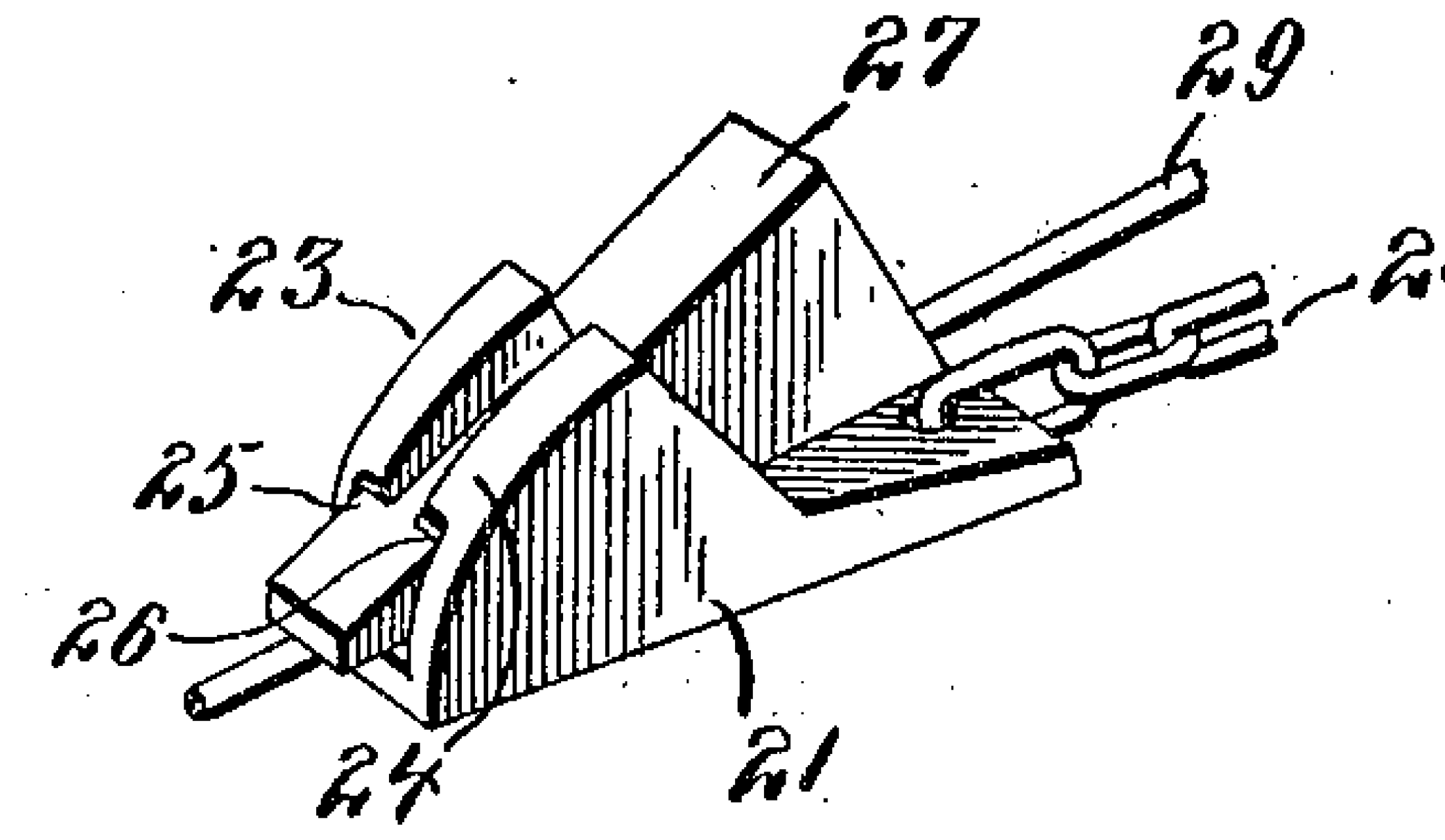


Fig. 5.

Fig. 4.





WITNESSES:

[illegible]

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UNITED STATES PATENT OFFICE.

JAMES W. ACTON, OF OREGON, MISSOURI.

WIRE-STRETCHER.

No. 837,447. Specification of Letters Patent. Patented Dec. 4, 1906.

Application filed February 24, 1906. Serial No. 302,792.

To all whom it may concern:

Be it known that I, JAMES W. ACTON, a citizen of the United States, residing at Oregon, in the county of Holt 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.

The invention relates to an improvement in fence and wire stretchers, and particularly to a stretcher embracing means for tightening either a section of woven-wire fence or a single strand.

The main object of the invention is the production of a stretcher which shall be simple in construction, comprise means for quickly and effectively stretching either at different or the same time a section of woven fence and a single strand of wire, and which shall be adapted to automatically hold taut the stretched section or strand of wire while it is being permanently attached to the supporting means.

Another object sought is to so arrange the novel parts of the stretcher that it shall be light, strong, and durable and easily manipulated by a single operator.

The invention will now be described in connection with the accompanying drawings and then pointed out in the claim.

In the drawings, Figure 1 is a perspective of my improved stretcher shown in operative relation to a section of woven fence. Fig. 2 is a central horizontal section, partly in elevation, of the stretcher. Fig. 3 is a vertical longitudinal section, partly in elevation, of the same. Fig. 4 is a central vertical longitudinal section, partly in elevation, of a clamping-block and wedge, a strand of wire being shown as securely clamped therein. Fig. 5 is a perspective of the same.

Referring now to the drawings, in which like reference-numerals indicate like parts throughout the several views, 1 denotes the stretcher-block, comprising top and bottom plates 2 and 3 and end walls 4 and 5. Arranged longitudinally of the frame and passing vertically through plates 2 and 3 are two parallel series of equally-spaced fulcrum-apertures 6 and 7, the apertures of one plate of each series lying in vertical alinement with the apertures of the same series in the other plate, the two series being arranged in staggered order with relation to each other.

Passing through an aperture 8 of wall 5 of the frame is a link-rod 9, formed at one end with hook 10 and attached at the other end by means of eyebolt 11 to a stretching-lever 12 near one end thereof. This lever is formed with two semicylindrical transverse notches 13 and 14, conforming in curvature to apertures 6 and 7, one on each side of and equidistant from eyebolt 11 and spaced apart a distance equal to that separating any aperture of series 6 from the nearest aperture of series 7 in the same plate.

Two removable fulcrum-pins 15 and 16, formed with heads 17 and 18, respectively, are designed to pass transversely through plates 2 and 3 when inserted in any two alined apertures of series 6 or 7. To loop 19, secured to wall 4 of the frame, is attached one end of a binding-chain 20 for a purpose to be hereinafter described.

21 denotes a clamping-block used in stretching a single strand of wire and comprising base-plate 22, formed with an inclined upper face, and spaced side walls 23 and 24, formed with inwardly-projecting binding-lugs 25 and 26, respectively, adapted in coöperation with base-plate 22 to frictionally engage and hold in place a wedge 27 when inserted between walls 23 and 24. 28 is a chain attached to the rear of the clamping-block and serves to secure it to the stretcher in operation, and 29 designates a section of wire shown as being securely held in the clamping-block.

30 denotes a section of woven fence designed to be stretched along a row of posts 31. A draft-chain 32 is securely attached to the two ends of a gripping-bar 33, between the sections of which one end of the roll of woven fence is secured, the other end being of course permanently attached in place to the post at which it is desired to commence the fence.

The operation of the apparatus is as follows: Assuming that the farther end of the section of woven fence is securely tied to the post desired, the remainder of the roll is unwound along the row of posts and the loose end firmly clamped between the sections of bar 33. Fulcrum-pin 15 is passed through plates 2 and 3 by insertion in two alined apertures of series 6, while pin 16 is inserted in either pair of the two alined apertures of series 7 lying nearest to pin 15—say, for example, as indicated in Fig. 2. The stretching-lever is now brought toward the fulcrum-pins until notches 13 and 14 engage pins 15 and 16, respectively, and hook 10 of link-rod 9 passed around draft-chain 32 and the stretcher

made fast to a near-by post by means of binding-chain 20. Manual power is now applied to the handle of lever 12 in the direction of said binding-chain, causing pin 15 to act as a fulcrum and drawing link-rod 9 in said direction and, as obvious, taking up some or all of the slack in the roll of fence-wire. The lever is forced as far as is necessary to bring notch 14 in alinement with that aperture of series 7 lying next to pin 16, as shown in dotted lines in Fig. 2, when said pin is inserted in said notch and acts either as a means for holding the lever, and consequently the section of fence-wire, in attained position or as a fulcrum in further use of the lever in stretching the section tighter, power on the handle being then of course applied in a direction opposite to that just previously taken until notch 13 is alined with that aperture in series 6 lying next in the direction of travel to pin 15, which is then inserted in said aperture and acts in its turn as a means for holding the lever in attained position.

In stretching a single strand of wire the loose end thereof is inserted in the clamping-block and securely held there by friction on the insertion of wedge 27 to the required distance, the block is attached to hook 10 of the stretcher by means of chain 28, and the lever 12 operated as above described and as obvious, causing the wire to be quickly drawn taut, when it can be permanently secured as desired.

In stretching heavy woven wire when all the slack is not taken up at the first operation of the lever the hook 34 on the forward end of the stretcher-block 1 is brought into use, its function being to hold the wire in place as far as stretched until the pin 15 can be removed to the next alined holes to the rear and the lever 12 carried back and again brought into engagement therewith. To accomplish this, two clamping-blocks 21 are employed, and they are connected by a rope or chain, one clamping-block being secured to the upper and the other to the lower border strands of the woven wire. The rope or chain is then inserted in the hook 34 in the same manner as the chain 32 is placed in the hook 9, as shown in Fig. 1.

While I have shown my apparatus in connection with a fence-wire, it will of course be readily understood that it is as well adapted for the stretching of any wires, such as telephone, telegraph, and similar wires.

Having thus described my invention, what I claim as new is—

A fencing-wire stretcher comprising a block formed with a rectangular opening therethrough and an opening through one end, said block being also provided in its upper and lower walls with parallel rows of spaced openings, the openings in the two walls being in vertical alinement and the openings in one row being arranged intermediate the openings in the other row, a lever slidably mounted in the central rectangular opening of said block and having in one of its edges spaced notches, a pivot-eye arranged upon said lever midway between said notches, a rod engaged with said pivot-eye and slidably mounted in the opening in the end of said block, said rod having its projecting outer end bent to provide a hook, means detachably engaged with said hook for clamping fencing-wire, pins arranged to engage the openings of the respective rows in succession and form continuously-advancing fulcrum-points for the lever, a loop pivotally mounted at one end of said block, an attaching element engaged with said loop, and the hook 34 fixed upon the opposite end of said block, substantially as shown and for the purpose set forth.

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

JAMES W. ACTON.

Witnesses:
H. E. DENNY,
A. VAN BUSKIRK.