

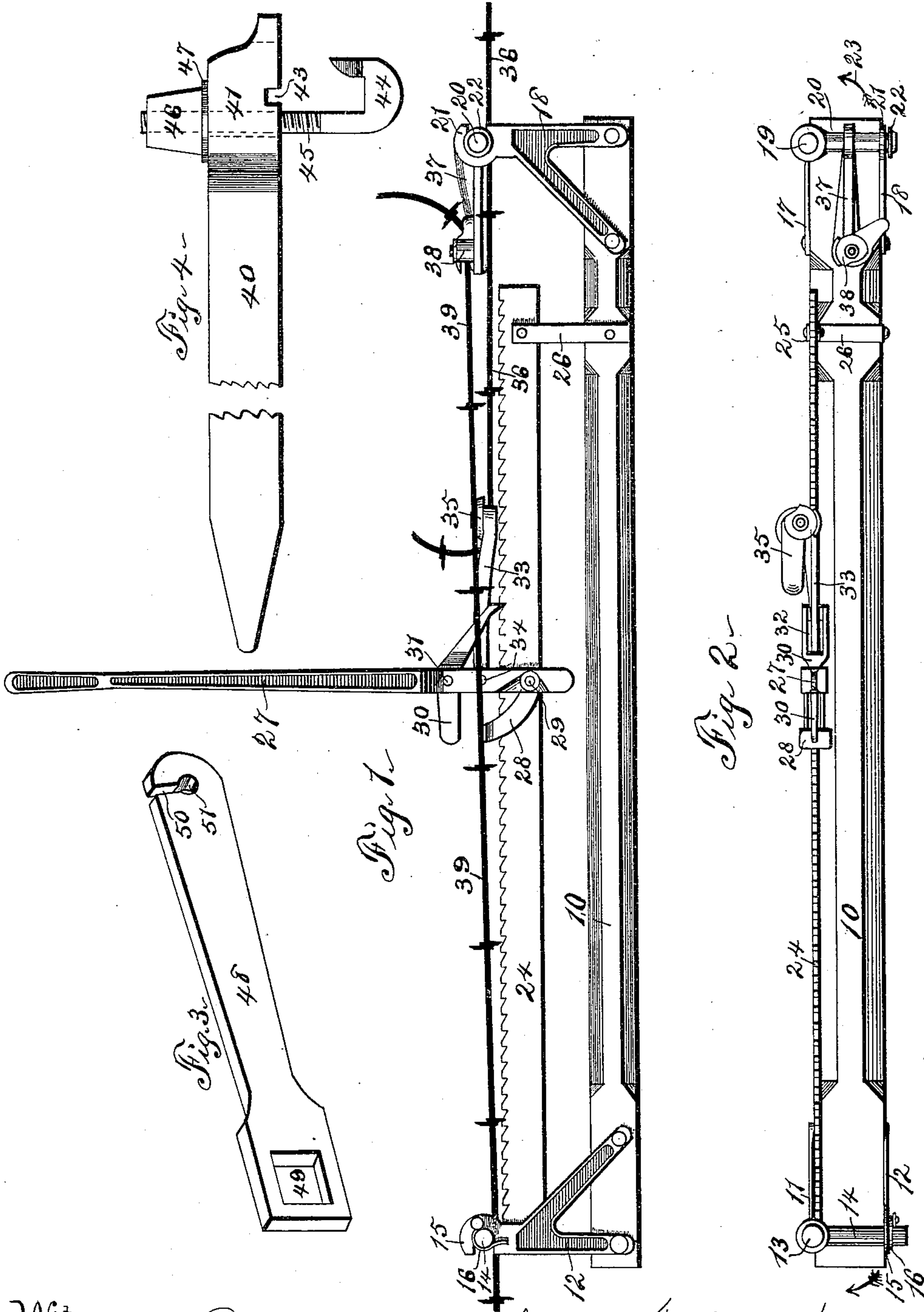
(No Model.)

2 Sheets—Sheet 1.

A. S. MURCHISON.
FENCE WIRE STRETCHER AND REPAIRER.

No. 547,021.

Patented Oct. 1, 1895.



Witnesses:

J. Sweet
W. T. Sankey

Inventor: Adam S. Murchison,
By Thomas G. Am J. R. Orwig, Attorneys

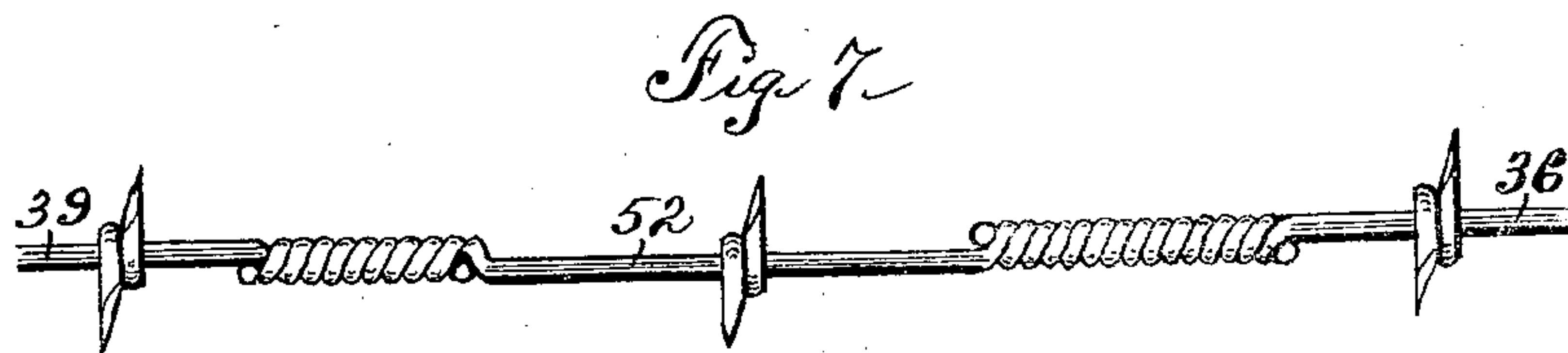
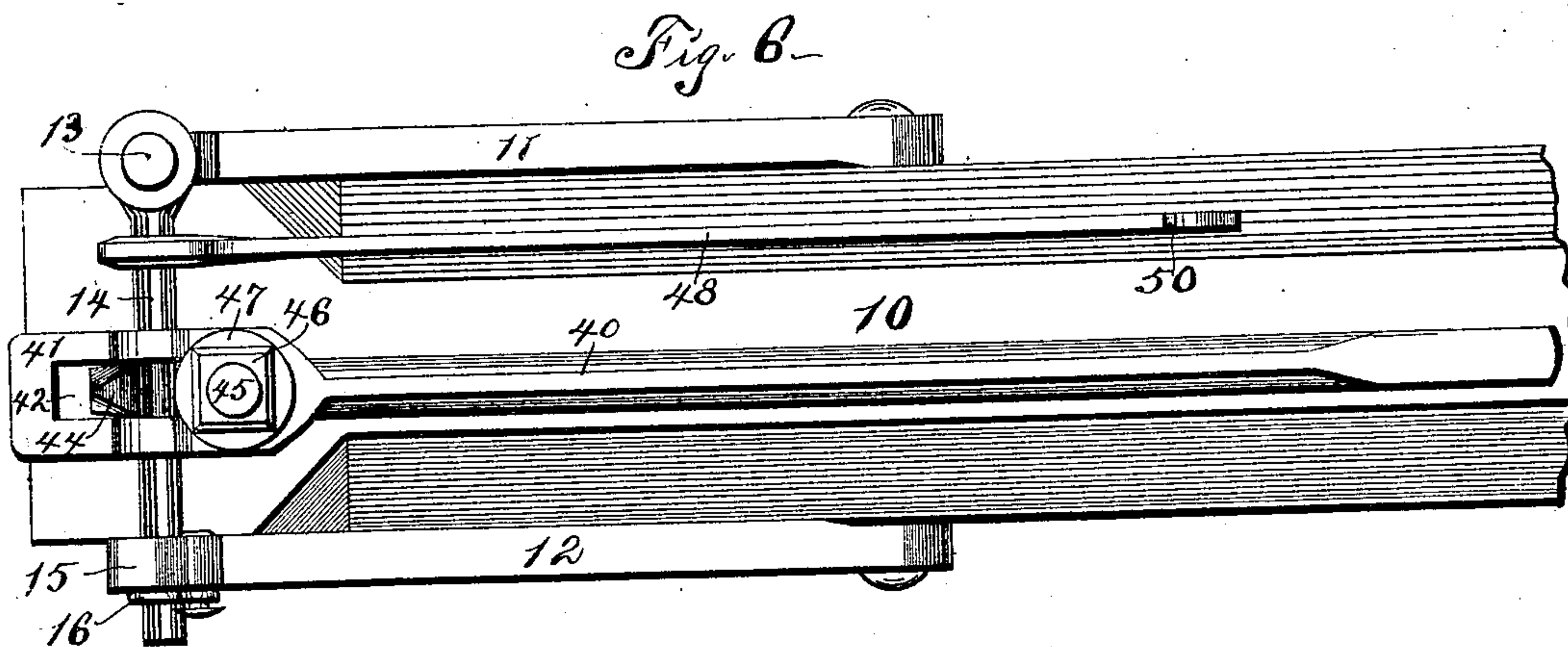
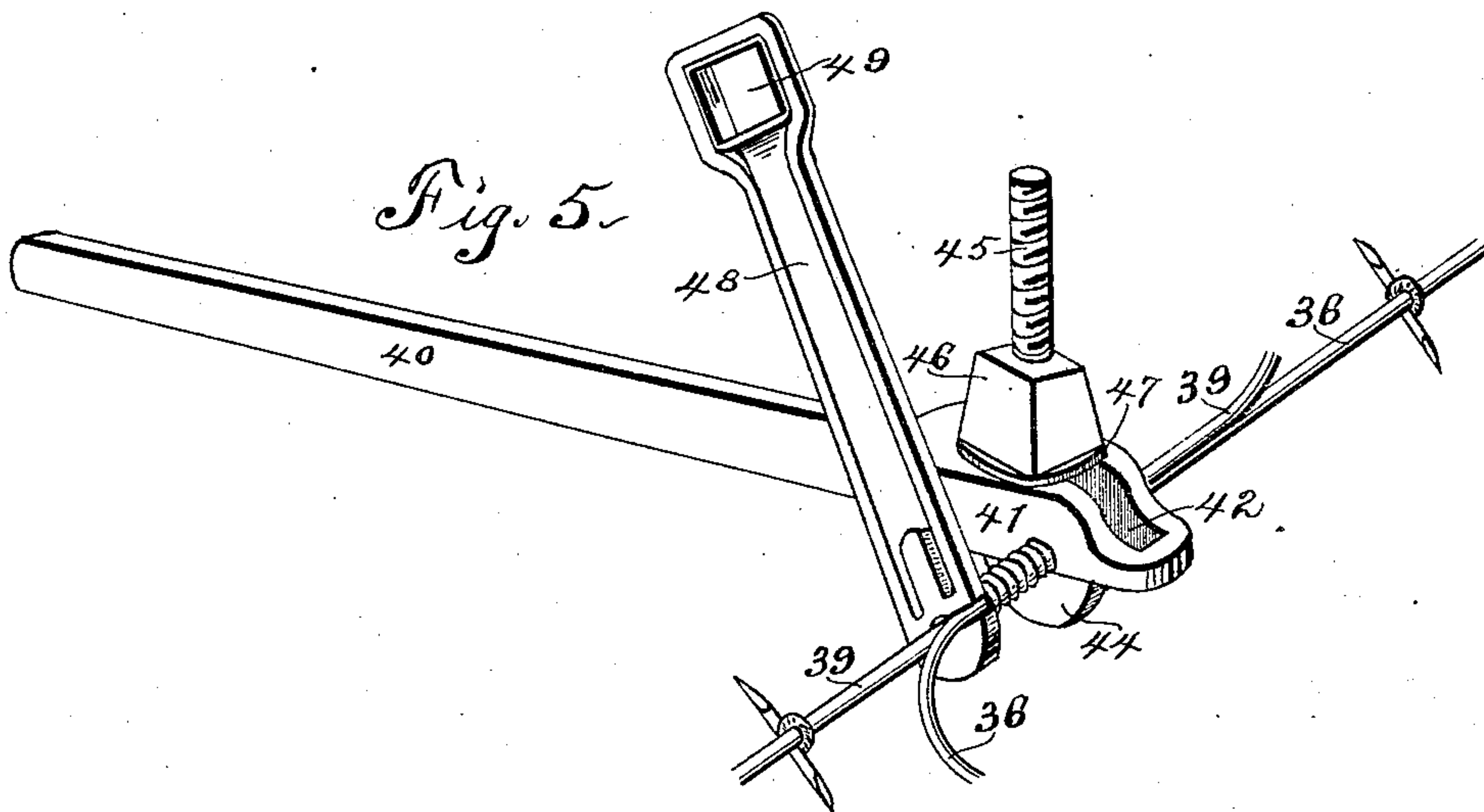
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UNITED STATES PATENT OFFICE.

ADAM S. MURCHISON, OF WILLIAMSBURG, IOWA.

FENCE-WIRE STRETCHER AND REPAIRER.

SPECIFICATION forming part of Letters Patent No. 547,021, dated October 1, 1895.

Application filed May 2, 1895. Serial No. 547,835. (No model.)

To all whom it may concern:

Be it known that I, ADAM S. MURCHISON, a citizen of the United States of America, residing at Williamsburg, in the county of Iowa and State of Iowa, have invented a Fence-Wire Stretcher and Repairer, of which the following is a specification.

The object of my invention is to facilitate stretching and repairing wire fences.

My invention consists in the combination, with stretching mechanism, of a bar designed for support of the stretching mechanism and to be suspended from the wire being stretched.

My invention consists further in the details of construction, arrangement, and combination of elements hereinafter set forth, pointed out in my claims, and illustrated by the accompanying drawings, in which—

Figure 1 is a side elevation illustrating my device in position for practical use. Fig. 2 is a plan of the complete device. Fig. 3 is a detail perspective of a wrench employed with my device. Fig. 4 is a detail elevation of a clamp employed with my device. Fig. 5 is a perspective illustrating the use of the wrench and clamp in twisting and joining wires. Fig. 6 is a detail plan of a portion of the device to which the wrench and clamp are attached for transportation or storage. Fig. 7 is a detail view illustrating wires repaired by splicing.

In the construction of the device as shown the numeral 10 designates a bar preferably made of wood and possessed of a high resistance to flexure. Standards 11 12 are fixed to and vertically extend from opposite sides of one end portion of the bar 10. A pivot 13 is formed on the upper end of the standard 11, and a hanger-bar 14 is pivoted at one end to said pivot, which hanger-bar is of such length as to extend across the device, Fig. 2. A hook 15 is formed on the upper end of the standard 12 and is designed to receive the outer end of the hanger-bar 14. The hanger-bar 14 is secured temporarily to the hook 15 by a hook 16, made of spring-wire, pivoted on the standard 12. Standards 17 18 are fixed to and vertically extend from opposite sides of the end portion of the bar 10 opposite to the standards 11 12. A pivot 19 is formed on the upper end of the standard 17 and a hanger-bar 20 is pivoted at one end on said pivot, which hanger-bar is of such length as to extend

across the device, Fig. 2. A hook 21 is formed on the upper end of the standard 18 and is designed to receive the outer end of the hanger-bar 20. The outer end of the hanger-bar 20 is provided with a washer 22 and is riveted against said washer, the location of the washer being such as to permit the bar 20 to swing, as indicated by arrow 23 in Fig. 2. A ratchet-bar 24 is positioned parallel with and above the bar 10 and fixed at one end to the standard 11 and at the other end to stays 25 26, connected to the bar 10 adjacent to the standards 17 18, the ratchet being formed on the upper edge of said bar. A lever 27, bifurcated at its lower end, is mounted on the ratchet-bar 24, and a bifurcated detent 28 is mounted on said ratchet-bar and pivoted at its bifurcated ends to the lower end of the said lever by means of pins 29, the upper end portion of said detent engaging said ratchet-bar. A gravity-pawl 30 is fulcrumed on a pin 31, transversely positioned in the lever 27 above the ratchet-bar and detent, and the forward (lower) end of said pawl engages said ratchet-bar. A slot 32, Fig. 2, is formed in the forward end portion of the pawl 30, and a grip-bar 33 is positioned in said slot and pivoted at one end on a pin 34, transversely seated in the lever 27 between the pins 29 31. An eccentric grip device 35, of common form, is mounted on the outer end of the grip-bar 33 and is designed to receive and hold the end portion of a fence-wire 36. A grip-bar 37, having an eccentric grip 38, of common form, is mounted on the hanger-bar 20 and is designed to receive and hold one end of a fence-wire 39.

In the practical use of this device the lever 27 is positioned as closely as possible to the grip 38 and the end of the wire 36 engaged by the grip 35, said wire being first passed beneath the hanger-bar 20 between the standards 17 18. The end of the wire 39 is then passed beneath the hanger-bar 14 between the standards 11 12 and engaged by the grip 38. The lever 27 is manually oscillated, and the detent and pawl successively and alternately engage the ratchet-bar and propel the lever along said bar, thus stretching the wires and overlapping the ends thereof to such a degree as that a secure joint may be made in the wires. It will be observed that the bar

10 sustains the fixed relations of the standards and connecting parts, and, resisting flexure to a high degree, prevents buckling, bending, and breaking of the device.

5 I have designed a clamp to be engaged in connecting the overlapping ends of the wires, which clamp is constructed as follows: A bar 40 is formed with an integral head 41, provided with a slot 42 and notches 43 in the
10 lower portion of said head adjacent to said slot. A hook 44 having a screw-threaded stem 45, is mounted for reciprocation in the slot, and a nut 46 and washer 47, mounted on
15 said stem, engage the head 41, and the stem and hook are moved by turning the said nut. A wrench is shown, comprising a metal bar 48, having an angular eye 49 to engage the
20 nut 46 and a slot 50 in the end thereof opposite to the said eye. The slot 50 opens to one edge of the bar 48 and is inclined slightly to the longitudinal plane of the bar, and a circular enlargement 51 is formed at the inner
end of said slot.

In joining the ends of wires by my clamp
25 and wrench I engage the overlapping ends of the wires 36 39 between the hook 44 and head 41 of the clamp and tighten the nut 46 with the wrench to draw the wires conjunctively and slightly "kink" the same within
30 the slot 42 and notches 43. I then engage the wires with the slot of the wrench and revolve said wrench around one of the wires, retaining the other wire in the slot, as illustrated by Fig. 5, the wrench being operated alter-
35 nately on opposite sides of the clamp. I then loosen the nut 46 with the wrench and remove the clamp from the wires. I remove the stretcher device from the wires before applying the wrench to twist said wires, after I
40 have applied the clamp to prevent slackening and to free the ends for twisting. The stretcher device is removed from the wires by swinging the hanger-bars, as indicated by arrows in Fig. 2. When the wires are so short as to
45 render the joining of the ends thereof, as de-

scribed, inconvenient, or impossible, a piece 52, Fig. 7, should first be connected to one of the wires to lengthen the same, the wrench and clamp being employed to conveniently perform such act of splicing.

The device is packed for transportation or storage by releasing and swinging out the hanger-bar 14, placing the wrench-eye over said bar, closing and securing said bar, and engaging the clamp-hook with said bar, as
55 shown in Fig. 6.

I claim as my invention—

1. In a stretcher, the combination of a rigid bar, standards fixed to said bar, hanger bars mounted on said standards and revoluble
60 thereon, a hook on one standard engaging one hanger bar, a ratchet bar of materially less length than the rigid bar connected to one standard and to the rigid bar, lever and pawl stretching mechanism mounted for travel on
55 said ratchet bar, and a grip device suspended on one hanger bar, as set forth.

2. In a wire stretcher the combination of a rigid bar, standards fixed to said bar, hanger bars mounted on said standards, and stretch-
70 ing mechanism connected with said bars and standards, as set forth.

3. In an apparatus for stretching and repairing fence wire, a rigid bar, standards fixed to said rigid bar, hanger bars hinged and con-
75 nected to said standards, a ratchet bar fixed to one of said standards at one end, stays connecting the other end of said ratchet bar to said rigid bar, stretching mechanism mounted for travel on said ratchet bar, a grip device
80 fixed to one of said hanger bars and cooperating with said stretching mechanism, a clamp for rigidly connecting and temporarily holding the wires after stretching, and a wrench
85 for twisting said wires together, as set forth.

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Witnesses:

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G. H. HUGHES.