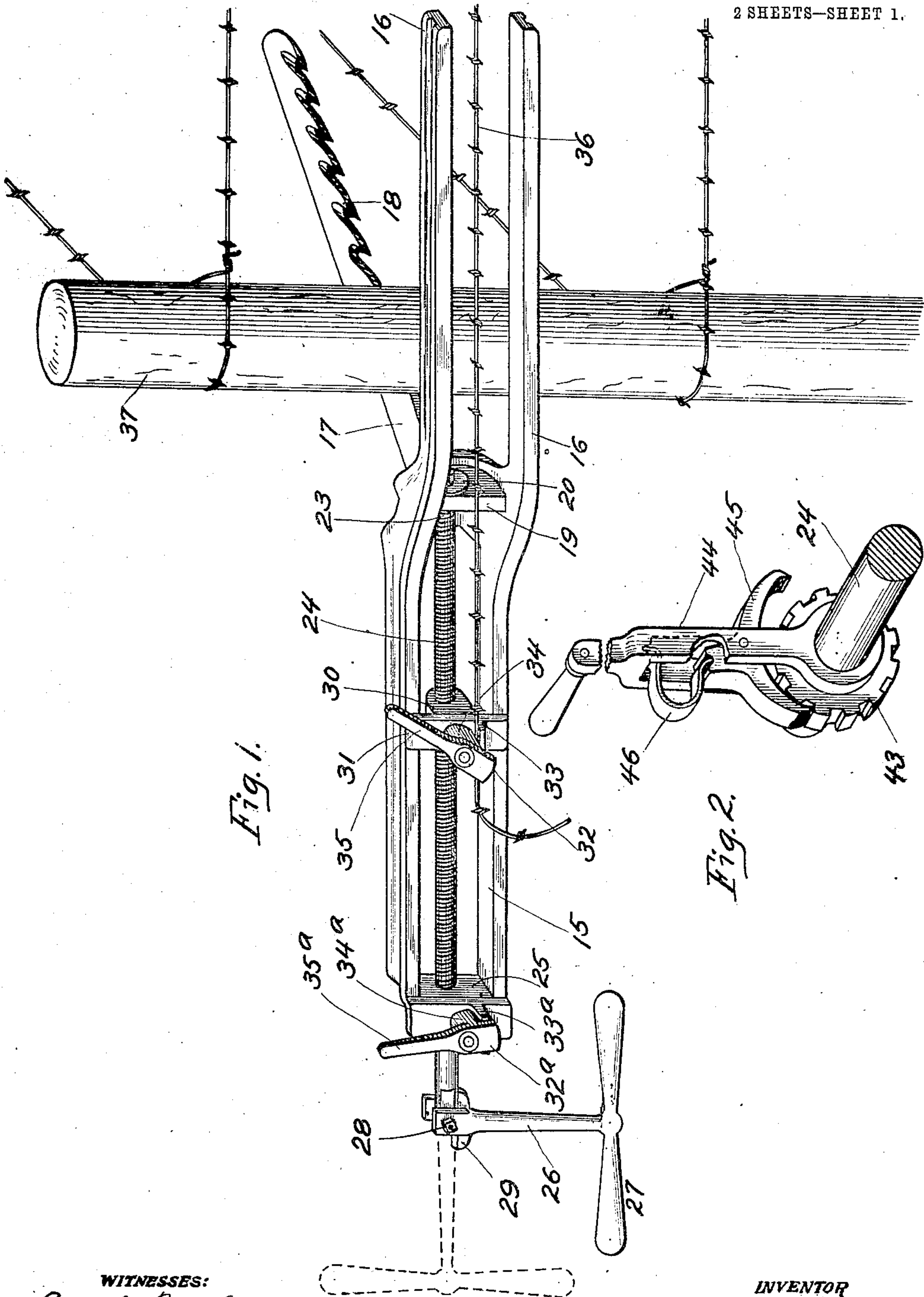


D. O. MINER.
WIRE STRETCHER.
APPLICATION FILED NOV. 11, 1907.

915,368.

Patented Mar. 16, 1909.

2 SHEETS—SHEET 1.



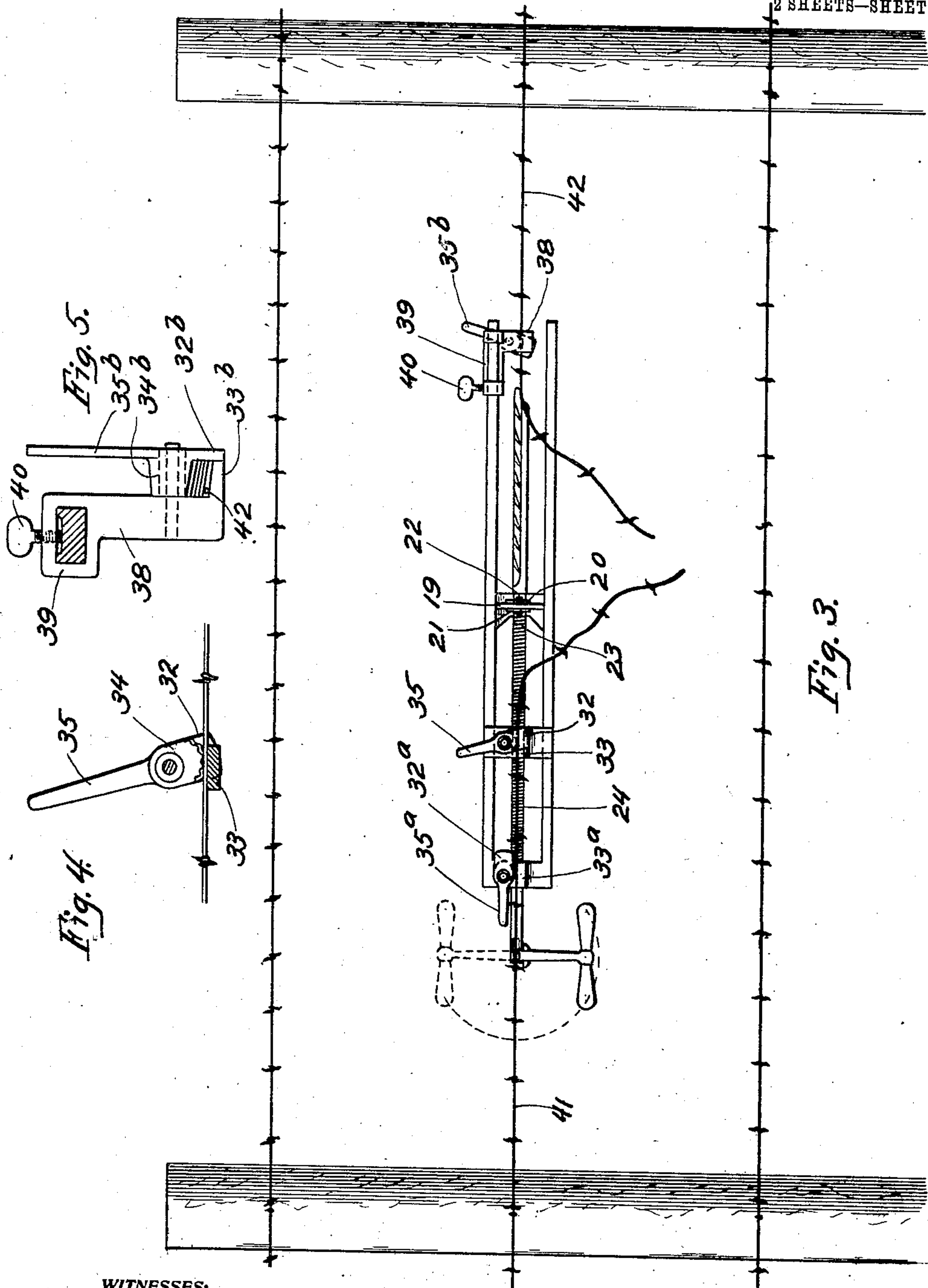
WITNESSES:
Edythe M. Anderson.
Anna L. Savoir

INVENTOR
Darwin O. Miner
BY
Sheridan and Wilkinson
ATTORNEY

915,368.

Patented Mar. 16, 1909.

2 SHEETS—SHEET 2.



WITNESSES:
Edythe M. Anderson,
Anna L. Savoir

INVENTOR
Darwin O. Miner
BY
Sheridan and Wilkinson
ATTORNEY

UNITED STATES PATENT OFFICE.

DARWIN O. MINER, OF HAWARDEN, IOWA, ASSIGNOR OF ONE-HALF TO RAYMOND C. MINER,
OF SIOUX FALLS, SOUTH DAKOTA.

WIRE-STRETCHER.

No. 915,368.

Specification of Letters Patent.

Patented March 16, 1909.

Application filed November 11, 1907. Serial No. 401,638.

To all whom it may concern:

Be it known that I, DARWIN O. MINER, a citizen of the United States, residing at Hawarden, in the county of Sioux and State of Iowa, have invented certain new and useful Improvements in Wire-Stretchers, of which the following is a specification.

The object of my invention is to provide a new and improved device that can be used for stretching fence wires.

A further object of my invention is to provide a wire stretcher that can be used for drawing together the opposed ends of a wire where broken for the purpose of uniting them.

Another object is to provide an operating handle that will not be interfered with by an adjacent wire.

Referring to the drawings—Figure 1 is a perspective view of my improved wire stretcher shown in operative relation to a fence post. Fig. 2 is a perspective view of a modification of a detail. Fig. 3 is an elevation showing the wire stretcher used to splice the opposed ends of a broken wire. Figs. 4 and 5 are views of a detail.

The wire stretcher consists of a main frame 15 having two parallel extensions 16 and another extension 17 standing at an angle thereto. The extension 17 has backwardly directed teeth 18 which are adapted to engage the fence post and prevent the tension on the wire from rotating the wire stretcher about it. As a part of the frame 15 there are two heads 19 and 25 which constitute journal bearings for the rotatable shaft 24. On this shaft there are two washers 20 and 21 on either side of the head 19, held by the key 22 and the opposed shoulder 23. The shaft 24 is screw-threaded throughout its length and terminates in an extension 26 with a handle 27. This extension 26 is attached to the shaft by the bolt 28 so that it can be deflected to one side. The shoulders 29 limit the amount of such deflection either way to substantially 90 degrees. Mounted in engagement with the shaft 24 is a carriage 30 which has two guide members 31 adapted to keep the carriage from rotating as it slides along the frame 15. The carriage 30 has a ledge 33 and a cam 34 overhangs this ledge, the acting surface being corrugated, as shown in Figs. 4 and 5. The cam 34 is controlled by a handle 35 and has a lip 32 which overhangs the ledge 33

when the cam is operatively engaging the wire.

The wire is represented by the reference numeral 36 and the fence post is designated as 37.

An extra clamping cam 34^a acting in conjunction with the opposed ledge 33^a is attached to the head 25. This serves to hold the wire whenever it is desired to release the cam 34 in order to take a new hold on the wire.

A detachable bracket 38 (see Fig. 5) is provided with a sleeve 39 and a nut 40 by which it may be attached to one of the extension legs 16, as shown in Fig. 3. This bracket 38 carries a cam 34^b similar in all respects to the cams that have already been described. It may be used to hold one end of a broken wire, as shown in Fig. 3. When the machine is used as shown in Fig. 1, the bracket is removed and laid aside. The two wires that are to be joined together are indicated in Fig. 3 by the reference numerals 41 and 42.

Fig. 2 illustrates an operating handle that may be used as a substitute for that shown in Fig. 1. On the shaft 24 is fixed a ratchet wheel 43 and a fork 44 engages the shaft 24 loosely so that it can rotate independently thereof. Within this fork 44 is a double pawl 45 with opposite members. This pawl is held in either of its two operative positions by the spring 46, thus by partial rotation of the handle the shaft 24 can be continuously rotated in either direction desired.

When it is desired to stretch a wire preparatory to stapling it to a fence post the handle 27 is rotated so as to bring the carriage 30 to the right, as viewed in Fig. 1. Then, the frame being positioned, as shown, the wire 36 is engaged by the clamping cam 34, and thereafter the handle 27 is rotated so as to traverse the carriage 30 to the left, thus stretching the wire.

One advantage of my device is that at any time when the wire is stretched the operator can let go of it with both hands and so be free to staple the wire to the fence post. If a single traverse of the carriage 30 is not enough to take up all the slack in the wire, then the wire can be engaged by the cam 34^a and held while the carriage 30 is moved back for a fresh hold.

When the device is to be used to bring together the ends of the broken wire the

bracket 38 is attached, one wire 42 is clamped thereby, and the other wire 41 is clamped to the carriage. Then by traversing the carriage to the right, as viewed in Fig. 3, the ends will be brought together and can be spliced or united in any convenient way. At such a time the wire 41 lies close alongside the shaft 24 and therefore the flexible handle shaft 26 is provided. This can be bent to one side every half revolution and slip past the adjacent wire.

The modification shown in Fig. 2 is for the same object, namely, to provide for interference by the wire 41 lying adjacent the shaft 24. It will be seen that I have provided a strong, simple and serviceable stretcher, one which will not be caused to rotate around the fence post by the tension of the wire, and which will leave the hands of the operator free when he desires to staple the wire. Moreover it can be used not only for stretching a wire with reference to a post, but for stretching two consecutive wires together.

I claim:

1. A wire stretcher comprising a frame, a straight guideway along said frame, a carriage adapted to slide along said guideway, a locking device on said carriage to hold a

wire, a screw-threaded shaft having its axis parallel to said guide way rotatably mounted in the frame and engaging said carriage, a handle at one end of the frame to rotate said shaft and diverging jaws extending from the opposite end of the frame, one of said jaws extending substantially in the direction of the length of the frame, and the other jaw extending at an acute angle thereto and having its inner side serrated with backwardly directed teeth.

2. A wire stretcher comprising a frame, a straight guideway along said frame, a carriage adapted to slide along said guideway, a locking device on said carriage to hold a wire, a screw-threaded shaft having its axis parallel to said guideway rotatably mounted in the frame and engaging said carriage, a handle at one end of the frame to rotate said shaft and diverging jaws extending from the opposite end of the frame, and a detachable clamp adapted to be mounted on one of said jaws and adapted to engage a wire, said clamp carrying a thumb-screw to lock it in place.

DARWIN O. MINER.

Witnesses:

ELMER JOHNSON,
J. C. DALTON.