(No Model.)

A. B. GRAHAM.

WIRE STRETCHER.

No. 354,409. Patented Dec. 14, 1886.

Fig. 1.

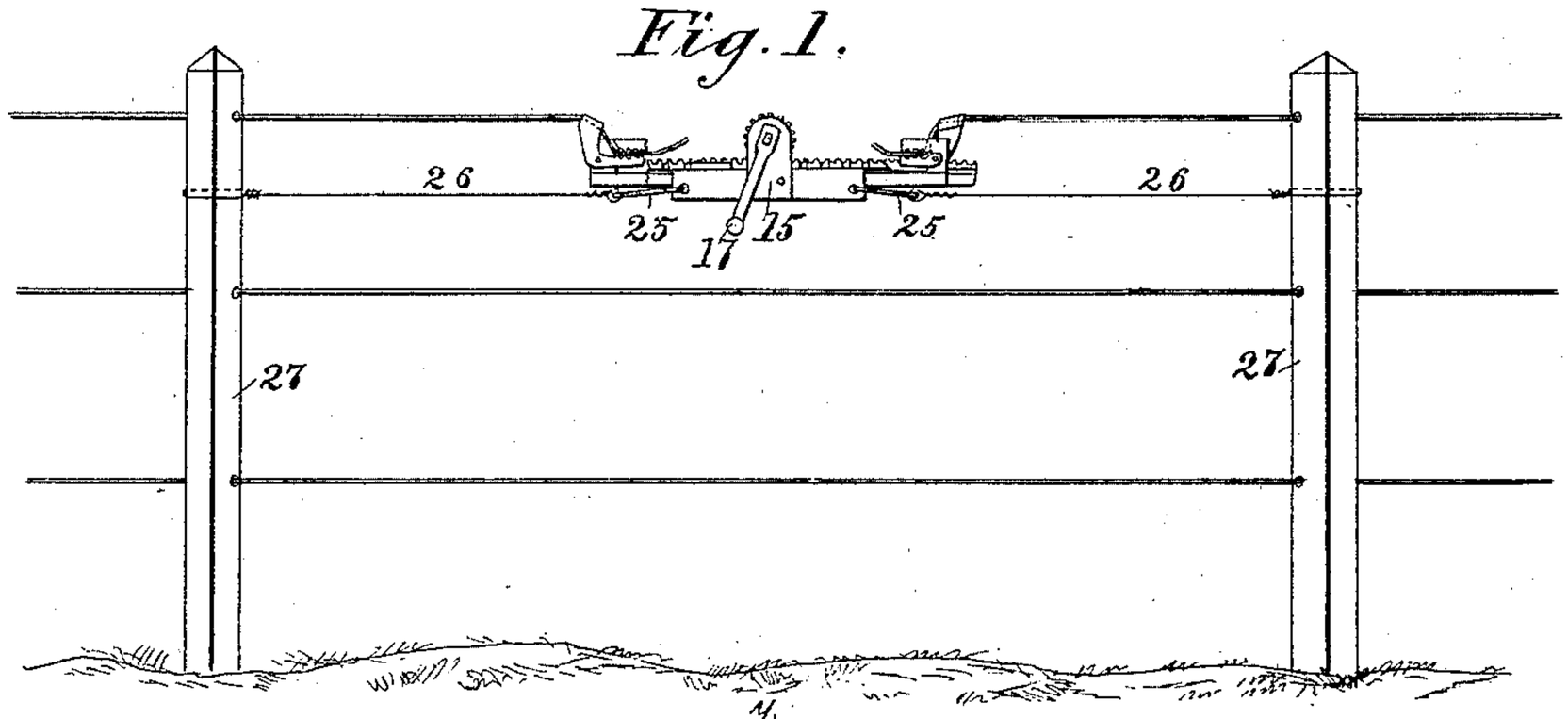


Fig. 2.

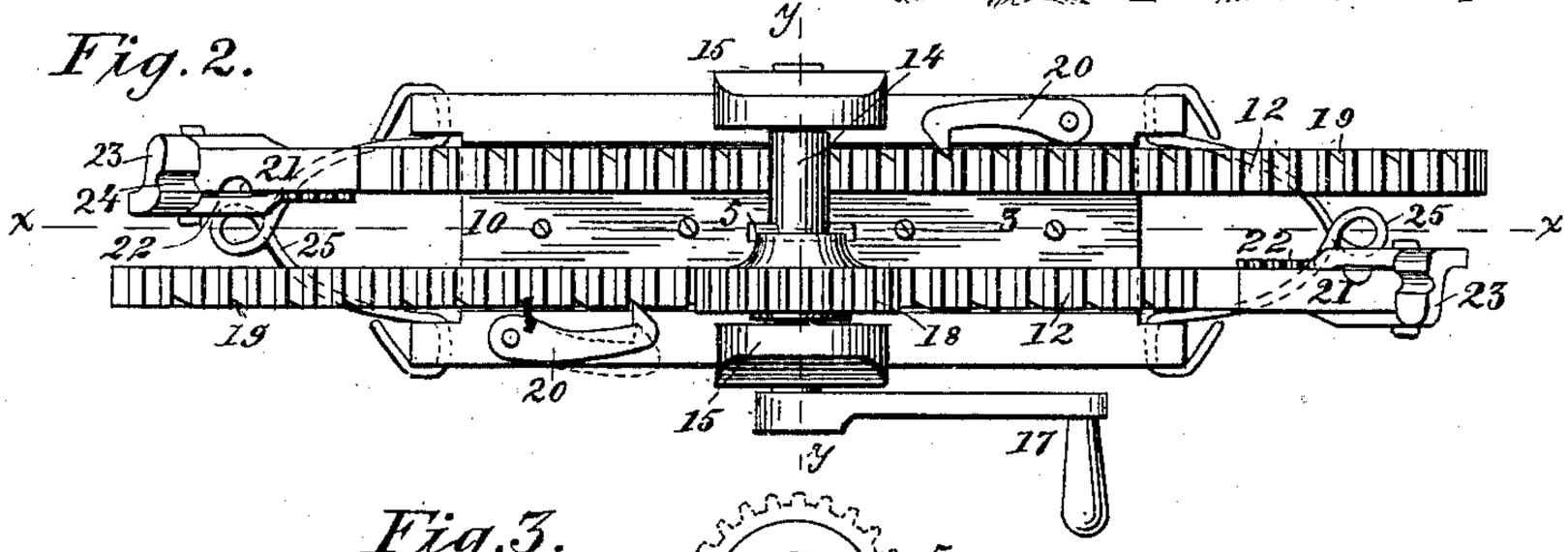


Fig. 3.

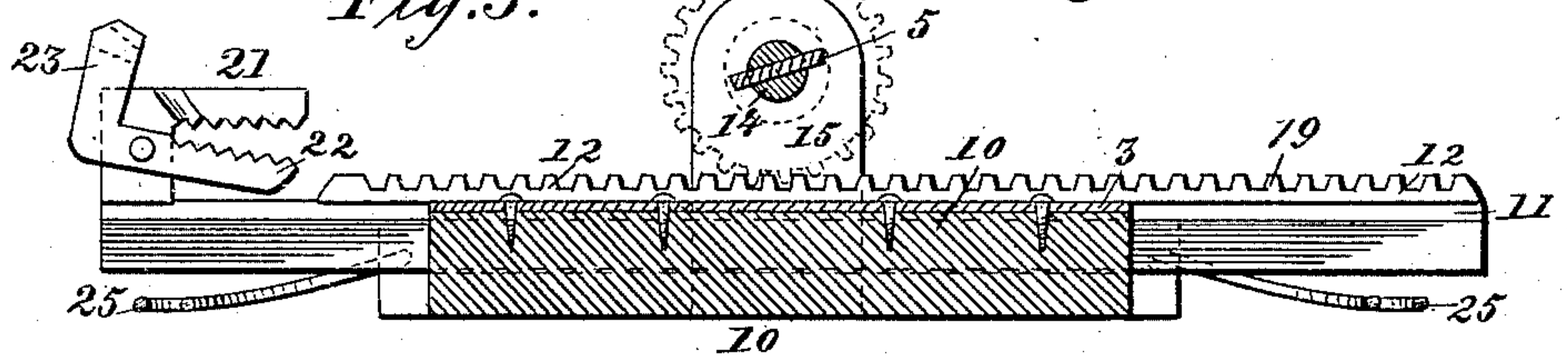


Fig. 4.

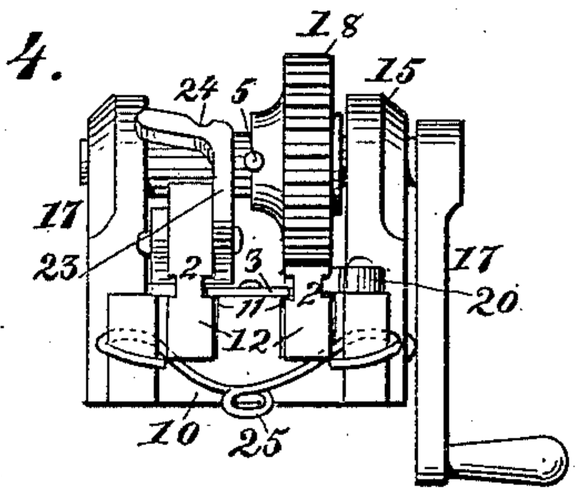
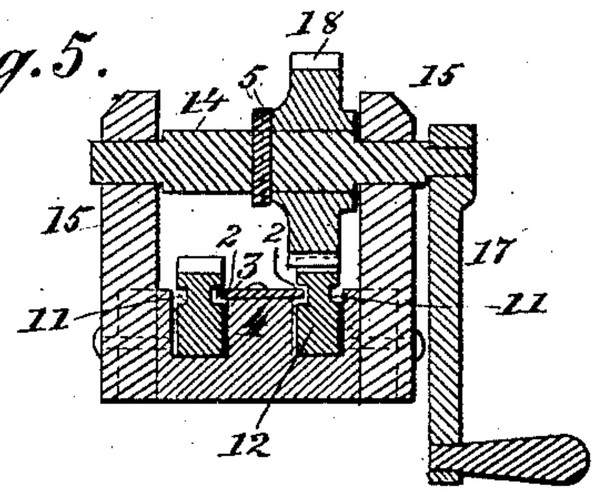


Fig. 5.



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UNITED STATES PATENT OFFICE.

ANDREW B. GRAHAM, OF BURLESON, TEXAS.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 354,409, dated December 14, 1886.

Application filed July 29, 1886. Serial No. 209,450. (No model.)

To all whom it may concern:

Be it known that I, ANDREW BASCOME GRAHAM, of Burleson, in the county of Johnson and State of Texas, have invented a new and Improved Wire-Stretcher, of which the following is a full, clear, and exact description.

The object of my invention is to provide an implement whereby the parted ends of a broken strand of wire may be brought together in order that they may be bound together, the implement being applicable for use in the mending of wire fences, telegraph-wires, or in fact any form of wires that may have been broken.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a view representing my improved wire-stretcher as arranged for use in mending a broken strand of a wire fence. Fig. 2 is an enlarged plan view of the same. Fig. 3 is a longitudinal sectional view taken on the line *x x* of Fig. 2. Fig. 4 is an end view of the wire-stretcher. Fig. 5 is a cross-sectional view taken on the line *y y* of Fig. 2.

The main portion or body of my improved form of wire-stretcher consists, essentially, of a block, 10, formed with two longitudinal parallel grooves or ways, 11, in which there are mounted racks 12, said racks being in turn formed with longitudinal grooves 2, within which there is fitted a plate, 3, that is secured to the central rib, 4, of the block 10. The crank-shaft 14 is mounted in proper bearings formed in standards 15, said shafts being provided with a handle, 17.

Upon the shaft 14 there is loosely mounted a pinion, 18, which is arranged so that it may be moved into engagement with either one of the racks 12, being held to the required end of the shaft 14 by a pin, 5, which is passed through the shaft and arranged to enter a recess, 6, formed in the hub of the pinion 18. The outer faces of each of the racks 12 are formed with ratchet-teeth 19, said teeth being engaged by pawls 20, that are fixed to the outer edges of the block 10. The racks 12 carry fixed inwardly-extending jaws 21, upon which there are pivotally mounted swinging jaws 22, that are formed with upwardly-extending arms 23, grooves 24 being formed in the upper faces of the arms 23. To each end of the block 10 there is secured a bail or loop, 25.

The operation of the implement is as follows: Attaching-wires 26 are secured to the bails 25, and brought into engagement with any proper stationary objects, such as the posts 27, that are shown in Fig. 1. The broken ends of the wire to be stretched are then brought into engagement with the jaws 21 and 22, being passed over the arms 23 before entering the bite of the jaws, so that the more pressure there is upon the arm 23 the greater will be the grip or bite of the jaws. After the wires have been placed as described, the shaft 14 is rotated so that the pinion 18 may be made to retract one of the racks 12, said rack being held to the position to which it is moved by its pawl 20. After one length of wire has been properly stretched, the pin 5 is withdrawn, and the pinion moved into engagement with the opposite rack 12, after which the crank-arm is turned in an opposite direction and the second end of the wire is drawn in, the two ends of wire being wound together as soon as they have been brought together and there is sufficient wire to form a twist or knot.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a wire stretching machine, the combination, with a shaft carrying a movable pinion, of racks carrying clamping-jaws and pawls arranged to engage with ratchet-teeth formed in the racks, substantially as described.

2. The combination, with a block carrying bails or loops 25, and longitudinally grooved, of racks mounted within said grooves, a crank-shaft carrying a pinion, said shaft being mounted in standards secured to the block, pawls 20, arranged to engage with ratchet-teeth formed in the racks, and clamping-jaws fixed to opposite ends of the racks, substantially as shown and described.

3. In a wire-stretching machine, the combination, with a support, of sliding racks provided with inwardly-projecting stationary jaws, movable jaws pivoted on the stationary jaws and provided with upwardly-extending arms, and means for operating the said racks, substantially as herein shown and described.

ANDREW B. GRAHAM.

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