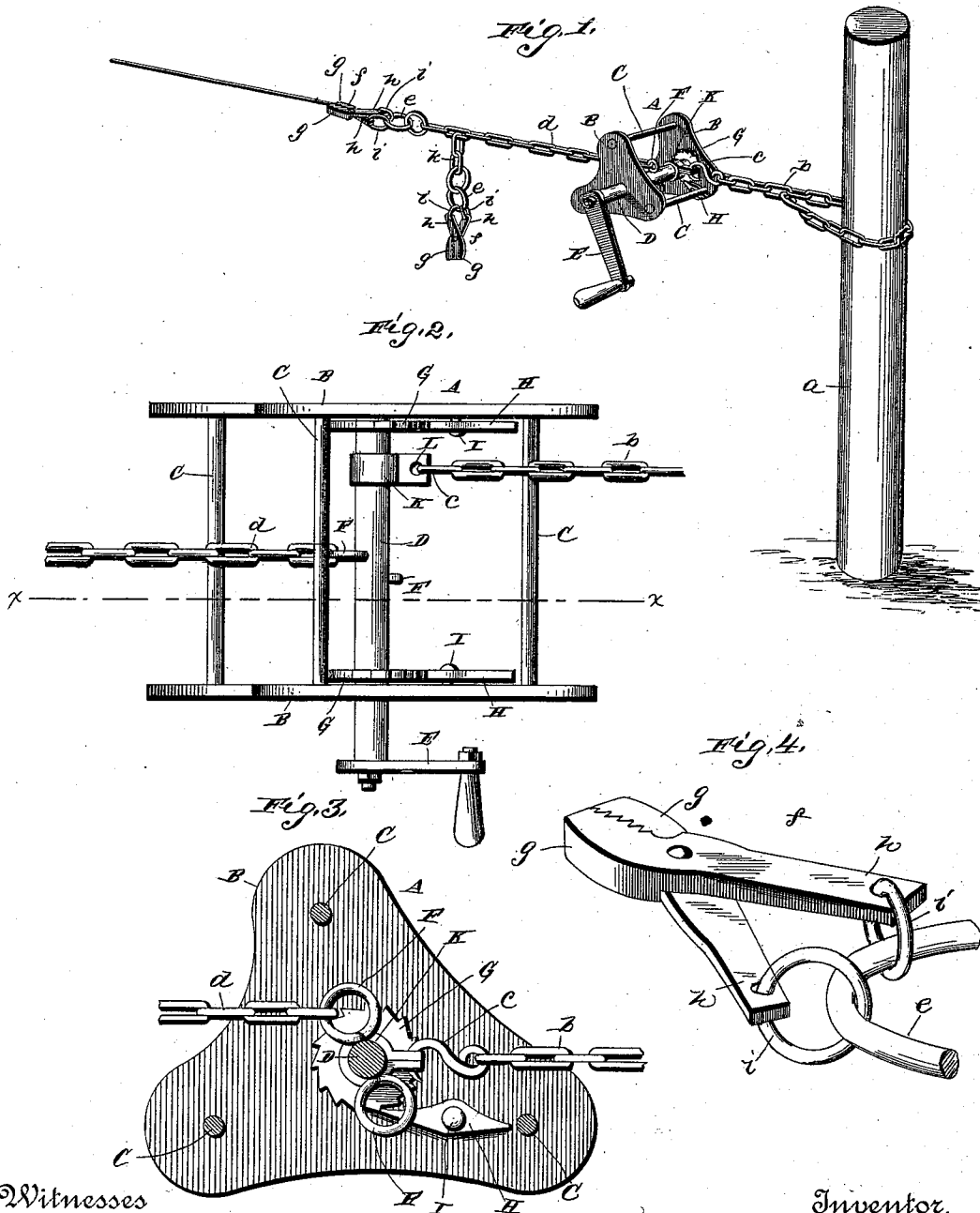


(No Model.)

F. O. BJUGSTAD.
WIRE STRETCHER.

No. 378,036.

Patented Feb. 14, 1888.



Witnesses

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UNITED STATES PATENT OFFICE.

FREDERICK O. BJUGSTAD, OF WATSON, MINNESOTA.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 378,036, dated February 14, 1888.

Application filed September 12, 1887. Serial No. 249,481. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK O. BJUGSTAD, a citizen of the United States, residing at Watson, in the county of Chippewa and State of Minnesota, have invented a new and useful Improvement in Wire-Stretchers, of which the following is a specification.

My invention relates to an improvement in wire-stretchers adapted for use in building wire fences; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of a wire-stretching device embodying my improvements, illustrating the manner of using the same. Fig. 2 is a top plan view of the same. Fig. 3 is a sectional view taken on the line *xx* of Fig. 2. Fig. 4 is a detached perspective view of one of the clamps.

A represents a frame which comprises a pair of triangular plates, B, connected together at their corners by means of rods or bolts C.

D represents a shaft which is journaled in central openings in the plates B, and has one end projecting beyond one of the said plates and provided with a removable crank, E. From opposite sides of the shaft D, near the center thereof, project eyes F.

G represents a pair of ratchet-wheels which are rigidly attached to the shaft and bear against the opposing inner sides of the plates B. Dogs or detents H are pivoted on bolts or pins I, which are attached to the plates B, and the said dogs or detents are adapted to engage the ratchet-wheels G.

K represents a ring or collar which is fitted loosely on the shaft, is free to rotate thereon, and is provided at one side with an eye, L.

a represents a stake which is driven in the ground at a suitable distance beyond one end of the proposed line of fence. A chain, *b*, is attached to the said post, and is provided with a hook, *c*, which engages the eye of the ring K. A chain, *d*, has a hook at one end, which engages one of the eyes F of the shaft, and to the outer end of the said chain is attached a ring, *e*, of suitable size.

f represents a wire-clamping device, comprising a pair of pivoted jaws, *g*, having their opposing inner edges serrated and provided

with diverging arms *h*, which are connected to the ring *e* by means of links *i*. One of the wires which is to be stretched is engaged by the clamping-jaws *g*. Another chain, *k*, has a hook which engages one of the links of the chain *d*, and to the said chain *k* is attached a wire-clamping device similar to the one previously described, which wire-clamping device engages another of the fence-wires. As many of these chains *k* and clamps may be employed as are rendered necessary by the number of wires to be stretched, there being a clamp for each wire.

In order to stretch the wires, it is only necessary to rotate the shaft D by turning its crank-handle, thereby causing the chain *e* to be wound up on the shaft, and consequently stretching the wires, as will be very readily understood. As the shaft rotates, the pawls or dogs engage the ratchet-wheels, and thereby prevent the shaft from rotating in a retrograde direction when the operator releases his hold on the crank, and consequently prevents the wires from being slackened. While the wires are thus stretched they may be readily attached to the fence-posts by means of the staples or keepers commonly employed for this purpose.

It will be understood that while the operator has hold of the crank-handle the frame will be maintained in the position shown in Fig. 1.

Duplicate eyes F are provided for the shaft D, to enable two chains, *d*, to be attached thereto when the device is to be employed for stretching two wires simultaneously in opposite directions.

From the foregoing description and by reference to the drawings it will be learned that as both the anchoring and stretching chains are attached to the shaft D almost the entire strain consequent upon the stretching of the wires is borne by the said shaft and very little strain is imposed upon the frame. This enables the frame to be made very light and at a slight cost, thereby enabling the device to be carried about without fatigue and reducing the cost to a minimum.

Having thus described my invention, I claim—

1. In a wire-stretching device, the combination of the frame A, the shaft B, journaled therein, and having the ratchet-wheels and the

eyes adapted for the attachment of a hooked chain, for the purpose set forth, the dogs or pawls pivoted to the frame and adapted to engage the ratchet-wheels, and the ring fitted loosely on the shafts, and also adapted for the attachment of a hooked chain, substantially as described.

2. The combination of the frame A, the shaft journaled therein, having the crank-handle and provided with the ratchet-wheels, the pawls or dogs pivoted to the frame and engaging the ratchet-wheels, the ring K on the shaft, the chain connecting said ring to a fixed point, and the chain e, attached to the said shaft, adapted to

be coiled thereon when the shaft is rotated, and provided with the wire-clamping device, and the supplemental chains k, attached to the chain e and provided with the independent wire-clutching devices, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

FREDERICK O. ^{his} X Bjugstad.
mark.

Witnesses:

HENRY AKER,
ELIAS JACOBSON.