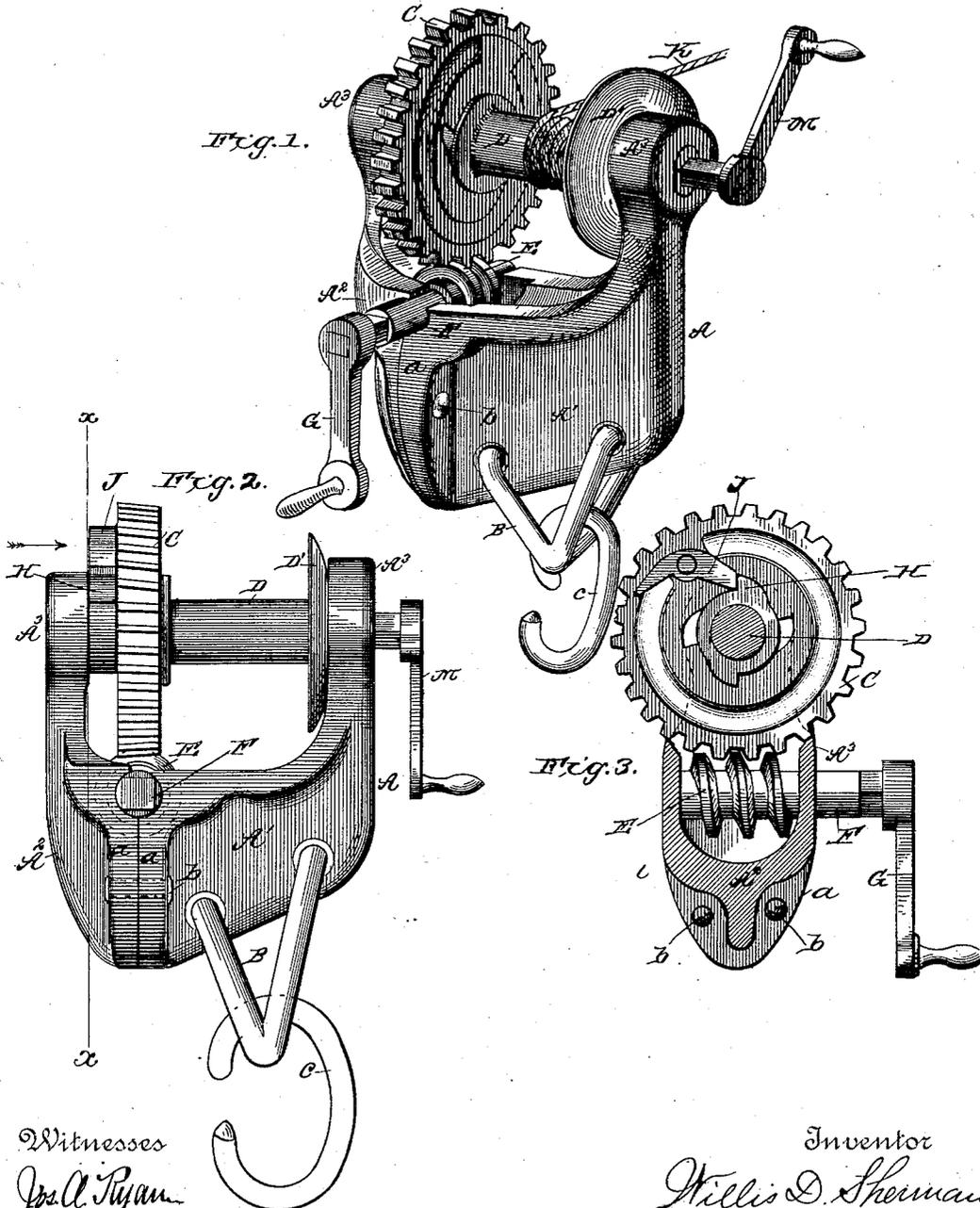


(Model.)

W. D. SHERMAN.
WIRE STRETCHER.

No. 353,383.

Patented Nov. 30, 1886.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIS D. SHERMAN, OF DIXON, ILLINOIS.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 353,383, dated November 30, 1886.

Application filed October 1, 1885. Serial No. 178,750. (Model.)

To all whom it may concern:

Be it known that I, WILLIS D. SHERMAN, a citizen of the United States, residing at Dixon, in the county of Lee and State of Illinois, have invented certain new and useful Improvements in Wire-Stretchers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention has reference to machines for tightening fence-wire, and pertains more especially to certain novel mechanism for conveniently and forcibly tightening such wire.

In the drawings, Figure 1 is a perspective view embodying my invention. Fig. 2 is a rear view of the same. Fig. 3 is a section on the line *xx* in Fig. 2.

A is the main plate, provided with the link B and hook *c* as a means of attachment to fixed objects. The plate A is formed of the two parts A' and A², to permit the placing in position of the other devices. The parts A' and A² have formed thereon the abutting flanges *a*, and are held together by means of bolts *b*, passed perpendicularly through such flanges.

D is a shaft journaled at each end in the projected ends A² of the plate A, and is furnished with a circular plate, D', to prevent the draft-rope coiling against the plate A.

C is a gear-wheel, pivoted loosely on the shaft D, and adapted to be actuated by the worm E, formed on the shaft F.

The shaft F is seated pivotally in the parts A' and A² of the plate A, and is held in place by the gear C, and is furnished with the crank G. A lug, H, is formed on the shaft D, and a dog, J, is pivoted on the side of the gear C in such relation to said lug as to be readily turned into engagement therewith, in which position the rotation of the gear imparts a rotary motion to the shaft D. A rope or chain, K, is suitably attached at one end to the shaft D, and at the other end to the wire to be drawn.

It is obvious that the turning of the crank G will cause the worm E to rotate the gear C, and by means of the leverage exerted both through such crank and gear cause the shaft D to rotate with great force and exert an immense drawing power on the wire through the medium of the rope or chain K. When a sufficient degree of tautness has been attained and the wire fastened, a slight tap on the free end of the dog J will throw the latter out of engagement with the lug H on the shaft D, and by grasping the rope K it can be easily unreeled, the long end of the dog J holding the same out of engagement by its weight.

The device is portable and convenient, and is operative in any position.

The worm E acts as a lock upon the gear C, and at all times when the dog J is in engagement with the lug H will hold the wire taut without the interposition of ratchets.

The immense leverage exerted through the crank G results in a very slow winding upon the shaft D, and to expedite such winding in the earlier stages of drawing the wire, and when the resistance of the latter is comparatively slight, I place a crank, M, on the end of the shaft D, with which, by leaving the dog J disengaged, the slack of the wire may be rapidly taken up, and when the resistance of the wire becomes too great for the single crank M the dog J is thrown into engagement with the lug H, and the operation completed by the worm and gear mechanism.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. In a wire-tightener, the combination of the parts A' A², which form the plate A and have projected ends A², with the shaft F, journaled in said parts and having worm-gear E, and the shaft D, journaled in the ends A², and having the gear C, loosely mounted thereon and provided with a stop, all substantially as shown and described.

2. In combination with plate A, consisting of the part A' A², united as described, and the shaft F, having worm-gear E, the shaft D, provided with lug H, and the gear C, mounted

on said shaft and having the dog J, and engaging with said worm-gear, substantially as described.

3. In a wire-tightener, the combination, substantially as described, of the several parts—viz., the plate A, consisting of parts A' A², carrying link B, and having projected ends A³, the shaft F, having worm-gear E, and journaled in parts A' A², the shaft D, jour-

naled in parts A³, and having plate D', and lug H, and the gear C on said shaft, provided with dog J, substantially as set forth.

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

WILLIS D. SHERMAN.

Witnesses:

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