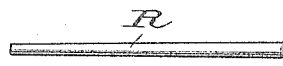
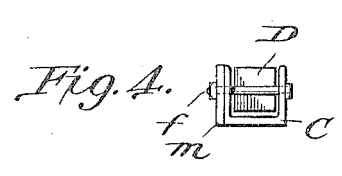
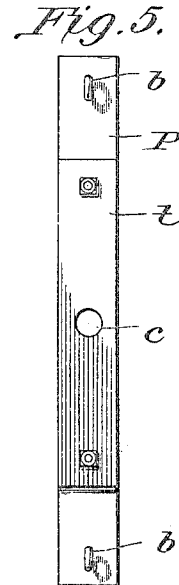
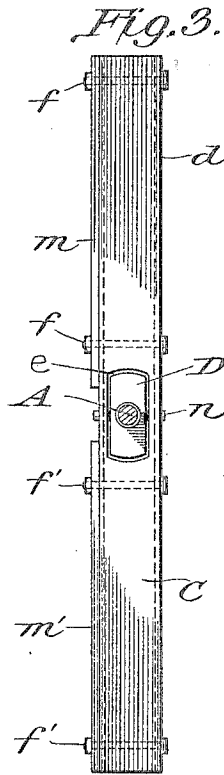
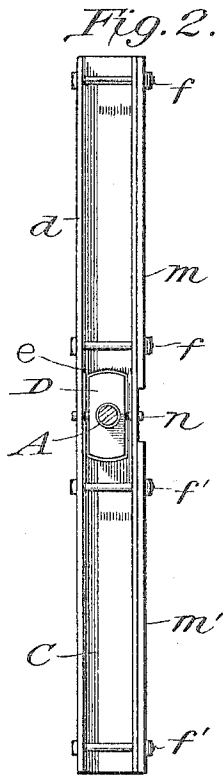
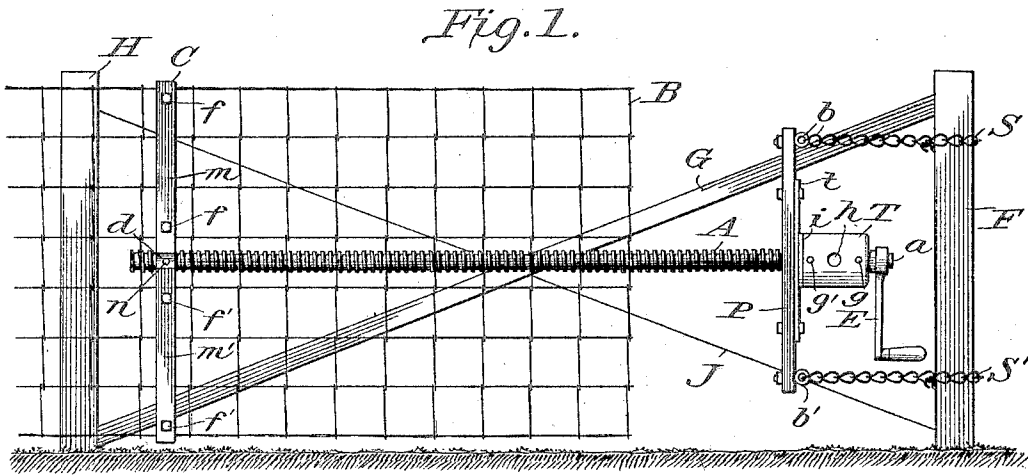


W. R. VAN.
WIRE STRETCHER.
APPLICATION FILED MAY 29, 1905.



Witnesses:
J. W. Straight
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Fig. 6.

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UNITED STATES PATENT OFFICE.

WILLARD R. VAN, OF WAVELAND, IOWA.

WIRE-STRETCHER.

No. 802,435.

Specification of Letters Patent.

Patented Oct. 24, 1905.

Application filed May 29, 1905. Serial No. 262,956.

To all whom it may concern:

Be it known that I, WILLARD R. VAN, a citizen of the United States of America, residing in the township of Waveland, in the county of Pottawattamie and State of Iowa, have invented certain new and useful Improvements in Wire-Stretchers; and I do 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 the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in wire-stretchers; and it consists in the peculiar construction and combination of the parts, that will be more fully set forth hereinafter and particularly pointed out in the claims.

The object of my invention is to improve the construction of wire-stretchers and to provide a simple, comparatively inexpensive, portable, and manually-operated device for stretching and tightening wire fence, especially woven-wire fence, when building or repairing same. I attain this object by the device illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my device applied. Fig. 2 is an enlarged detailed rear elevation of the nut or traveler on the screw-shaft and of the clamp. Fig. 3 is an enlarged detailed front elevation of the nut or traveler and clamp. Fig. 4 is an enlarged detailed top or plan view of the nut or traveler and clamp. Fig. 5 is a front elevation of the draw-head, and Fig. 6 is a side elevation of the lever employed when desired instead of the crank-handle to rotate the screw-shaft.

Similar letters refer to similar parts throughout the several views.

F and H represent ordinary fence-posts inserted in the ground. The fence-post F is located at one end of the fence and is braced by the brace G, extending from it to the fence-post H.

J is a wire which is stapled at one end to the fence-post F and at the other end to the fence-post H.

P is a draw-head which is provided with the strengthening-piece *t*, bolted thereto.

S and S' are chains secured to the draw-head by the eyebolts *b b'*.

A is a screw-shaft which passes loosely through the aperture *c* of the draw-head P and is provided at its front end with the crank-handle E.

T is a collar which is firmly secured, by means of the pins *g g'*, to the screw-shaft.

i is a washer which is fixed on the screw-shaft between the draw-head and collar.

D is a nut or traveler which is provided with a threaded aperture through which the screw-shaft extends, the thread of the screw-shaft being adapted to engage with and fit the thread of the aperture.

d is a draw-bar having the slot *e*, through which the screw-shaft extends, the draw-bar being pivoted to the nut or traveler D by the pivot *n*.

m m' are iron bars which are secured to the draw-bar by the bolts *f f' f' f'*.

h is an aperture which extends through the collar T and screw-shaft A.

R is a lever which is adapted to enter the aperture *h*.

C is a clamp composed of the draw-bar *d*, the bars *m m'*, and the bolts *f f' f' f'*.

B represents a piece of woven wire such as is employed in the construction of woven-wire fence and which is inserted in the clamp between the draw-bar *d* and the bars *m m'*.

The draw-head P is secured to the post F by means of the chains S S'.

It is apparent that if the screw-shaft be rotated in the proper direction it will cause the nut or traveler D, together with the clamp C, to move along the screw-shaft toward the draw-head P and that if the rotation of the screw-shaft be reversed the nut or traveler, together with the clamp, will move along the screw-shaft away from the draw-head.

The clamp C is pivoted to the nut or traveler D at a point midway between the ends of the nut or traveler, as shown. When stretching woven-wire fence, sometimes the tension is the greatest on the top portion of the fence and at other times on the bottom

portion thereof. This inequality of tension would cause the nut or traveler D as it moves along the screw-shaft toward the draw-head to bind if the clamp was not pivoted, as hereinbefore set forth, to the nut or traveler; but by reason of the clamp being pivoted to the nut or traveler the strain all comes on the pivot *n*, and thereby the binding of the nut or traveler is obviated.

10 In order to insert the woven-wire fencing between the draw-bar *d* and the bars *m m'*, as shown in the drawings, it is necessary to remove the bars *m m'* and then to place the woven-wire fencing on one side of the draw-
15 bar and after this has been done to replace the bars *m m'*. The bars *m m'* are adapted to fit either side of the draw-bar.

The lever R is longer than the crank-handle and it is employed to rotate the screw-shaft
20 by the insertion of its end in the aperture *h* when a greater purchase is required than the crank-handle affords.

It is evident when my device is anchored to a fence-post and connected to the end of a
25 strip of woven-wire fencing, as shown and set forth herein, and the other end of the strip of woven-wire fencing is stapled or anchored to another fence-post that the proper rota-

tion of the screw-shaft either by means of the crank-handle or lever will cause the strip of
30 woven-wire fencing to be stretched.

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

1. The combination of the screw-shaft A, 35 the nut D fitted to the screw-shaft, the draw-bar *d* pivoted to the nut and having the slot *e* through which the screw-shaft extends, the clamping-bars *m m'* which are bolted to the draw-bar, and the draw-head P through which
40 the screw-shaft passes loosely, substantially as described.

2. The combination of the screw-shaft, the nut fitted to the screw-shaft, the draw-bar
45 pivoted to the nut, the clamping-bars secured to the draw-bar, the draw-head through which the screw-shaft passes loosely, and the means for anchoring the draw-head, substantially as described.

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

WILLARD R. VAN.

Witnesses:

IRA CLARK PASCHAL,
WILLIAM WRIGHT HAWORTH.