

UNITED STATES PATENT OFFICE.

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WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 785,280, dated March 21, 1905.

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To all whom it may concern:

Be it known that we, RALPH H. TURLEY and REID K. GAMBRELL, citizens of the United States, and residents of Greeley, in the county of Weld and State of Colorado, have invented certain new and useful Improvements in Wire-Stretchers, of which the following is a specification.

Our invention relates to an improvement in fence-wire stretchers, the object being to provide a neat, simple, and inexpensive device of the "twin-hook" variety which can be easily manufactured and operated.

A further object is the provision of guiding and supporting means for the stretching arms or hooks whereby they are retained in proper position at all times and in operation are properly guided to alternately grasp and stretch the wire strand.

Another object resides in the provision of a rigid center bar to which the operating-lever is pivotally secured, the center bar also serving to support the guides or yokes in which the hooks are received.

To these ends our invention consists in certain novel features of construction and combinations of parts, such as will be more fully described hereinafter and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective of our invention, and Fig. 2 is a view in side elevation.

A indicates a rigid center bar which is provided at or near one end with laterally-extending yokes 1 1. These yokes or eyes extend in opposite directions from and in alignment with each other and may be rigidly secured to the center bar. To the opposite end of the center bar is secured a chain or other flexible connection 3, whereby the device is connected with a post or other suitable stationary object, as usual, the bar being apertured, as at 2, to afford a simple means for securing the chain thereto.

An operating-lever 4 embraces, preferably, the center bar at a point near the end at which the guides 1 1 are secured, but in the rear thereof, the lever projecting some distance on each side of the center bar, which passes between the sections of the lever, as shown,

whereby a firm and equal strain or tension is brought to bear on the stretching-arms, hereinafter described, without danger of exerting a torsional strain on the lever or stretching-arms. Atequidistant points on the lever from its pivotal point 5 are pivotally secured the rear ends of the stretching-arms 6 7, the arm 6 being slightly longer than is the arm 7; but it is quite immaterial which arm is made the longer. These arms from their pivotal points 8 and 9, the pivotal ends being received between the sections of the lever, extend off from the lever and through the yokes 1 1 and are provided at their outer free ends with the wire receivers or holders 11 11. Pivotally secured adjacent the holders are the automatic wire-clamps 12 12, the inner ends of which are cam-shaped and serrated, these ends extending into the holders, against which they impinge to grip the wire thereto. The outer ends of the wire-clamps are connected, by means of springs 13 13, to the respective arms 6 7 of the stretcher, whereby the clamps are normally caused to engage the holders.

The lever 4 is extended at one end to form a handle 14 to facilitate the operation of the device.

Having thus set forth the construction of our device, we will now describe its operation.

When it is desired to simply stretch a wire, as in fence-making, the device is secured to a post or stake by means of the chain 3. The wire to be stretched is then brought to the stretching-arms and is placed in each of the wire-holders 11 11, where it is automatically held by means of the spring-actuated clamps 12 12. The lever 4 is then reciprocated, causing the arms to travel back and forth, describing a flattened ellipse. The free end of the longer arm 6 always remains in advance of the free end of the short arm 7, and the elongated yokes retain the arms in their proper positions, at the same time permitting a limited lateral movement thereof and guiding them toward and from the wire. As one arm is forced forward the other arm is drawn rearwardly, thus taking up the slack in the wire and stretching it, since on the alternate forward movement each holder slides along the wire which is held therein, the wire

being drawn taut by the rearwardly-moving arm, the clamp allowing the arm to slide forward on the wire, but immediately clamping the wire to the arm upon the commencement of the rearward movement thereof, thus automatically gripping the wire and avoiding the necessity of clamping the wire by hand each time the lever is oscillated.

The rear head or holder of the shorter arm is beveled, as at 15, where it contacts with one edge of the longer arm to afford a suitable bearing-surface.

If it be desired to splice two wires, a clamp 16, secured to the end of the chain 3, is fastened to one of the wires, the other wire being held by the clamps 12 12, and the stretcher operated, as before described, to bring the two wires together, where they can be easily connected.

From the foregoing it will be seen that the arms take hold of the wire being stretched in a sort of hand-over-hand method, the shorter arm stretching forward and gripping the wire just behind the holder of the longer arm when the lever is moved in one direction and then being drawn rearwardly while the longer arm reaches along the wire to take a new hold, the wire always remaining in the holders during the stretching operation.

It is obvious that many changes might be made in the form and arrangement of the several parts described without departing from the spirit and scope of our invention, and hence we do not wish to limit ourselves to the precise construction herein set forth; but,

Having thus fully disclosed our invention,

what we claim as new, and desire to secure by Letters Patent, is—

1. A wire-stretcher comprising a suitably-pivoted lever, arms loosely secured to the lever, gripping means carried by and forming a part of the free end of each arm for retaining and clutching the wire, and yokes in which the arms are received and guided during their reciprocations.

2. A wire-stretcher comprising a suitably-secured rigid center bar, a lever pivotally secured thereto intermediate the ends of the bar, the lever extending on each side of the bar, an arm loosely secured to the lever on each side of its pivotal point, oppositely-extending yokes secured to the center bar, the arms received in and guided by the yokes, and gripping means carried by the free ends of the arms for engaging and alternately gripping the wire.

3. A wire-stretcher comprising a rigid center bar, a flexible connection secured to one end thereof, guiding means secured near the opposite end thereof, a lever pivotally secured to the center bar in rear of the guiding means, arms loosely connected to the lever and engaged by the guiding means, and gripping means carried at the free end of each arm.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

RALPH H. TURLEY.
REID K. GAMBRELL.

In presence of—

LINCOLN FISHBACK,
CHARLES D. TODD.