No. 649,045. Patented May 8, 1900.

B. D. ELLIOTT.

WIRE STRETCHER.

(Application filed Jan. 20, 1900.)

(No Model.)

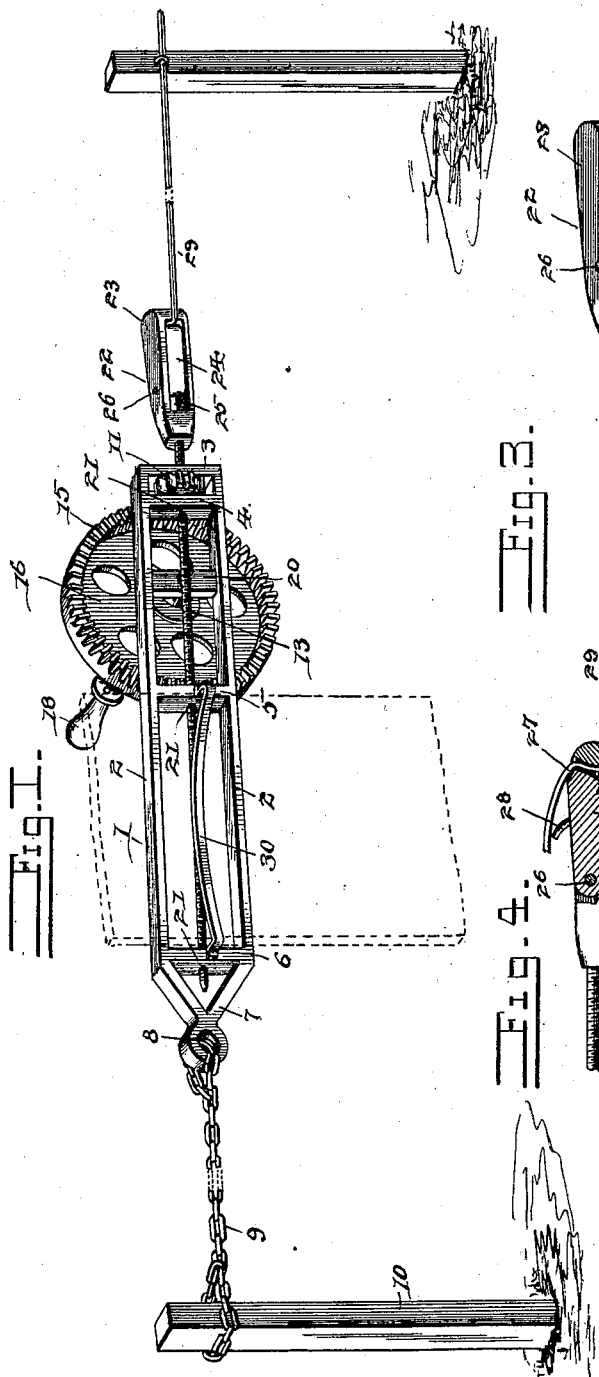

Fig. 1.

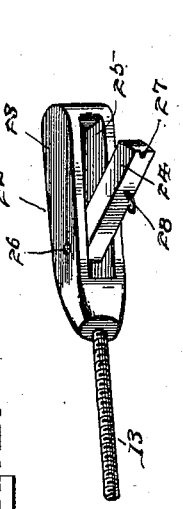

Fig. 3.

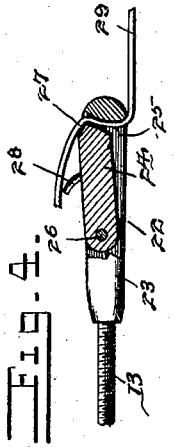

Fig. 4.

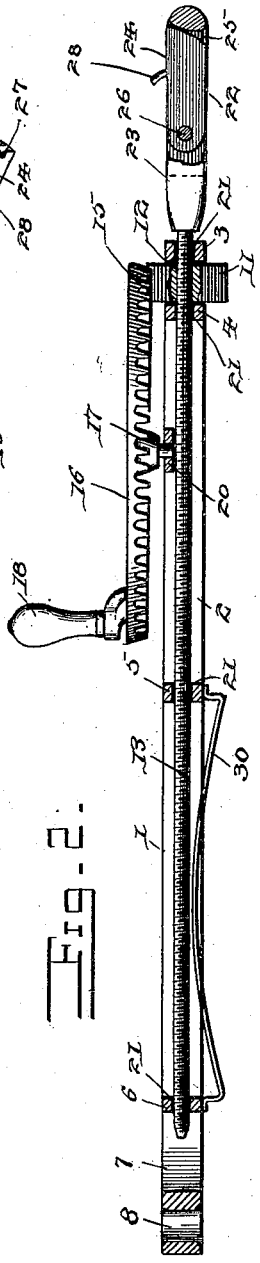

Fig. 2.

Witnesses
F. E. Alden.
H. J. Riley

B. D. Elliott Inventor

By Its Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

BENJAMIN DOUGLASS ELLIOTT, OF NUMBER ONE, TENNESSEE.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 649,045, dated May 8, 1900.

Application filed January 20, 1900. Serial No. 2,156. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN DOUGLASS ELLIOTT, a citizen of the United States, residing at Number One, in the county of Sumner and State of Tennessee, have invented a new and useful Wire-Stretcher, of which the following is a specification.

The invention relates to improvements in wire-stretchers.

The object of the present invention is to improve the construction of wire-stretchers and to provide a simple, inexpensive, and efficient device adapted to be conveniently and rapidly operated for stretching fence-wires to enable the same to be stapled or otherwise secured to a fence-post and capable of securely holding the said wires while the same are being fastened.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a wire-stretcher constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a detail perspective view of the outer end of the screw and the clamp. Fig. 4 is a detail sectional view showing the clamp engaging a wire.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates an oblong frame composed of side bars 2 and connecting-bars 3, 4, 5, and 6 and provided at one end with a triangular extension 7, having an eye 8, adapted to receive a chain 9 or other suitable device for securing the frame to a fence-post 10. The transverse bars 3 and 4 are located at the other end of the frame and are spaced apart to form a narrow transverse opening for the reception of a pinion 11, which has a threaded opening 12 for engaging a longitudinal screw 13, whereby the latter is moved outward and inward as the pinion is rotated. The pinion is provided with spur-teeth which mesh with corresponding spur-teeth 15, extending from the inner face of a gear-wheel 16, mounted on a stub-shaft 17 and provided with a crank-handle 18. The stub-shaft is secured to a transverse bar 20, located out of the plane of the screw, as clearly illustrated in Fig. 2 of the accompanying drawings. The transverse bar 5 is located near the center of the frame, and the transverse bar 6 is arranged at the end of the frame at the triangular extension 7. The longitudinal screw 13 extends through guide-openings 21 of the transverse bars, and it is provided at its outer end with a clamp 22, consisting of a body portion 23 and a pivoted dog 24, mounted in an opening 25 of the body portion of the clamp. The inner end of the body portion of the clamp is provided with a bore or opening for the reception of the outer end of the screw, which is fixed to the clamp, and the opening 25 extends longitudinally of the body portion. The dog is pivoted at its inner end on a transverse pin 26 or other suitable fastening device, and it is provided at its outer end with a wire-receiving notch 27 and a projection 28, located between the notch and the inner end of the door. The wire 29 is passed through the outer portion of the opening 25 and engaged with the outer end of the dog, which is beveled or cut away, as shown, and the strain on the wire will hold the dog firmly in engagement with it; but the wire may be engaged with the projection, whereby it may be subjected to any strain without liability of slipping. The clamp is readily engaged with a wire and is quickly detached therefrom, the projection serving as a convenient means for grasping the dog as soon as the wire is slackened. The screw, which extends the entire length of the frame when it is at the limit of its inward movement, enables the wire-stretcher to have great range in operating on fence-wires, and the gearing will enable the screw to be rapidly operated in stretching a wire and in running the screw outward preparatory to the operation of stretching. As soon as the wire is stretched to the desired tension the crank-handle of the gear-wheel may be released, as the wire-stretcher cannot slip and accidentally slacken the wire.

It will be seen that the wire-stretcher is exceedingly simple and inexpensive in construction, that it is light, strong, and durable, and

that it is rapidly and conveniently operated and is capable of firmly gripping a fence or other wire.

In order to prevent the wire-stretcher from twisting or rotating during its operation, it is provided with a resilient longitudinally-disposed bar 30, curved inward between its ends and having its terminals bent at an angle and attached to the cross-bars 5 and 6. The bar 30, which presents an inner convex face, is adapted to engage a plank or board inserted between it and the frame and arranged in an upright position. The plank or board is arranged between the resilient bar and the frame, with its lower end bearing against the ground, and it will retain the device in proper position. This construction will permit the wire-stretcher to be readily raised and lowered to position it properly with relation to the wire to be stretched. When the bar 30 is in its normal position, as illustrated in Fig. 2 of the accompanying drawings, its central portion projects inward beyond the plane of the adjacent faces of the side bars, so that it is adapted to engage the board or plank frictionally.

What is claimed is—

1. A wire-stretcher comprising a frame provided with guide-openings and having a transverse opening, a longitudinally-movable screw arranged in the guide-openings of the frame, projecting beyond one end of the same and provided with means for engaging a fence-wire, means for connecting the other end of the frame with a fence-post or other anchor, a pinion mounted in the transverse opening of the frame and having a threaded opening receiving the screw, and a gear-wheel mounted on the frame in a plane parallel with that of the said frame and meshing with the pinion, substantially as described.

2. A wire-stretcher comprising an oblong frame having longitudinally-alined guide-openings and provided with a transverse opening, a longitudinally-movable screw passing through the guide-openings of the frame and extending beyond one end of the same and provided with means for engaging a wire, a device located at the other end of the frame for connecting the same to a post or other anchor, a pinion arranged in the transverse opening of the frame and having a threaded opening receiving the screw, and a gear-wheel mounted on the frame in a plane parallel with that of the said frame and meshing with the pinion, substantially as described.

3. A wire-stretcher comprising an oblong frame composed of side bars and transverse bars connecting the side bars and provided with longitudinally-alined guide-openings, a longitudinally-movable screw extending through the guide-openings and projecting from one end of the frame, a pinion mounted between two of the transverse bars and having a threaded opening receiving the screw, and a gear-wheel mounted on the frame in a plane parallel with that of the said frame and meshing with the pinion, substantially as described.

4. A wire-stretcher provided at one side with a resilient bar, adapted to clamp a board or plank between it and the wire-stretcher, whereby the latter is prevented from rotating, substantially as described.

5. A wire-stretcher comprising a frame, stretching mechanism arranged at one end of the frame, means for connecting the other end of the frame with a post or anchor, and a curved bar bowed inwardly and connected at its ends to the frame and adapted to receive a plank or board, whereby the frame is prevented from rotating, substantially as and for the purpose described.

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

BENJAMIN DOUGLASS ELLIOTT.

Witnesses:
M. F. BLOODWORTH,
H. B. HALE.