

UNITED STATES PATENT OFFICE

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WIRE STRETCHER AND TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 647,401, dated April 10, 1900.

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To all whom it may concern:

Be it known that I, PHILIP E. GOLD, a citizen of the United States, residing at Sipe Springs, in the county of Comanche and State of Texas, have invented certain new and useful Improvements in Wire Stretchers and Tighteners; 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.

This invention relates to improvements in devices for stretching and tightening wires, and particularly the line-wires of fences and the like; and the object thereof is to provide a simple, cheap, and effective construction of implement, whereby the operation of stretching and tightening a wire may be conveniently and expeditiously performed, and to adapt the device for use also as a wire-cutter.

To this end the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter more fully described, and particularly pointed out in the appended claims.

In the drawings hereto annexed and forming a part of this specification, Figure 1 is a perspective view of a wire cutter, stretcher, and tightener embodying my invention. Fig. 2 is a side elevation looking toward the side opposite that shown in Fig. 1. Fig. 3 is a top plan view. Fig. 4 is an enlarged detail view, with parts in section, of the swiveled twisting-hook and its looped bearing.

Referring now more particularly to the drawings, wherein like reference-letters designate corresponding parts throughout the several views, A represents the handle of the stretching and tightening device, which is provided at its front end with an oblique downwardly-projecting extension B, terminating in a straight forwardly-extending arm C, arranged in a plane parallel with but below said handle and having a pointed end *d*, that is adapted to be thrust into a fence-post or other fixed support to assist in holding the tool stationary during the operation of stretching and tightening the wire. At a point just in rear of the oblique extension the handle is formed in one or both of its edges with a notch or notches *e*, with which coacts a cutting-blade *f* upon the front end

of an auxiliary handle G to form a wire-cutter operating in the usual manner. This auxiliary handle is pivoted to the main handle at *h*, adjacent to said cutting-blade, and is adapted to fold parallel therewith, and, if desired, the rear ends of said handles may be formed into a screw-driver bit *i* and nail-claw *j*, as shown, or other suitable auxiliary devices to adapt the tool for a variety of uses.

Projecting upwardly and forwardly at a substantially-oblique angle from the front end of the handle A is a bearing K, consisting of a metallic strap bent into the form of an open loop. The looped or bowed portion of this bearing stands outwardly above the oblique downwardly-projecting extension of the handle and is provided with an opening *l*, while the converging arms *m* thereof cross said extension and straddle the handle and are rigidly connected thereto by means of a rivet *n* or other suitable fastening device, stop-lugs *o* being formed on opposite sides of the rivet-hole on each side of the handle for the arms of the bearing to fit down between to reinforce the rivet and stay said bearing and prevent backward or forward movement of the latter. In the bearing is mounted a swiveled twisting-hook P, having at the base of its shank *q* a rectangular head *r*, surmounted by a flange or stop-collar *s*, and from the lower end of this head projects a stem *t*, which extends through the opening *l* in the looped portion of the bearing and serves as a journal whereby the hook is rotatably mounted on the bearing. This stem is threaded for a portion of its length to receive a nut *u*, by which it is detachably secured to the bearing. A wrench bar or handle V is removably fitted on the hook and is confined between the bearing and collar *s*. This bar is provided with a central rectangular socket *w*, which closely embraces the head *r*, so that by grasping the ends or handle portions of the bar the latter may be operated to rotate the hook and a powerful leverage exerted to effect an easy and convenient twisting and tightening of the wire. A ready and quick disconnection of the parts just described may be made by releasing the nut *u*, whereupon the stem of the hook may be withdrawn from engagement with the bearing and the wrench bar or handle slipped off the lower end of

the rectangular head. The space or opening between the stem or bill of the hook is made comparatively wide to prevent the coiled or twisted wire from hanging therein and permit of the same being readily released when the tightening and stretching operation is completed.

In operation the wire to be tightened and stretched is inserted in or looped about the hook and drawn as tightly as possible by means of the tool. The pointed end of the arm C is then forced into the side or face of the fence-post or other fixed support to assist in holding the tool stationary and the wrench-handle operated to rotate the swiveled hook in the proper direction to twist or wind up the wire until it is stretched to the desired tension. When this is done, the wire is stapled or otherwise secured to the fence-post and the tool removed.

The tool may also be employed for taking up the slack in fence-wires already in use and securing the same without the use of staples or similar fastenings. This is accomplished by twisting the ends of a short piece of wire about the fence-wire, extending said short piece of wire around the opposite side of the post from the fence-wire, and then engaging the hook of the tool with the loop of the piece of wire and twisting the same, so as to cause it to firmly clamp the post and draw the fence-wire to the proper tension.

The projection of the bearing outwardly above the oblique extension of the handle provides a clearance-space which allows of a free movement and manipulation of the wrench-bar without interfering with the handle or adjacent parts of the tool.

It will thus be seen that my invention provides a simple, cheap, and efficient device whereby the operation of stretching and tightening wires to any required tension may be quickly and conveniently effected, and it will of course be understood that while the construction of tool shown is deemed preferable changes in the form, proportion, and minor details of construction may be made within the scope of the invention without departing

from the spirit or sacrificing any of the advantages thereof.

Having thus described the invention, what is claimed as new is—

1. A wire stretcher and tightener, comprising a handle having a bearing, a swiveled hook provided with a wrench-head, a collar at the upper or outer end of the head and a threaded stem projecting from the lower or inner end of the head and mounted in an opening in said bearing, a nut applied to the stem, and a wrench-bar having a socket confined between the bearing and collar and engaging said wrench-head.

2. A wire stretcher and tightener, comprising a handle having at its front end an oblique downwardly-projecting extension terminating in a pointed arm, a bearing projecting obliquely in an upward and forward direction from the said front end of the handle above the oblique extension thereof, a swiveled hook removably mounted in the outer end of the bearing and provided with a wrench-head, and a wrench-bar having a socket to engage said head.

3. A wire stretcher and tightener, comprising a handle having at its front end an oblique downwardly-projecting extension terminating in a pointed arm, a bearing projecting obliquely in an upward and forward direction from the said front end of the handle above the oblique extension thereof, and comprising a looped strap having its arms straddling the handle and secured thereto, lugs upon the handle to bear upon said arms and prevent movement of the same and reinforce the fastening member thereof, a swiveled hook journaled in and removably secured to the bowed or looped portion of the bearing and provided with a wrench-head, and a wrench-bar having a socket to engage said head.

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

PHILIP E. GOLD. [L. S.]

Witnesses:

E. J. MARKS,
BERTIE SMITH.