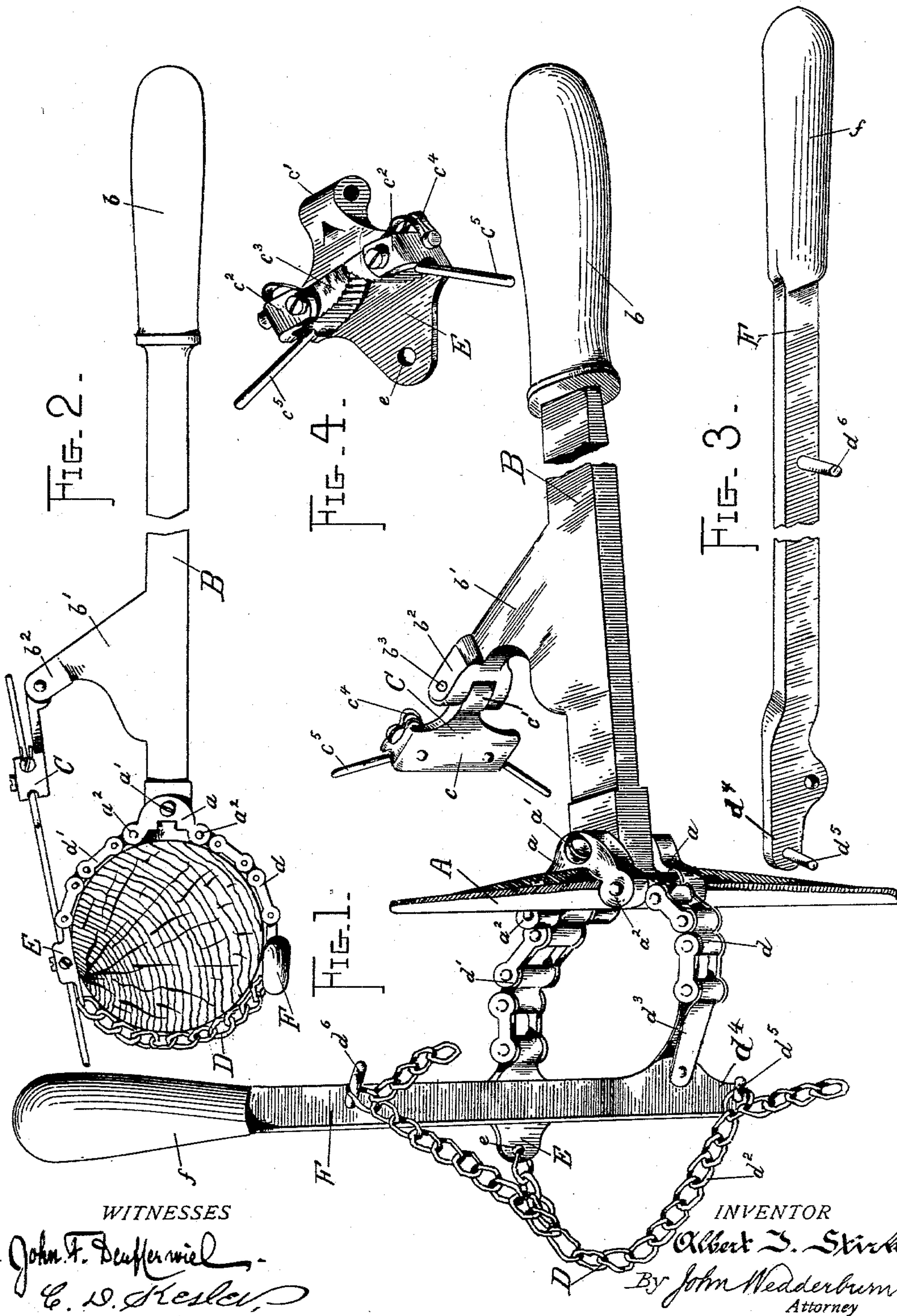


(No Model.)

A. J. STIRK.  
WIRE STRETCHER.

No. 593,250.

Patented Nov. 9, 1897.





# UNITED STATES PATENT OFFICE.

ALBERT J. STIRK, OF BOSTON, MASSACHUSETTS.

## WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 593,250, dated November 9, 1897.

Application filed January 9, 1897. Serial No. 618,563. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT J. STIRK, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, 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.

This invention relates to improvements in wire-stretchers; and it consists of the combination, with a pivoted lever, of means for securing the same to a fence-post and a wire-clamp mounted on said lever.

The invention also consists of certain other novel constructions, combinations, and arrangements of parts, all of which will be hereinafter more fully described and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 represents a perspective view of my device. Fig. 2 represents a top plan view of my improvement applied to a post, the latter being shown in section. Fig. 3 represents an enlarged detail perspective view of the locking-lever, and Fig. 4 represents an enlarged detail perspective view of one of the wire-clamps.

A in the drawings represents the frame or base; B, the operating-lever, pivotally mounted thereon; C, the wire-clamp mounted on said lever; D, the securing-chain; E, the wire-clamp mounted on the same, and F the binding or attaching lever. The frame A is preferably elliptical in shape, so as to lie snugly alongside of the post to which the stretcher is to be applied and form a vertical brace for the lever B. Said frame is provided upon its back with two spaced lugs  $a$ , between which the end of the lever B is pivotally mounted by a bolt or rivet  $a'$ . Said lever B is provided at its outer free end with a handle  $b$  and near its pivot-point with a projecting shoulder  $b'$ , having two spaced apertured lugs  $b^2$  at its outer end.

The wire-clamp C comprises a base-plate  $c$ , having an apertured lug  $c'$ , that is pivotally mounted between the lugs  $b^2$  by a pivot-pin  $b^3$ , and angular arms  $c^2$ , extending upward and inward from said plate  $c$ . Cams  $c^3$ , having milled faces, are journaled between the

arms  $c^2$  and the plate  $c$  upon each side of said frame, so as to meet in the center of the same.

The two cams are normally held in engagement with each other by bow-springs  $c^4$ , secured to said arms  $c^2$  and bearing with their free ends against said cams. Each of the cams is further provided with an operating-handle  $c^5$ , whereby it may be moved against the tension of its spring  $c^4$  to disengage it from its twin cam. The said frame A is provided upon each side with spaced lugs  $a^2$ , between which short chains  $d$  and  $d'$  are pivotally mounted. The said chain  $d'$  is provided at its outer end with a wire-clamp E, similar in every respect to the clamp C and provided with an aperture  $e$  for the attachment of the flexible chain D. This chain D is provided with a short section  $d^2$ , attached thereto some distance below the eye  $e$ . The outer end of the chain  $d$  is provided with a pivoted yoke  $d^3$ , between the arms of which the lever F is pivotally mounted. This lever F projects to one side of its pivotal point at  $d^3$  to form a projection  $d^4$ . This projection is provided with a laterally-extending pin or stud  $d^5$ , the use of which will be hereinafter more particularly described.

The long arm of the lever F is bent slightly with relation to the remainder of said lever and is provided with a laterally-projecting pin  $d^6$ , also adapted for the reception of the chain D. The end of said lever F is provided with an operating-handle  $f$ .

In operating my improved wire-stretcher the frame A is first secured to the fence-post by passing the chains  $d$  and  $d'$  about said post, pulling the lever F forward and hooking the end of the short chain  $d^2$  upon the pin  $d^5$ . The lever F is now vibrated until the chain  $d^2$  and the portion of the chain D connecting it to the clamp E are tightly bound about the post. The chain D is then hooked over the pin  $d^6$ , thus preventing the lever F from moving out of its adjusted position. By this means the whole device is tightly clamped to the post against any possibility of slipping. The wire is now passed through the clamps E and C and the lever B operated to stretch said wire. After the lever has been moved back once the clamp E effectively holds the wire while the lever is being moved forward



again, so that its clamp C may take a firm hold of the wire farther forward, the jaws of said clamp C automatically opening on this reverse movement of the lever to permit the wire to pass freely between them.

It will be observed from the foregoing description that the wires of the fence may be tightened to any desired degree and held in such stretched position until they may be nailed or otherwise secured to the post. The leverage of the lever B is such that the operation of stretching a wire, even to a breaking-point, is attended with very little labor and could be accomplished by a person wholly unskilled in the use of such machines. If at any time it is desired to disengage the cams from the wires, this is accomplished by moving the operating-handles  $c^5$ , connected to said cams.

I do not care to limit the application of my invention to the stretching of fence-wires alone, as the same may be aptly employed for stretching telegraph, telephone, and electric-light wires, or, in fact, any wires which require such operation before they can be secured by manual labor alone. The application of the device in position upon the post is accomplished in a quick and positive manner, and such device when so mounted is held firmly in position upon the post against any strain that may be brought to bear upon it by the stretching of the wire and operation of the lever. While this connection to a post is firm and positive, it at the same time may be instantly broken when it is desired to move the instrument either up or down upon the post or to remove it altogether therefrom by disengaging the chain D from the pin  $d^6$ .

By means of the peculiar formation of the lever F with the greater portion of its length out of the same plane with the end carrying the pin  $d^5$  I am enabled to operate said lever without any interference from the post, as it does not touch the same at any point except in proximity to the said pin  $d^5$ .

Having thus described my invention, what

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

1. The combination with a supporting-frame, of post-chains mounted thereon, a lever mounted on said chains for tightening them about said post, a pivoted lever also mounted on said frame, and a wire-clamp mounted on said latter lever, substantially as described.

2. The combination with a supporting-frame, of chains mounted thereon for connecting it to a post, a pivoted lever mounted on said chains for tightening the same, a wire-clamp also mounted on said chains, a pivoted operating-lever mounted on said frame, and a wire-clamp mounted in said latter lever, substantially as described.

3. The combination with a supporting-frame, of chains for securing the same to a post, a lever pivotally connected to the outer end of one of said chains, a wire-clamp connected to the outer end of the other chain, an attaching-chain connected to said wire-clamp and adapted to engage the pivoted lever, an operating-lever mounted on said frame, and a wire-clamp mounted on said latter lever, substantially as described.

4. The combination with a supporting-frame, of attaching-chains connected thereto, a pivoted lever mounted at the outer end of one of said chains and provided with lateral chain-receiving projections upon opposite sides of its pivot-point, and wire-clamps mounted on the outer end of the opposite chain, an attaching-chain connected to said wire-clamp and adapted to be hooked over the pins of the pivoted lever, an operating-lever mounted on said frame, and a wire-clamp mounted on said lever, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ALBERT J. STIRK.

Witnesses:

JAMES L. WALSH,  
THOS. C. KENNEDY.