

No. 757,213.

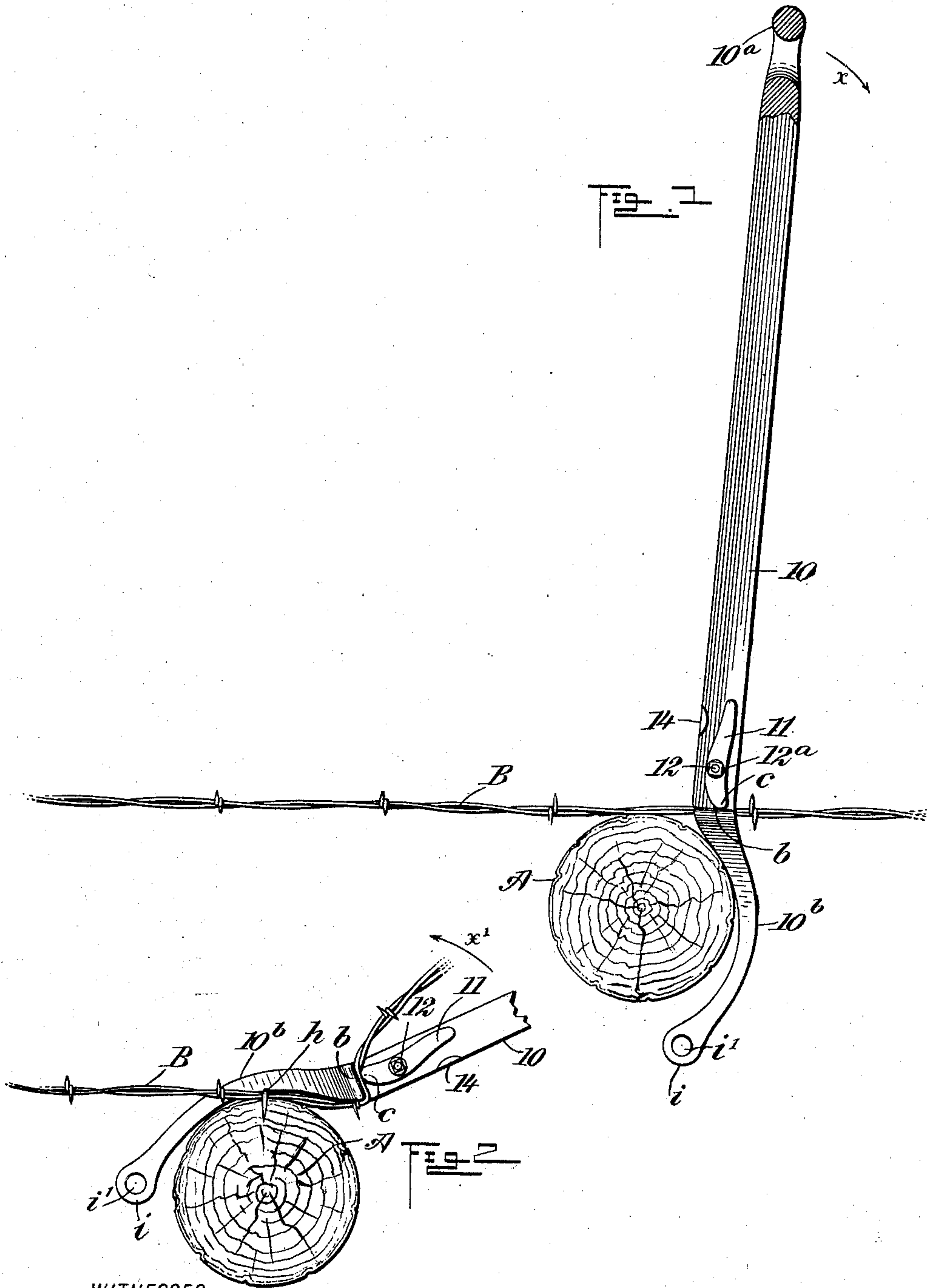
PATENTED APR. 12, 1904.

J. A. MILLER.
WIRE FENCE TOOL.

APPLICATION FILED MAY 19, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

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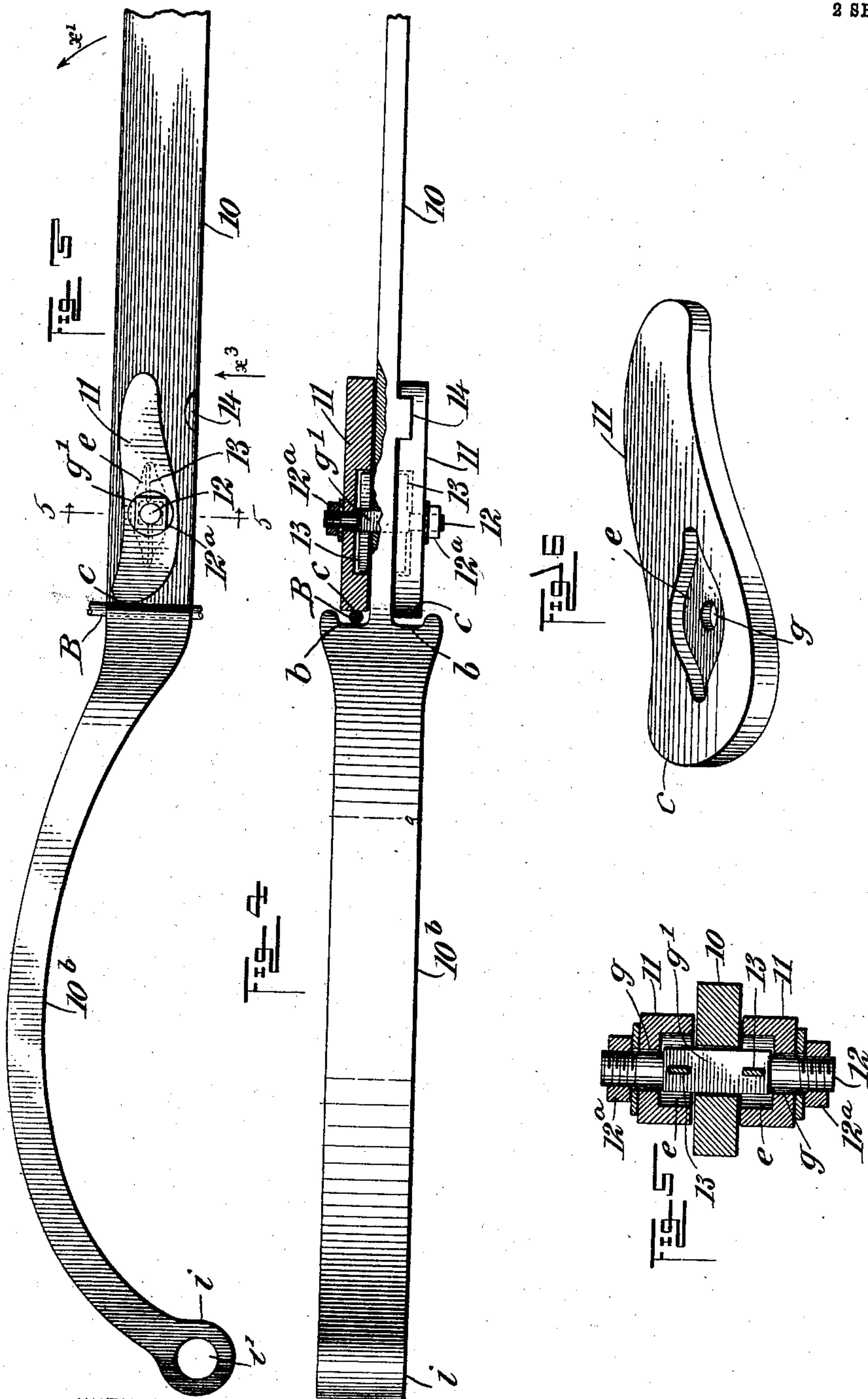
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UNITED STATES PATENT OFFICE.

JOHN A. MILLER, OF AVONDALE, COLORADO.

WIRE-FENCE TOOL.

SPECIFICATION forming part of Letters Patent No. 757,213, dated April 12, 1904.

Application filed May 19, 1903. Serial No. 157,772. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. MILLER, a citizen of the United States, and a resident of Avondale, in the county of Pueblo and State of Colorado, have invented a new and Improved Wire-Fence Tool, of which the following is a full, clear, and exact description.

This invention relates to tools employed in the erection and repair of wire fences, and has for its object to provide a tool of that character having novel details of construction that adapt it for efficient service as a wire-stretcher and a staple-pulling implement.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a top plan view showing the improved tool applied for stretching a fence-wire. Fig. 2 is a plan view showing the implement as applied for pulling staples. Fig. 3 is an enlarged plan view of the combination-tool, the handle portion being removed. Fig. 4 is a partly sectional side view of the same seen in the direction of the arrow x^3 in Fig. 3. Fig. 5 is a transverse sectional view substantially on the line 5 5 in Fig. 3, and Fig. 6 is an enlarged perspective view of one of a pair of clamping-dogs employed.

The lever 10 may be in the form of a flat metal bar having a grip-piece 10^a in the nature of a spade-handle formed on one end and a widened portion or head 10^b of suitable length at and near the opposite end thereof, and, as is clearly shown in Figs. 2 and 3, the head portion 10^b is bent laterally into an elliptically-curved form, so that it may be applied upon a fence-post A and dispose either flat side of the lever uppermost. The heel of the curved head 10^b merges into the lever 10, and the latter extends centrally therefrom, producing two shoulders b , one at each side of the lever, said shoulders having a shallow recess in each for the reception of a fence-wire B, as shown in Fig. 4.

Two similar clamping-dogs 11 are provided,

each dog having one end c rounded edgewise. At a suitable point near the edge c on each dog 11 a transverse perforation g is formed in the body of the dog, and the relative positions of said perforations serve to dispose the curved edges c eccentric thereto, as is indicated for one dog in Fig. 6.

At a proper distance from the shoulders b the lever-body 10 is transversely perforated near the transverse center for the reception of a pivot-bolt 12, the perforation being angular and a portion of the pivot-bolt between its ends being shaped to fit snugly in said perforation, as is shown by dotted lines in Fig. 3.

In the side of each clamping-dog 11 that in service contacts with a respective side of the lever 10 an oblong recess e is formed, the bottom wall of which is centrally apertured by the perforation g . The angular portion g' of the pivot-bolt 12 may extend a short distance each side of the lever 10; but the remaining end portions of the pivot-bolt are rendered cylindrical and threaded for a portion of their length, said threaded ends receiving the nuts 12^a.

The dogs 11 are respectively mounted upon the threaded end portions of the pivot-bolt 12, and the angular portions thereof occupy the recesses e , respectively, the bottom walls of said recesses contacting with the shoulders formed by the reduction of the bolt ends diametrically in rendering them cylindrical, and it will be seen that when the dogs are secured in place on the end portions of the pivot-bolt by the nuts 12^a they will have sufficient clearance from the sides of the lever 10 to permit them to rock freely, and the nuts may be also freely revolved on the bolt.

In the portions of the pivot-bolt 12 within the recesses e two transverse slots are formed wherein two similar plate-springs 13 are respectively inserted and secured at their longitudinal centers. These springs being positioned longitudinally of the oblong recesses have bearing at their ends on the side walls of said recesses, so that they are adapted to normally hold the cam edges of the dogs disposed nearly in contact with the bottom surfaces of the recesses in the shoulders b .

At the side edge of the lever 10 opposite the

end portions of both of the dogs 11 nearest to the grip-piece 10^a projections 14 may be formed or secured, which serve to limit the lateral vibration of either dog when it is rocked toward said projection for the release of the cam edge of the dog from a fence-wire B, which edge has by the action of the spring 13 been impinged upon the fence-wire, as will be further explained.

10 In Fig. 1 the device is shown as applied for stretching a fence-wire that has been secured by one end to one of a line of fence-posts and is to be drawn taut in contact with the fence-post A, to which it is to be secured in the usual manner. As shown, the concave side of the curved head 10^b is turned toward the side of the post and caused to have contact therewith, the degree of curvature of the head adapting it to engage with posts of different diameters. The operator holds the lever 10 horizontally and by pressing the uppermost dog 11 toward the projection 14 rocks the dog sufficiently to carry the cam-curved edge *c* away from the recess *b* that it is opposite, and thus produce a channel between said parts wherein the fence-wire that has been held near the post may be introduced. The dog 11 is now released, permitting the spring 13, which has been bent by the rocking movement of the dog, to resume its normal straight condition, whereupon the cam edge *c* of the dog will be pressed by the force of the spring into contact with the wire. At this stage of the operation the lever 10 is inclined away from the operator, as shown in Fig. 1, assuming that he is standing near the post A at the side whereon the fence-wire B is to be secured by staples, as usual, although the operator may stand upon either side of lever in operating it. The grip-piece 10^a is now pulled upon, so as to rock the lever toward the operator, as indicated by the arrow *x* in Fig. 1, which will cause the dog 11 to bite upon the wire and draw the latter along the post, so as to stretch it. The operator by rocking the implement upon the post as a fulcrum may give the lever 10 such a position that he can by standing with his body in contact therewith prevent the lever from rocking backward, which will leave his hands free to use a hammer and drive a staple over the wire into the post, thus securing the wire to the post. If the fence-wire is to be drawn taut in a direction opposite that indicated in the drawings, which is from left to right, this can be readily effected by turning the tool over and disposing the lower dog uppermost. The tool may now be applied to the side of a fence-post whereon a wire is to

be stretched and secured, and the lever 10 will obviously be extended in a direction opposite that shown in Fig. 1, so that its rocking movement upon the fence-post will pull a wire in a direction opposite that indicated in said figure—that is to say, from right to left.

If fence-wires are to be moved from posts to take up slackness or rebuild the fence, this may be done by using the tool as indicated in Fig. 2. The curved head 10^b in this service of the implement is placed upon the post A adjacent to the fence-wire B and on the same side of the post therewith, this engagement of the head being effected after the heel of the head portion 10^b has been hooked upon the wire near the post and the dog 11 that is uppermost is permitted to bite upon the wire. The lever 10 is now pushed or drawn in the direction of the arrow *x'* in Fig. 2, which will kink the wire where it engages with the shoulder *b* and the cam-face of the dog, while the free end of the curved head rocks upon the post and the wire is forced away from it, thus pulling the staple *h* from the post. A rounded enlargement or boss *i* may be formed on the free end of the curved head 10^b and said boss have a perforation *i'* therein to provide convenient means for hanging the tool upon a nail or the like projecting from a wall.

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

1. The combination with a lever, a laterally-curved head on one end of the lever, and a recessed shoulder on the head at each side of the lever where the head is joined thereto, of two dogs respectively pivoted by a single bolt on opposite sides of the lever, each dog having a lateral recess therein, and springs engaging the bolt and dogs within the respective recesses in said dogs, each dog having a cam-shaped end which coacts with a respective recessed shoulder to hold a wire.

2. The combination with a lever having a transverse grip-piece on one end, a laterally-curved head on the opposite end, terminating in a perforated enlargement, and a shoulder between the head and the body of the lever, of a spring-pressed dog pivoted on the lever and having a cam-shaped end, that coacts with the shoulder, to hold a wire.

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

JOHN A. MILLER.

Witnesses:

JOSEPH S. GREENE,
I. E. RICKER.