

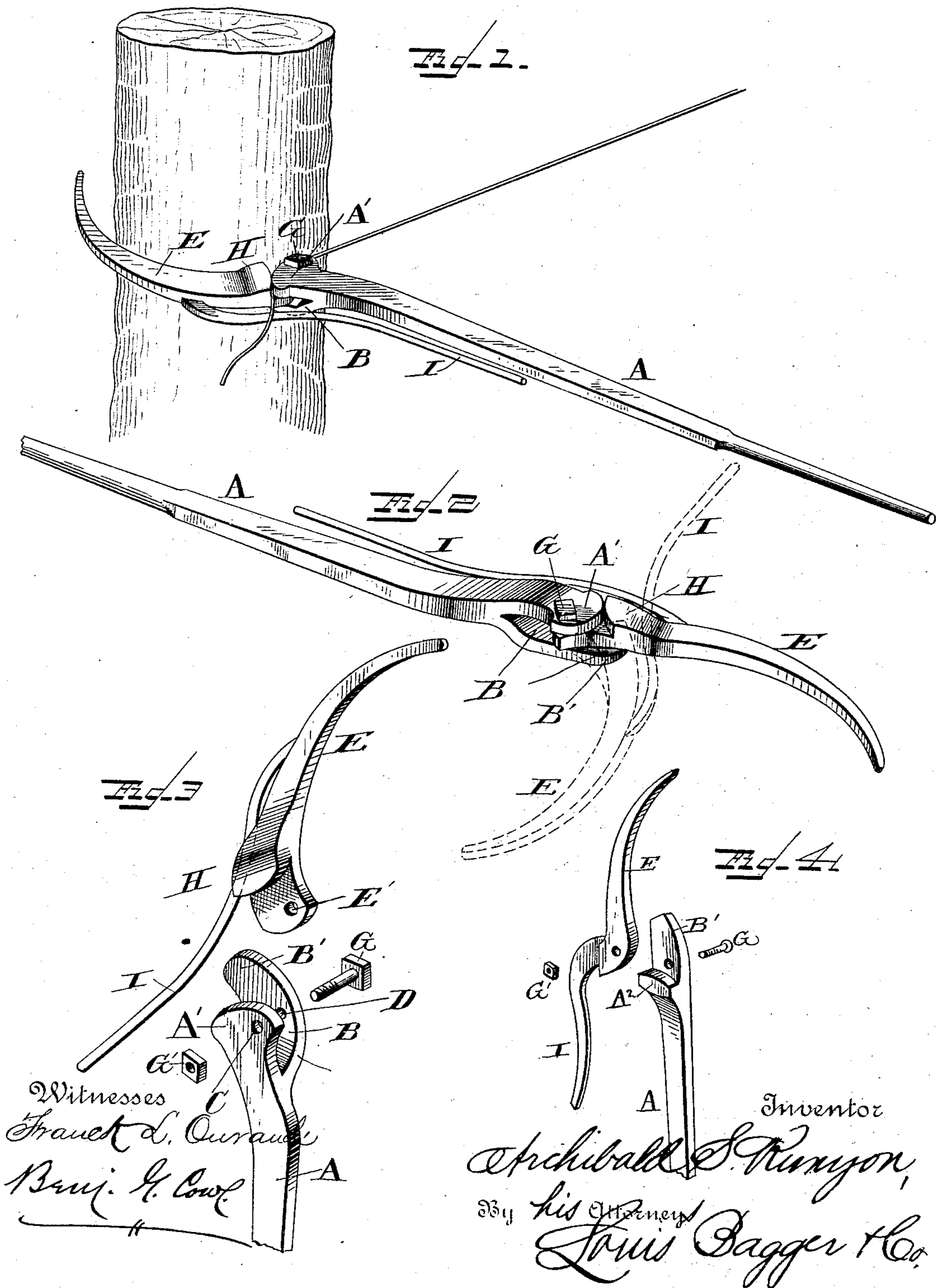
(No Model.)

A. S. RUNYON.

WIRE STRETCHER.

No. 375,956.

Patented Jan. 3, 1888.



UNITED STATES PATENT OFFICE.

ARCHIBALD S. RUNYON, OF ST. JOHN, MISSOURI, ASSIGNOR OF ONE-HALF
TO JOHN H. MORGAN, OF SAME PLACE.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 375,956, dated January 3, 1888,

Application filed June 25, 1887. Serial No. 242,470. (No model.)

To all whom it may concern:

Be it known that I, ARCHIBALD S. RUNYON, a citizen of the United States, and a resident of St. John, in the county of Putnam and State of Missouri, have invented certain new and useful Improvements in Wire-Stretchers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view showing my improved wire-stretcher in operation. Fig. 2 is a perspective view of the wire-stretcher alone, showing also in dotted lines the hook or finger swung open to receive the wire. Fig. 3 is a detail view of the stretcher, showing the finger separated from the lever or operating-handle; and Fig. 4 is a perspective view of a modified form of my invention.

The same letters of reference indicate corresponding parts in all the figures.

My invention relates to that class of wire-stretchers in which a finger is pivoted to the end of the handle in such a manner as to be able to clamp the wire between them; and it consists in the improved construction of the same, as will be hereinafter more particularly described, and pointed out in the claim.

Referring to the several parts by letter, A indicates the lever of my improved wire-stretcher, the said lever being usually made of iron, and, preferably, three feet in length, one-half inch thick, one and one-half inch wide at its inner widest end, and tapering to one-half inch at its outer end, the edges of the outer end portion of the lever being rounded off to form a convenient grasp or handle for the hand of the operator. The extremity of the wide inner end of the lever is curved or rounded, as shown at A', while to one side of the inner end of the lever is welded, or otherwise firmly secured, a block or piece, B, of metal, of about the same width as the wide inner end of the lever, this block B extending out from the point where it is welded to the end of the lever, and then extending parallel to the inner wide end of the lever A, but with its free end B' extending beyond the free inner end of the

lever, as shown most clearly in Fig. 3 of the drawings. The free end of this block B is slightly curved so as to lie along the side of the movable finger when the latter is extended out in its operative or closed position. The wide inner end of the lever, and also the block B, are each formed with a perforation or transverse opening, C D, the said apertures registering.

E indicates the curved finger or hook of the stretcher, this finger being preferably twelve inches in length, one-half inch thick, one and one-half inch wide at its inner end, and tapering and curved to its outer end, as shown in the drawings, this finger being also usually made of iron. The transverse aperture C of the inner end of the lever extends through the same to one side of the center of the width of the said end, as shown, the inner wide end of the finger E being likewise formed with a transverse aperture, E', to one side of the center of its width, so that when the finger is pivotally secured between the wide inner end of the lever A and the block B by means of a pivot-bolt, G, having a head on one end and a nut, G', screwed on its threaded end and passing through the registering apertures C and D and the transverse aperture E' in the wide inner end of the finger E, the finger is eccentrically pivoted in the inner end of the lever, and the inner part of the finger is formed with or has welded to it, on the side corresponding to the inner end of the lever, a cam projection, H, the projecting end of which is curved or rounded, as shown; and as the inner end of the finger is eccentrically pivoted to the inner end of the lever A, it will be seen that when the said finger is swung or turned in on its eccentric pivot-bolt the space between the rounded end of the said cam on the side of the finger and the rounded inner end of the lever will be increased as the finger turns on the pivot-bolt, so as to admit of the wire's being readily placed or inserted between the rounded end of the cam and the rounded inner end of the lever A, while when the finger is swung back or straightened out by the outer end of the lever A being pushed back the said rounded ends will approach until they are nearly in contact, so that when the lever is straightened out for operation to

stretch the wire the end of the wire to be operated upon will be firmly clamped between the rounded end of the clamping-cam on the side of the inner end of the finger and the clamping end of the lever A, as shown in Figs. 1 and 2 of the drawings. To the back of the curved finger is welded, or otherwise firmly secured, the inner end of a small bar or rod, I, the free end of which extends up back of the lever A, as shown, and the object of this clamping-bar will be hereinafter described.

In operation one end of the wire to be stretched is fastened to the post at the end of the fence, and the wire is then unrolled and carried along the line of posts along which the wires are to be stretched. The stretcher is taken to a post at a convenient distance from the first post. The wire to be stretched is clamped in the stretcher by first swinging partly forward the eccentrically-pivoted finger, so as to open the space between the clamping ends or jaws, when the wire is inserted or placed between the said jaws in toward the lever A, so as to clamp and hold the wire between the clamping-jaws. The end of the finger is now hooked around the post, and the outer end of the lever pushed forward, so as first to tightly bind the wire in the clamp of the stretcher, and as the forward motion of the lever is continued, making the post the center of the motion, the curved finger turning on and around the post, the wire will be gradually stretched until it comes alongside of or in contact with the post, when it is secured to the post by means of suitable staples.

In using the stretcher the operator is so situated that when the wire is drawn around against the post he can place his shoulder, back, hip, or knee against the handle A, according to the height of the wire he is stretching, and hold it fast, which leaves both his hands free for placing and driving in the staples to secure the wire to the post. By means of the small rod I the jaws of the device can be held clamped against the wire after it has been properly adjusted, and while the operator is placing himself in position against the handle, as above described, thus enabling one man to stretch the wire, hold it in position, and staple it fast to the post. If in taking hold of the wire with the clamp the hold should be taken too long or too short—that is, too far from or too near the end of the wire to stretch it properly—it is but a moment's work to move the stretcher backward or forward so as to get it to the right place on the wire, so that the wire can be drawn against the post upon which the stretcher is working, the finger being readily opened or closed by the small bar I. With a very little practice the operator will know readily where to take hold of the wire. It will be seen that the more the

strain on the outer end of the lever A is increased in stretching the wire the firmer will the wire be clasped between the clamping-jaws of the implement.

If preferred, I may construct the stretcher of the slightly-different form shown in Fig. 4 of the drawings, the only difference between this form and that shown in the first three figures being that a cam projection, A², is formed or welded on the side of the wide end of the lever instead of the block B, between which and the wide end of the lever the finger was formerly pivoted, this block B being dispensed with, and the cam projection H is left off the wide end of the finger E, the end of the cam projection A², which in this form is welded to the side of the wide end of the lever, near the extremity of the same, being slightly rounded, as shown, and being welded to the lever in such position that when the rounded end of the finger E is pivoted to the wide end of the lever by the pivot-bolt G eccentrically, as shown, the rounded inner end of the finger and the end of the cam projection A² form the clamp in which the wire is held. It will be seen that this form of my invention only differs slightly from that before described, the construction being somewhat simplified and the device thus cheapened.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of my invention will be readily understood. It will be seen that my improved wire stretcher is exceedingly simple and strong in construction, and can therefore be manufactured at a small cost, while at the same time it is exceedingly powerful and efficient in operation. It can be rapidly operated, working with great accuracy and power, as great leverage is obtained by the use of the long lever, the post serving as a fulcrum.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

In a wire-stretcher, the combination of the handle or lever A, the inner end of which is rounded, and a curved finger, E, pivotally secured to said end, said finger being provided with a cam projection upon its side corresponding to the inner end of the lever, and also with the small rod I, secured to the back of the curved portion, the free end of which extends up back of the lever, substantially as and for the purpose set forth.

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

ARCHIBALD S. RUNYON.

Witnesses:

J. E. PUTNAM,
D. E. STATTON, Jr.