

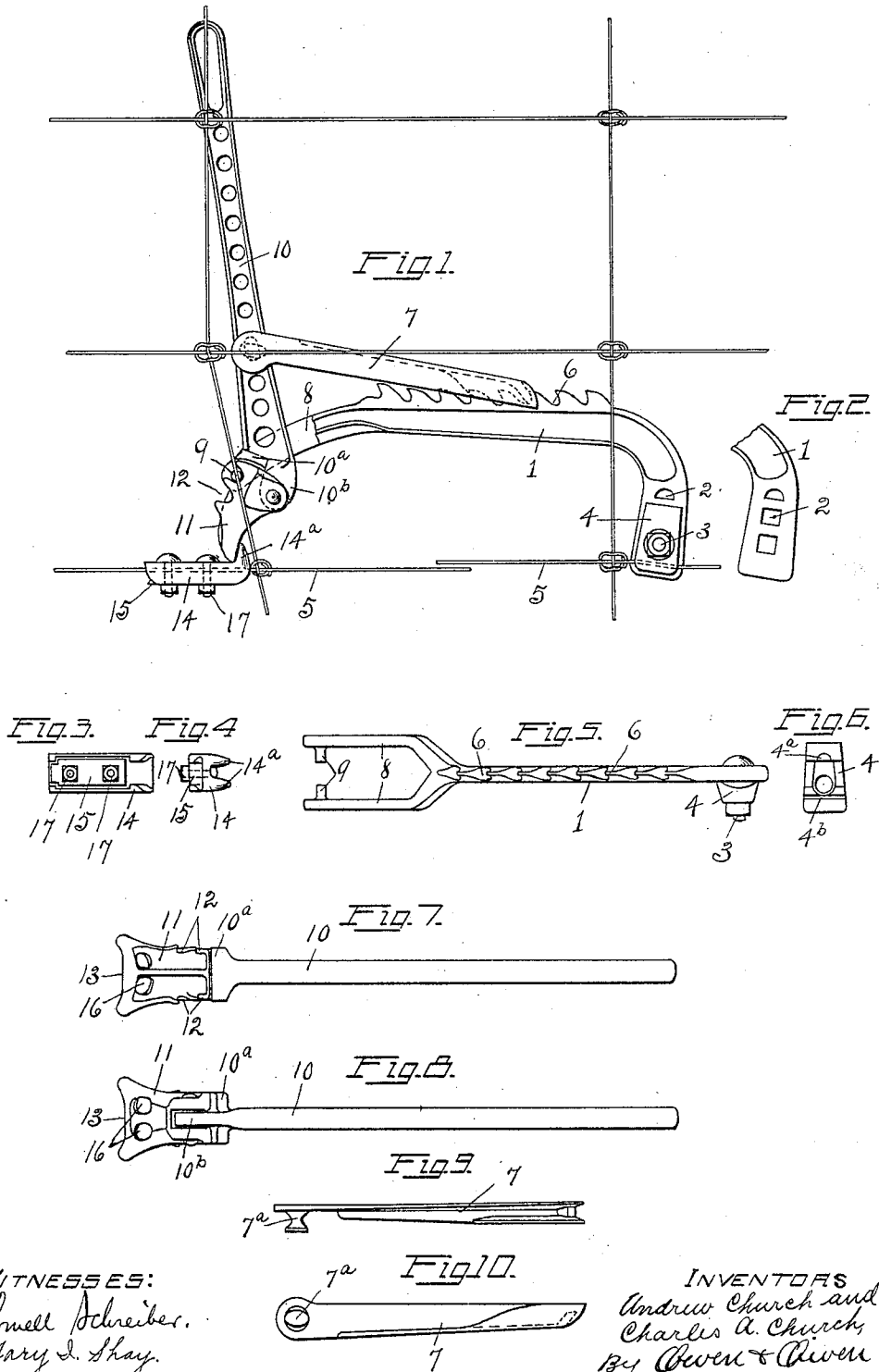
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A. & C. A. CHURCH.

COMBINED WIRE STRETCHER AND SPLICER.

APPLICATION FILED MAY 17, 1905.



WITNESSES:

Russell Schreiber.
Mary L. Shay.

INVENTORS
Andrew Church and
Charles A. Church,
By Owen & Owen
Their Attorneys.

UNITED STATES PATENT OFFICE.

ANDREW CHURCH AND CHARLES A. CHURCH, OF ADRIAN, MICHIGAN.

COMBINED WIRE STRETCHER AND SPLICER.

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Specification of Letters Patent.

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Application filed May 17, 1905. Serial No. 260,808.

To all whom it may concern:

Be it known that we, ANDREW CHURCH and CHARLES A. CHURCH, citizens of the United States, and residents of Adrian, in the county of Lenawee and State of Michigan, have invented certain new and useful Improvements in a Combined Wire Stretcher and Splicer; and we 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

Our invention relates to the class of wire-fence-working tools employed for stretching the line-wires thereof, and has for its object to provide a combination-tool of this class that may either be adjusted to draw the contiguous ends of a broken wire section together for the purpose of splicing the same or be used as a stretcher for drawing the line-wires of a fence taut between two supporting-posts preparatory to fastening the same thereto.

A further object of our invention is the provision of a tool of this class that has its parts so associated and connected as to enable it to be quickly and easily set up or be knocked down for the purpose of packing it in compact form when not in use or during shipment.

The operation and construction of the invention are fully described in the following specification and shown in the accompanying drawings, in which—

Figure 1 is a vertical elevation of the apparatus comprising my invention, showing it in operative engagement with a broken fence-wire and as drawing the ends thereof together for the purpose of splicing. Fig. 2 is an elevation of one of the ends of the bridging member with the clamping-plate removed. Figs. 3 and 4 are bottom plan and end views, respectively, of the clamping members employed for coacting with the stretcher-lever. Fig. 5 is a top plan view of the spanning member. Fig. 6 is a rear elevation of the clamping-plate employed at the forward end of the spanning member. Figs. 7 and 8 are rear and front views, respectively, of the stretcher-lever; and Figs. 9 and 10 are bottom and rear side views, respectively, of the pawl.

Referring to the drawings, 1 represents the bridging or spanning member of my inven-

tion, which is substantially L shape in construction and has its short arm provided with a series of apertures 2 for receiving a bolt 3, which bolt retains the movable clamping plate or jaw 4 in adjusted position against the face of said arm. The plate or jaw 4 is formed on its inner surface with a lug 4^a, as shown in Fig. 6, which is adapted to project in one of the apertures 2 of the member 1 and prevent a turning of said plate when the bolt 3 is tightened. The plate or jaw 4 is also shown as being formed on its inner side with a transverse groove 4^b to form a seat for a wire 5 as it is gripped between the coacting faces of the member 1 and jaw 4.

The long arm of the bridging member 1 is formed on its upper edge with a series of teeth, forming a rack 6, with which the pawl 7 engages, and terminates at its free end in a forked or bifurcated portion 8, which curves slightly inwardly, as shown. Formed in axial alinement on the inner surface of each of the arms of the fork 8 is a stud 9, which together act as a fulcrum for the lever of the tool. For the purpose of a combination-tool said lever consists of a handle 10 and jaw 11. The handle 10 has its lower end broadened to form a flat integral jaw 10^a for coacting with the gripping-surface of the jaw 11 and is provided with a downwardly-projecting bearing-lug 10^b, to which the jaw 11 is pivoted, as shown in Fig. 1. The jaw 11 is shown as provided on its rear side edges with two or more sets of notches 12, which form a seat for the fulcrum-studs 9 and permit of the ready adjustment of the length of the power-arm of the lever. The lower edge of the jaw 11 is concaved, as shown at 13, to adapt it to conform partially to the contour of a post against which it may bear when used solely as a stretcher and not in combination with the bridging member 1 as a splicing-tool. When used in the latter connection, the lower edge of the jaw 11 connects with a wire 5 to be stretched for the purpose of splicing through the medium of the companion members 14 and 15, the former of which has its forward end provided with the laterally-projecting hooks or lugs 14^a, which engage in the apertures 16, formed in the jaw 11. The members 14 and 15 are clamped together on an interposed wire by means of the bolts 17. The handle 10 is of a thickness adapted to permit its insertion between the ends of the lugs 9 when the parts are being assembled, after which it is raised and the proper set of

notches is placed in engagement with the fulcrum-lugs 9, as shown in Fig. 1. It is obvious for the purposes of the splicing-tool a single-piece lever might be used equally as well as the form of lever shown.

A pawl 7 is pivoted to the lever-handle for coacting with the teeth of the rack 6 and retaining the wire sections 5 in stretched position during the splicing operation. This pawl is made easily removable from the lever-handle by reason of its pivot 7^a being formed with an oblong head which passes through and locks on the opposite side of a correspondingly-shaped aperture formed in the lever-handle, as shown by dotted lines in Fig. 1.

The operation of our invention is as follows: When it is desired to draw the contiguous ends of a broken wire together for the purpose of splicing, the short arm of the bridging member 1 and the clamping members 14 and 15 are first secured in properly-spaced position thereto on opposite sides of the break, with the long arm of the member 1 disposed toward the clamping members 14 and 15. The handle 10 of the lever is then inserted between the studs 9 and raised in position for the notches 12 in its foot-piece to engage said studs, after which the nose of the lever is placed in engagement with the hooks on the clamping member 14, as shown in Fig. 1. This being done, the pivot 7^a of the pawl 7 is placed in engagement with the aperture provided therefor in the lever-handle, and its free end is placed in loose contact with the teeth of the rack 6, thus positioning the parts in readiness to draw the broken sections of the wire together when the lever is manipulated in the proper direction. Should the lever be used as a stretcher separate from the other parts, the wire to be stretched is placed between the coacting faces of the jaw 10^a on the lever-handle and the pivotal jaw 11 and the end of the jaw 11 placed in contact with a post to which the wire is to be fastened or other stationary object, which acts as the fulcrum therefor, so that the greater the pull on the lever the greater will be the gripping stress applied to the wire by the jaws.

It will thus be seen that we have provided an instrument that may be used either as a splicing or stretching tool, that is simple and efficient in its operation, and that is so constructed as to enable its parts to be easily

and quickly assembled in operative position or taken apart for the purpose of shipping or storing.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A tool of the class described, comprising a substantially L-shaped bridging member having a clamp at one end and a rack on a portion thereof, a lever removably fulcrumed to the free end of said member, a pawl in removable engagement with said lever and having its free end coacting with said rack, and means for gripping a wire having a projection thereon for coacting with the end of the lever.

2. A tool of the class described, comprising a substantially L-shaped bridging member having gripping means at one end, a rack formed on a portion thereof, and its other end forked or bifurcated, the arms of said forked portion being each provided with an axially-alining inwardly-projecting stud, a lever loosely fulcrumed on said studs within the forks, a pawl pivoted to the lever for coacting with said rack, and wire-gripping means for coacting with the end of said lever.

3. A tool of the class described, comprising a break-bridging member having gripping means at one end and a rack formed on a portion thereof, a lever fulcrumed to the free end of said bridging member, wire-gripping means coacting with the weight end of the lever, and a pawl in engagement with said lever and having its free end coacting with said rack.

4. A splicing-tool comprising a bridging member having a clamp at one end thereof, a lever fulcrumed to the other end of said member and having the end of its weight-arm formed with depressions or sockets, a clamping member having lugs or spurs for engaging the depressions or sockets in the lever, and means for retaining the lever in adjusted position.

In witness whereof we have hereunto signed our names to this specification in the presence of two subscribing witnesses.

ANDREW CHURCH.
CHARLES A. CHURCH.

Witnesses:

SUSIE SCHUREMAN,
D. B. MORGAN.