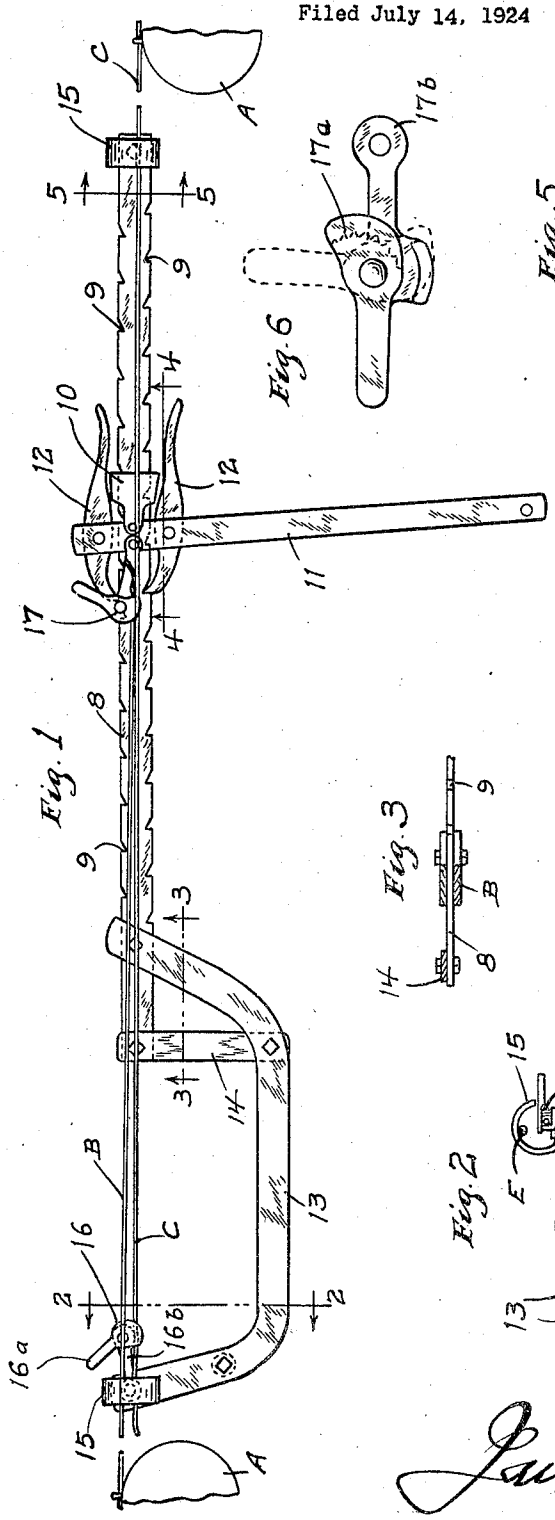
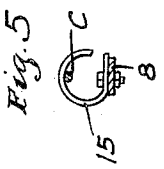
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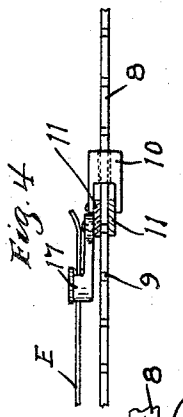
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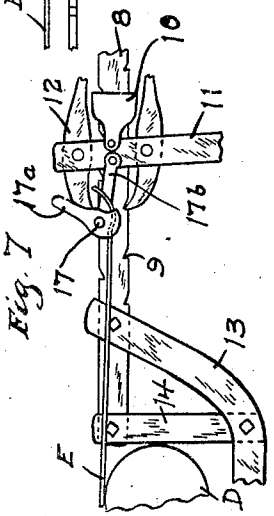
WIRE STRETCHING AND SPLICING DEVICE

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UNITED STATES PATENT OFFICE.

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WIRE STRETCHING AND SPLICING DEVICE.

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This invention relates to a wire tensioning and splicing device, and particularly to such a device that can be used in connection with wire fencing, telegraph lines, etc. It has long been difficult for one man to properly tension a wire to secure the same to a post or other object, or to hold two wires together under tension for splicing.

It is an object of this invention, therefore, to provide a wire stretching device which can be used against a fixed base of resistance without slipping away therefrom.

It is another object to readily attach and release such a device from a wire or wires.

A further object is to provide a device for pulling the free ends of two oppositely disposed fixed wires together under tension, to hold the same in a position where they can easily be spliced, and to equalize the tension on the same.

It is a further object of this invention to provide a wire stretching and splicing device, which will combine all these, and other features, in one structure.

To disclose the same, the following description is made in connection with the accompanying drawings in which like reference letters and numerals refer to the same parts throughout the different views, and in which

Fig. 1 is a plan view of the device used as a combined stretcher and splicer in connection with two wires;

Fig. 2 is a cross section taken on line 2—2 of Fig. 1, as indicated by the arrows;

Fig. 3 is a portion of a longitudinal section taken on the line 3—3 of Fig. 1, as indicated by the arrows;

Fig. 4 is a portion of a longitudinal section of the tensioning means taken on the line 4—4 of Fig. 1, as indicated by the arrows;

Fig. 5 is a cross section of Fig. 1 on the line 5—5, as indicated by the arrows, showing a form of wire guide;

Fig. 6 is a plan view of one of the clamping means showing the clamp released in full lines and the clamp set in dotted lines; and

Fig. 7 is a partial plan view of the device used as a wire tensioner against a fixed base of resistance.

In said drawings, posts A denote anchoring means to which wires B and C may be secured. These wires may represent single strands of wires or the longitudinal strands of a wire fence. A flat bar or frame member 8, preferably of metal, is provided having oppositely disposed notches 9 cut in its edges at regular intervals, forming a ratchet. The notches on one edge are spaced longitudinally on bar 8, mid-distant from the notches on the opposite edge. Loosely mounted on bar 8 is keeper 10, having pivotally secured thereto, rocker lever 11 composed of two sections spaced apart the width of bar 8 and preferably riveted together. A pair of reversely disposed pawls 12 are pivoted to rocker lever 11 between the two sections thereof and are positioned at opposite sides of bar 8 to alternately engage the notches 9 thereon.

A frame 13 of substantially bow or U-shape is bolted to bar 8 adjacent the end thereof towards which notches 9 point. Bow 13 is preferably composed of two parallel spaced bars connected together by rivets or bolts passing through spacing thimbles. A bar 14 adapted to form a post abutting shoulder is secured at one end to bow 13 and at its other end to one end of frame member 8, said bar being disposed substantially at right angles to frame member 8. Wire guides 15 are bolted to the outer end of bow 13 and frame member 8 on the upper surfaces thereof, in substantial alignment therewith. Guides 15 may be made circular in shape with a flat bolting surface and an opening for the insertion and removal of the wires. Clamps 16 and 17 are provided composed of levers 16^a and 17^a, respectively, with inner notched shoulders thereon and clamp jaw members 16^b and 17^b, respectively, said levers and members being connected together by pivots. Said jaw members have lateral ledges or shoulders cooperating with the notched shoulder portions on said levers. Clamp 16 is secured to the outer unattached end of bow 13 by having its jaw members bolted thereto, and clamp 17 to one section of the rocker lever 11 intermediate the two pawls 12, said clamp being secured similar to clamp 16.

The operation of the device is as follows:

When the device is used to stretch but one wire, the same is disposed as shown in Fig. 7, the shoulder 14 abutting against the post or other base of resistance D. The rocker lever 11, keeper 10 and pawls 12 are pushed

to a position adjacent the bow 13 by releasing the pawls 12 from engagement with notches 9. This may readily be done by grasping the handle portions of the pawls and moving them together. Wire E is then placed through the opening in the guide 15 situated at the outer end of bow 13. A portion of the wire is then inserted between the lever 17[a] and the jaw 17[b] of open clamp 17. The clamp lever 17[a] is then turned upward to the dotted position shown in Fig. 6 and the wire is then secure. Shoulder 14 is placed against a base of reaction such as a post D, which will fit within the bow 13. The lever 11 will then be rocked, the pawls 12 alternately engaging with the notches 9, said lever being moved along frame 8 to draw the clamp secured end of the wire away from the shoulder 14 towards the free end of bar 8. As the rocker lever 11 has considerable length, there will be sufficient power exerted, without any great effort, to give the wire B any desired tension. Because of bow 13 and the wire B, running across the open side thereof, there will be no tendency for the device to slip away from or off of the base of resistance. The wire can then be secured to the object, which is used as a base of resistance, such as the post D, or to any other object under the desired tension. The clamp 17 can then be released and the wire stretcher removed.

When the device is used for stretching and splicing two wires extending in opposite directions, or for stretching and splicing a broken wire, the device is disposed as shown in Fig. 1. The wires B and C, to be tensioned and spliced, are anchored at some suitable member such as post A. No base of reaction is required against which the stretcher and splicer must act. The wire B is led through guide 15 adjacent the bow 13 and is secured by clamp 17. Wire C is then placed through guide 15 at the outer end of frame member 8 and, if long enough, is placed between the jaws of clamp 16 and secured. If wire C is not of sufficient length to extend to clamp 16, as would most likely be the case, when it is desired to splice a broken wire under tension, an auxiliary piece of wire is connected thereto of sufficient length to reach clamp 16 and it is securely engaged thereby. The lever 11 is then rocked as before to draw the clamp secured ends of wire B away from the bow 13. The tension exerted on wires C and B will be equalized and both wires will quickly and easily be brought up to the desired tension. The two wires extend across the bow 13 and can then be grasped while under tension with suitable pliers or other means, and held. Clamps 16 and 17 are then released and the wire stretcher removed. The two wires can then be easily spliced under tension by the pliers or by means of a splicing tool.

The device has been amply demonstrated in actual practice and has been found very efficient for the purposes specified.

It will be readily seen that an exceedingly simple and efficient wire stretcher and splicer has been provided, which can be easily and quickly operated by one man to hold wire at any desired tension for fastening or splicing.

It is, of course, understood that various changes in the forms and details of the invention may be made without departing from the scope of applicants' invention, which, generally stated, consists of the matter shown and described and set forth in the appended claims.

What is claimed is:

1. A wire stretcher comprising an elongated frame, a wire positioning bow fixed at one end thereof, a shoulder fixedly secured to the inner side of said bow and the bow end of said frame, said shoulder being adapted to abut against a fixed base of resistance, and a tensioning device movable on said frame away from said shoulder, having means for releasably securing a portion of the anchored wire so that said wire will extend across the open side of said bow.

2. A wire stretcher and splicer, adapted to be used with two oppositely disposed anchored wires, having in combination an elongated frame having a bow at one end, across the open side of which said wires run, clamping means for securing the free end of one of said wires at the outer end of said bow, a tensioning device movably mounted on the intermediate portion of said frame and clamping means secured to said tensioning device for securing the free end of the other of said wires, whereby said wires can be tensioned and held across said bow for splicing.

3. A wire stretcher comprising an elongated frame, a bow rigidly fixed at its inner side to one end of said frame, the open side of said bow being along the line of said frame, a wire holding clamp secured at the outer end of said bow, a wire tensioning means movable on said frame away from said bow, a wire tensioning clamp secured to said means, each of said clamps being adapted to hold an end of a wire so that the two wires will extend across the open end of said bow, whereby the wires may be conveniently spliced within the outline of said bow after being tensioned.

In testimony whereof we affix our signatures.

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