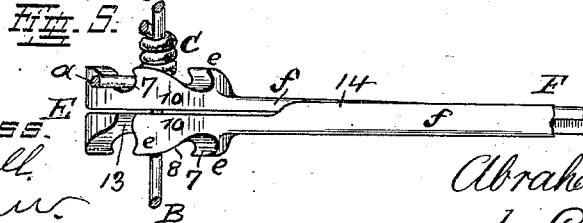
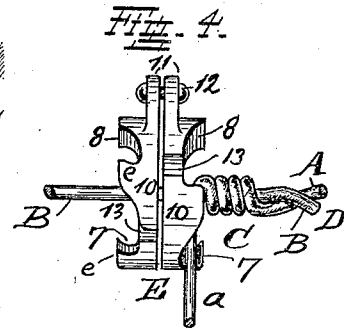
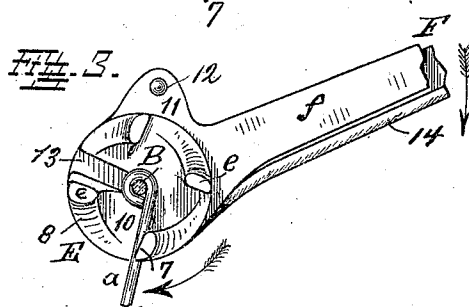
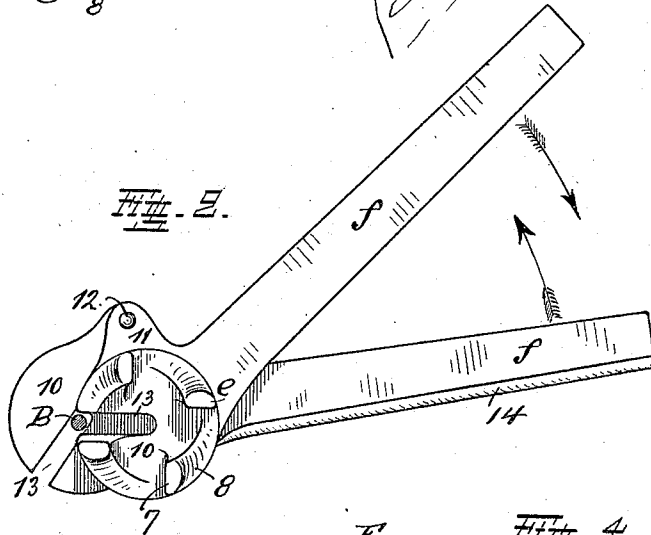
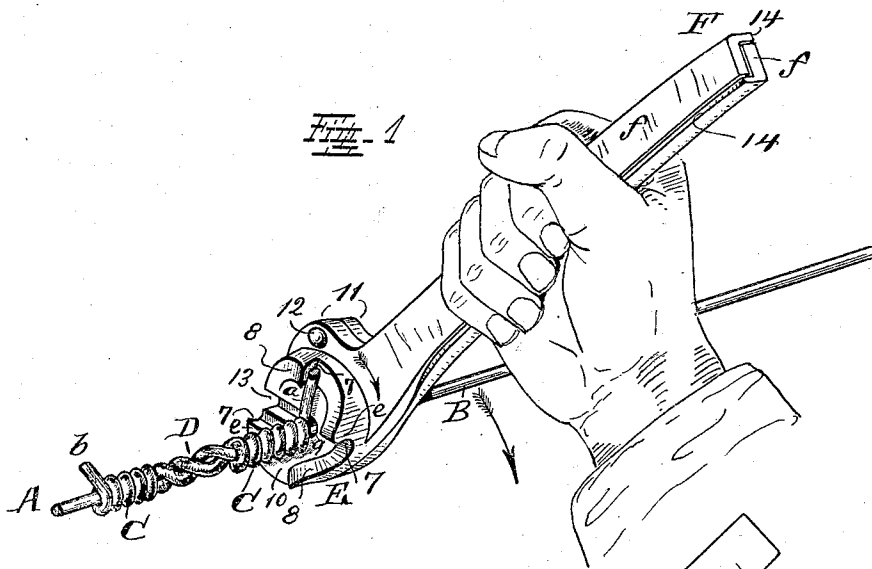


A. B. PROBASCO.
 TOOL FOR FORMING WIRE JOINTS.
 APPLICATION FILED MAR. 13, 1909.

940,823.

Patented Nov. 23, 1909.



Witnesses:
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UNITED STATES PATENT OFFICE.

ABRAHAM B. PROBASCO, OF TURTLE CREEK TOWNSHIP, WARREN COUNTY, OHIO.

TOOL FOR FORMING WIRE-JOINTS.

940,823.

Specification of Letters Patent.

Patented Nov. 23, 1909.

Application filed March 13, 1909. Serial No. 483,126.

To all whom it may concern:

Be it known that I, ABRAHAM B. PROBASCO, a citizen of the United States, and residing in Turtle Creek township, Warren county, State of Ohio, have invented a certain new and useful Tool for Forming Wire-Joints; and I do declare the following to be a clear, full, and exact description thereof, attention being called to the accompanying drawing, with the reference characters marked thereon, which forms also a part of this specification.

This invention relates to a tool to be used for the purpose of completing the spliced joint whereby the ends of two wires are to be connected. It is more particularly adapted for use on fence-wires and in such cases where close proximity of the ground or of other wires renders convenient manipulation of a tool difficult.

In the following specification and particularly pointed out in the claims at the end thereof, will be found a full description of my invention, together with its manner of use, parts and construction, which latter is also illustrated in the accompanying drawing, in which:—

Figure 1 illustrates the manner of using the tool and its manipulation for the purpose of completing a joint whereby the ends of two wires are to be connected. Fig. 2 shows in a side-view of the tool the manipulation of the same for the purpose of placing it in position on a wire. Fig. 3 in a similar view shows the tool adjusted in place, and ready for use. Fig. 4 is an end-view of Fig. 3, and Fig. 5 is an underside view of said figure.

In the drawing, A and B indicate two wires, the ends of which are to be connected to form what may be one of the longitudinal strands of a wire-fence.

a is the end of wire A and *b* indicates the end of wire B, and the usual method of connecting such wires is by twisting them near their ends about each other one or more times, as shown at D, after which the joint is completed by curling the end of each wire a number of times around the other wire beyond the point at D where they have been twisted about each other. A wire curl as shown at C results on each side of the twist indicated at D as shown in Fig. 1. My tool is more particularly intended to form these curved portions C on each side of the twisted portion D.

The construction of the tool involves a hub E, whereby it may be mounted upon a wire, a handle F whereby this hub may be rotated about the wire, and lateral projections *e* adapted to engage and take hold of the end of one wire to be curled about the other wire, so that as said hub is rotated, the particular wire-end is caused to share in this rotation and becomes curled about the wire. These projections *e* are provided on each side of the hub, so that the tool may be conveniently used on each side of the joint to be formed to curl first one end and then the other and on either side of the wire.

Projections *e* are circularly arranged and consist each of the wire-end engaging face 7, arranged at an angle, more or less abrupt, it being substantially a right angle with reference to the side of the hub. The back of each projection rejoins the side of the hub on an inclined surface as shown at 8. In the center of the hub an opening 9 is provided which receives the particular wire upon which the tool is seated at the time and whereby it is held in position. The manipulation is obvious and may be readily understood by inspecting Fig. 1. The tool, after being seated upon one of the wires to one side of twist D, is moved sidewise against the free end of the other wire and this end is engaged by one of projections *e*. Next the hub by means of handle F is rotated about the wire upon which it is seated, so as to curl the particular end about the same. If close proximity of the ground, or of another wire, or any other obstructing object limits the continued rotation of the hub by interfering with the movement of the handle, this latter is swung back, and renewed engagement of the wire-end is effected by means of the same or by another one of projections *e*.

For obvious reasons it is not always possible to mount the tool upon the wire by placing the same upon this latter from its other end since such end is usually not accessible because being fixedly connected. For this reason the tool is made of two parts, one like the other and complementary to each other each containing a hub-section 10 and an integral handle-section *f* and the two parts are connected to each other by a pivot 12, located eccentrically with reference to the hub and mounted in lugs 11 of which there is one provided on each hub section from which they laterally project. The tool

may thus be adjusted as shown in Fig. 2, in which condition it may be readily placed upon the wire, radially disposed slots 13 open at the periphery of each hub-section 5 and terminating in the center thereof, permitting the wire to pass in. These two slots are not located in the same radial direction with reference to the hub in its normal condition as shown in Fig. 1, so that, when the tool is closed as shown in Figs. 1, 3, 4 and 5, the wire is entirely surrounded by portions of the hub, which form opening 9 complete.

Each hub-section closes the slot of the other hub-section by lying transversely across the same, leaving only the inner, coincident end-portions of each slot open to form opening 9 which is occupied by the wire so that, while the hub is rotated about this latter, the tool can never lose its seat.

When open as shown in Fig. 2, the tool may be seated on either side of the twisted connection at D and the wire may be approached from either side, and with either side of the tool toward the nearest of the twisted ends, after which in either one of these positions rotation may be had in either direction to suit conditions, the wire-end engaging projections being always available for use. In manipulation the tool is swung back and forth with a semi-circular or quarter-circular motion. During the return movements, the wire-end and projections *e* slide freely past each other and without interference, which is due to the presence of inclined backs 8.

If there is nothing in the way to prevent it, the tool may of course be continuously rotated in one direction. Each handle-section *f* has on its outer edge a laterally projecting flange 14, which extends inwardly, that is toward the other section, the flange of one section being adapted to close against and overlap the edge of the other section as best shown in Fig. 1, and whereby, during use of the tool, its two parts are firmly held in position with reference to each other, forming during that time a practically one piece structure which precludes all possibility of becoming unseated from the wire.

It may be desirable or necessary, especially if the wire is stiff, to hold the same rigid with some suitable implement (pliers, pincers, tongs) to provide resistance in opposite direction to the movement of the tool which causes the wire-ends to twist about the wire, and to prevent this latter from following the rotated wire-end. A tool specially arranged for this purpose may also be used.

Having described my invention, I claim as new:

1. A tool for forming a wire joint, consisting of a hub adapted to be seated upon a wire and having a handle whereby it may be

rotated about this wire upon which it is seated, the hub being provided with laterally extending projections, each having a surface arranged substantially at right angles to the hub and adapted to engage the wire when moved against the same and an inclined surface which causes the projection to pass the wire without effect when moved in the opposite direction.

2. In a tool for connecting the ends of two wires, the combination of a hub having an opening to permit it to be seated upon one of the wires and provided with integral spaced wire-end engaging projections which in plurality extend substantially at right angles from both sides of it and parallel to the axis of the hub and a handle whereby the tool may be rotated about the wire.

3. A tool for forming a joint between two wire-ends, which is adapted to be seated upon a wire and consists of two parts, one shaped like the other and complementary thereto each containing a hub-section and a handle-section, a pivot whereby the two sections are side-wise connected to each other, and wire-end engaging projections extending laterally from the outer side of each hub-section.

4. A tool for forming a joint between two wire-ends, which consists of two complementary parts pivotally connected to each other and each consisting of a handle-section and a hub-section, which latter are each provided with wire-end engaging projections and with a radially disposed notch which extends to the center of the hub-section, the notch in one hub-section being arranged at a radius different from that in the other section, so that the outer part of the notch in one section is closed by overlapping parts of the other section.

5. A tool for forming a joint between two wire-ends, which is adapted to be seated upon a wire and consists of two complementary parts one of which is shaped like the other and each of which consists of a hub-section provided with wire-end engaging projections and with an integral handle-section, each of which latter has a flange on its outer edge, the flange of one handle-section being adapted to engage the edge of the other handle-section when the two parts of the tool are alined to overlap each other so as to form the handle complete, and an eccentrically located pivot whereby one part of the tool is sidewise connected to the other part.

In testimony whereof, I hereunto affix my signature in the presence of two witnesses.

ABRAHAM B. PROBASCO.

Witnesses:

C. SPENGLER,
T. LE BEAU.

Correction in Letters Patent No. 940,823.

It is hereby certified that in Letters Patent No. 940,823, granted November 23, 1909, upon the application of Abraham B. Probasco, of Turtle Creek Township, Warren County, Ohio, for an improvement in "Tools for Forming Wire-Joints," an error appears in the printed specification requiring correction, as follows: Page 1, line 55, the word "curved" should read *curled*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 8th day of February, A. D., 1910.

[SEAL.]

E. B. MOORE,
Commissioner of Patents.