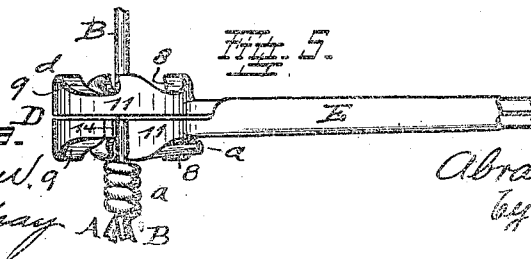
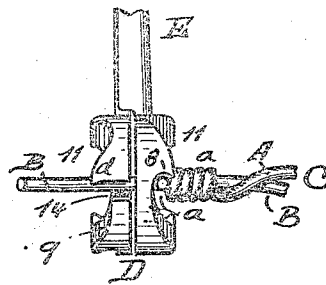
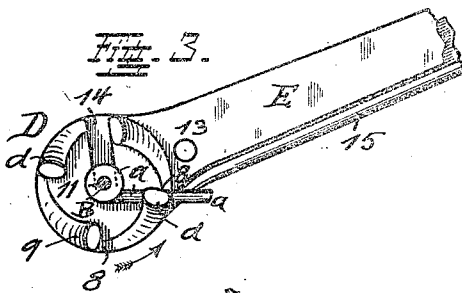
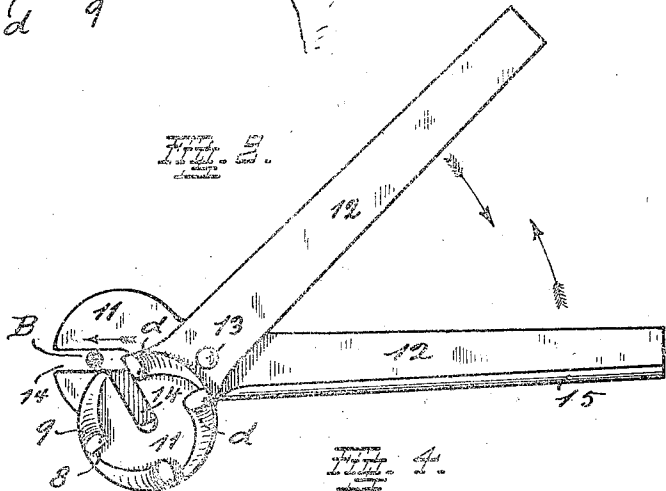


1,031,963.



Witnesses

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W. N. Lindsay

14-00000

Abraham B. Probasco
by C. Spengelatty.

UNITED STATES PATENT OFFICE.

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

TOOL FOR FORMING WIRE-JOINTS.

1,031,963.

Specification of Letters Patent.

Patented July 9, 1912.

Application filed March 6, 1911. Serial No. 612,450.

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 certain new and useful Improvements in Tools for Forming Wire-Joints; and I do declare the following to be a clear, full, and exact description of the invention, attention being called to the drawing which accompanies this application and forms a part thereof.

This invention relates to tools used in connection with the formation of spliced wire-joints.

Patent No. 940,823, issued to me on November 23, 1909, describes a related tool intended to be used for the purpose of completing the connection between two wires after their ends have been engaged to each other in a preliminary way. By reason of this preliminary connection of the wire-ends the possibilities for placing said tool in position on the wire are limited and the wire must be approached side-wise, since the connected wire-ends prevent any other mode of engagement. The tool was therefore accordingly constructed to permit of its ready engagement with the wire under these peculiar conditions existing, certain slot-formations being provided and made use of for the purpose. While said tool has proved to be quite satisfactory for its intended use, I have found that by locating the slots differently as to their angular relation with reference to the tool-handle and to each other the use of the tool is rendered more convenient, while at the same time certain other changes have been made whereby the construction of the tool is simplified.

In the following specification and particularly pointed out in the claim 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 is a perspective view of my improved tool showing also manner of its use. Fig. 2 illustrates in side-view manipulation of the tool for the purpose of placing it upon a wire preparatory to its use between the ends of the wire. Fig. 3 in a similar view shows the tool after placed in position and ready for use. Fig. 4 is an end-view of the tool as it appears in Fig. 3. Fig. 5,

is a top-view of it as it appears in Fig. 3, and also in Fig. 1.

In the drawing, A and B indicate the two wires to be connected to each other by a joint which is formed by intertwining the end-portions of the wires. This is done by first twisting part of one wire near its end about a similar part at the end of the other wire as shown at C in Fig. 1, after which the free end portions of the wires beyond this twist are curled, the end-portion *a* of wire A, around the straight part of wire B, and the end-portion *b* of wire B around the straight portion of wire A. My tool is provided for the purpose of curling these end-portions of the wires in the manner indicated.

The tool consists of wire-curling projections or teeth *d*, a hub D from which they project laterally, said hub being adapted to be seated upon the wire, and of a handle E, whereby the hub with the curling-teeth is rotated about the wire. One of the sides of each of the teeth which is intended to engage the wire ends is concaved to facilitate such engagement and as shown at 8, the other side back of this face 8 being inclined between the apex of the tooth and the side of the hub as shown at 9. A number of such teeth is provided on both sides of the hub, to permit use of the teeth on either side of the tool to curl the wire-ends on each side of twist C. An opening 10 is provided in the center of the hub to receive the wire upon which the tool is seated at this time and about which its hub is rotated by means of the handle while curling the free wire-ends.

Since the wire-ends are already connected by the preliminary twist C at the time the tool comes into use, it is impossible to place the tool in position by passing it in over the end of one of the wires and therefore the tool is made in two parts the division being between the sides of the hub, two parts 11—11 resulting, each of which is provided with a set of teeth *d* on its outer side. The handle is arranged in an analogous manner resulting in two handle-sections 12—12, one for each hub-section from the periphery of which they project. The two parts of the tool are connected to each other by a pivot 13 seated in the handle-sections and adjacent the hub-sections. Each hub-section has a slot 14 starting from the center and reaching the periphery of the hub-section between two teeth *d* where said slot

are open outwardly. In one hub-section the slot is disposed in a direction which is in line with and parallel to the handle-section of said hub-section. In the other hub-section the slot is arranged at right angles to the handle-section of said hub-section, all as most clearly shown in Fig. 2. When the two sections of the tool are closed up on each other as shown in Figs. 1, 3, 4 and 5, the intact portion of one hub-section closes the outer part of the slot in the other section, the inner portions of the slots in the center of the hub where they come together remaining open and form opening 10 which is intended to receive the wire.

When the tool-sections are opened as shown in Fig. 2, the outer ends of the slots become open and the tool may be readily placed upon the wire. When closed again the tool finds a secure position on the inclined wire and for the purpose of its succeeding use forms now practically an integral one-piece implement. Its use and manipulation is clearly shown in Fig. 1. The tool is first seated upon the wire on one side of twist C and the free end of the other wire is engaged by one of teeth *d* and curled about the wire upon which the tool is seated. After that the tool is disengaged and seated upon the wire on the other side of the twist and the same manipulation is repeated with respect to the other wire-end. The tool-handle is swung back and forth analogous to the handle of a wrench, the hub being all the while held close to twist C, so that, while swung in one direction, the concaved side 8 of a tooth will engage the wire-end and take it along, while when moving in the other direction, said wire end will pass freely over the inclined sides of the teeth and drop in again in front of them.

Each handle-section has a flange 15, the flange of one section contacting against the edge of the other section as best shown in Fig. 1, thereby preventing the handle-sections from slipping, one past the other, after they are in proper position.

By reason of the particular location of the pivot and the angular relation of the slots with reference to the handle-sections as shown in my patent mentioned, the resistance when heavy wire was worked, set up a re-action in the handle-sections, tending to spread or open them during use. By locating the pivot in the handle-sections and by having the slots in the hub-sections arranged as shown and so that they will be at right angles to each other when the tool is closed for action as shown in Fig. 3, this resistance is overcome so that no re-action is transmitted to the handle-sections during use.

Having described my invention, I claim as new:

A tool for forming a joint between the ends of two wires to be connected and consisting of two parts, each part comprising a hub-section and a handle-section extending from the periphery thereof, each hub-section being provided with laterally projecting curling-teeth and having a slot starting from its center and opening at the periphery in the space between two curling-teeth, the slot in one hub-section being disposed in a direction which is in line with and parallel to the handle-section of this hub-section and the slot in the other hub-section being arranged at right angles to the handle-section of said hub-section, and a pivot whereby the two tool-parts are connected to each other so that, when the tool is closed up, the intact part of one hub-section closes the outer part of the slot in the other hub-section, leaving a central opening in the hub which serves to support the tool on a wire for manipulation, after such wire, having been admitted through the slots in the hub-sections, occupies such opening.

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

ABRAHAM B. PROBASCO.

Witnesses:

C. SPENGEL,
T. LE BEAU.