June 21, 1927. 1,633,401

J. FISHER

TOOL FOR WRAPPING WIRE

Filed Nov. 28, 1923

Fig. 1.

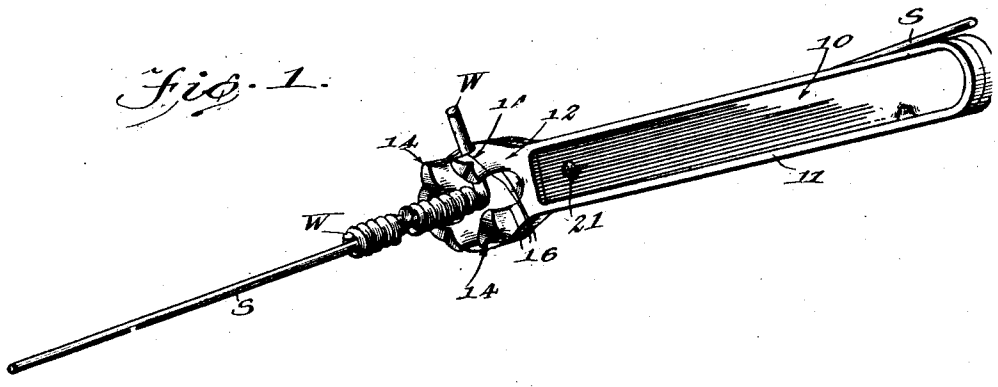


Fig. 2.

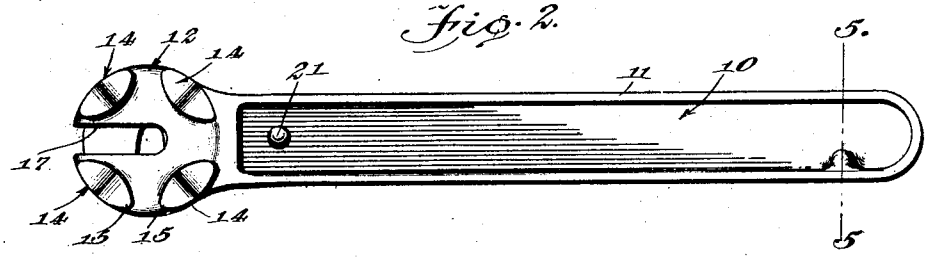


Fig. 3.

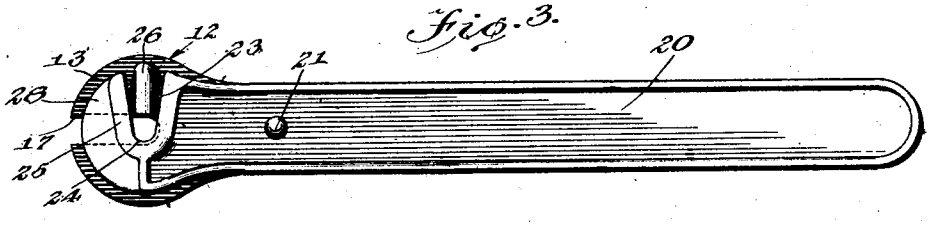


Fig. 4.

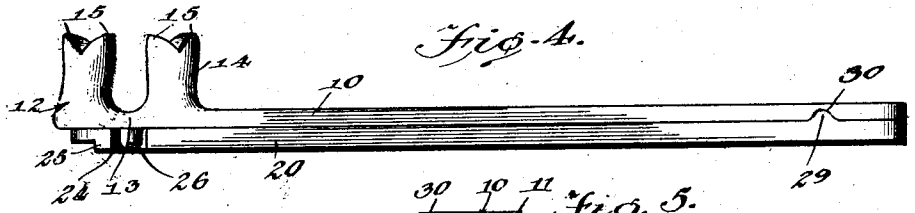
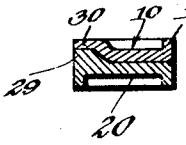


Fig. 5.



WITNESSES

Laurence O. Hankin

INVENTOR

Jacob Fisher.

BY Munn & Co

ATTORNEYS

Patented June 21, 1927. 1,633,401

UNITED STATES PATENT OFFICE.

JACOB FISHER, OF WABASH, INDIANA.

TOOL FOR WRAPPING WIRE.

Application filed November 28, 1923. Serial No. 677,508.

This invention relates to an improvement in tools for wrapping wire, and is especially designed for use in wrapping wire in forming wire splices or wire joints.

The object of the invention is to provide a tool of this character which is in itself simple and durable in construction, easy and comparatively inexpensive to manufacture and which greatly simplifies and facilitates the various operations incident to the formation of the wire joint or splicers and which also carries out its functions in a more effective and efficient manner than any of the tools heretofore proposed.

Other objects and advantages of the invention reside in certain novel features of the construction, combination and arrangement of parts which will be hereinafter more fully described and particularly pointed out in the appended claims, reference being had to the accompanying drawings forming part of this specification and in which:

Figure 1 is a perspective view, showing the improved tool in use in wrapping a wire during the formation of a wire joint or splice;

Figure 2 is a top plan view of the tool shown in Figure 1;

Figure 3 is a bottom plan view thereof;

Figure 4 is a view thereof in side elevation; and

Figure 5 is a detail view in section on line 5—5 of Figure 2.

Referring to the drawings, the numeral 10 designates a handle, the exposed or top face of which is formed with a marginal rib 11. The rib 11 strengthens the handle member 10 and facilitates manipulation thereof.

At one end of the handle member 10 a working head, designated generally at 12 is integrally formed therewith. This working head 12 includes a body portion 13 and a circular series of laterally extending fingers 14. The fingers 14 are integrally formed with the body portion 13 and except for their extremities or tips and for the points at which they join the body portion 13 they are substantially circular in cross section. At the points where these fingers 14 join the body portion 13 they are enlarged so as to be substantially elliptical in cross section. At the tips or extremities of these fingers 14 they are extended toward each other, as at 15, so that the fingers 14 present concaved confronting wire engaging faces 16. The body portion 13 of the working head is formed with a radial slot 17 which extends from the periphery of the body portion at a point between two of the fingers 14 in through the body portion to a point slightly beyond the center thereof, as clearly shown in Figure 2. This slot 17 enables the working head to be mounted on either of the main strands S of the wires to be spliced and to be rotated therearound while one of the wire engaging faces 16 of the fingers 14 is engaged with the end W of the wire to be wrapped around the main strand S on which the tool is mounted.

A bar 20 is pivotally connected to the handle member 10, as at 21. This bar is in length slightly less than the combined length of the member 10 and the working head 12. In width it is coextensive with the handle member and the portion thereof which underlies the head 12 is slightly enlarged with respect to the main portion of the bar 20 though somewhat smaller than the working head 12. The surfaces of the handle member 10 and working head 12 and the surface of the bar 20 engaged therewith are smooth so as to facilitate relative pivotal motion of the bar 20 and handle member 10. The face of this bar 20 which is disposed outermost is provided with a marginal rib 22 similar to the rib 11. The rib 22 also serves to strengthen the bar 20 and to facilitate manipulation of this bar. The portion of the bar 20 which underlies or which is opposed to the handle member 10 constitutes a complementary handle member. The portion of this bar 20 which underlies or is opposed to the working head 12 is slotted, as at 23, to provide a movable jaw face 24. Around this jaw face 24 the bar 20 is enlarged or reinforced, as at 25. On the under side of the working head 12 a fixed jaw 26 is formed and is arranged to co-operate with the jaw face 24 of the bar 20. The end portion 28 of the bar 20 which lies on one side of the slot 23 is adapted to extend across the under side of the slot 17 of the working head 12 and serves to prevent the accidental displacement of the working head from the

main strand of wire on which it is mounted during the coiling or wrapping operation of the wire W, the portion 28 constituting a latch for this purpose. The fixed jaw 26 coacts with the movable jaw face 24 to prevent or minimize the tendency of the tool to work axially along the strand S on which it is mounted since this jaw and jaw face frictionally engage the strand for such purpose.

By constructing the wire engaging fingers as above described and by forming the confronting wire engaging faces 16 concave it is possible to use a single working head 12 and a single set of fingers 14 to wrap or coil both wrapping wires about the main strand and to wrap or coil these wrapping wires in either direction. To reverse the direction of wrapping it is not necessary to remove the tool from the main strand wire on which it is mounted. These advantages are had in a simple reliable tool where at the same time accidental displacement of the working head laterally from the main strand is prevented. In other words the bar 20 with its slot 23 and latch 28 prevents the working head from slipping off the strand wire S as it would were the slots 17 open and unobstructed. A further and important advantage is had by the provision of the jaw 26 and jaw face 24 which minimizes the tendency of the tool to work axially along the strand wire S on which it is mounted. The elements which serves to prevent accidental displacement laterally and axially are controlled by the grip of the operator which must be exerted to actuate the tool. The tool may be readily dismounted from the strand of wire after the wrapping or splicing has been completed by swinging the bar 20 and the handle member 10 about the pivot 21. Such swinging motion may be readily imparted to these elements by virtue of the ribs 11 and 22.

In order to prevent the bar 20 from swinging past the handle member 10 in one direction the bar 20 may be provided with a stop lug 29 and the handle member 10 with a socket or recess 30 with the wall of which the stop lug 29 engages for this purpose.

I claim:

1. A tool for use in wrapping wire comprising a handle having a working head provided with spaced lateral fingers for engaging the wrapping wire, the adjacent faces of the fingers being oppositely curved, said head having a radial slot projecting inwardly beyond the center of said head, a second handle pivoted on the first-mentioned handle and provided with a head in contact with the first-mentioned head and having a slot at substantially right angles to the slot in the first-mentioned head, the provision of the slot in the second-mentioned head forming a latch adapted to be disposed transversely across the outer free end of the first-mentioned slot, said latch being adapted to engage the wire for releasably forcing the same when the handles are in alignment in frictional contact with the inner end of the first-mentioned slot.

2. A tool for use in wrapping wire comprising a handle member having a working head, provided with lateral fingers for engaging the wrapping wire, said fingers being disposed in spaced relation along the periphery of the head, the head being provided with a radial slot extending inwardly beyond the center of the head, a second handle pivotally mounted on the first-mentioned handle and having a head in close contact with the first-mentioned slot and provided with a slot at substantially right angles to the slot in the first-mentioned head, said slot providing a latch at the outer end of the second-mentioned head, an edge of the slot in the first-mentioned head providing a jaw face, a jaw on the first-mentioned head and co-operating with the jaw face of the second head to minimize the tendency of the tool to work axially along the strand of wire when the handles are in alignment.

JACOB FISHER.