J. MUMFORD.

WIRE PLIERS.

APPLICATION FILED FEB. 21, 1914.

1,129,828. Patented Feb. 23, 1915.

Fig. 1.

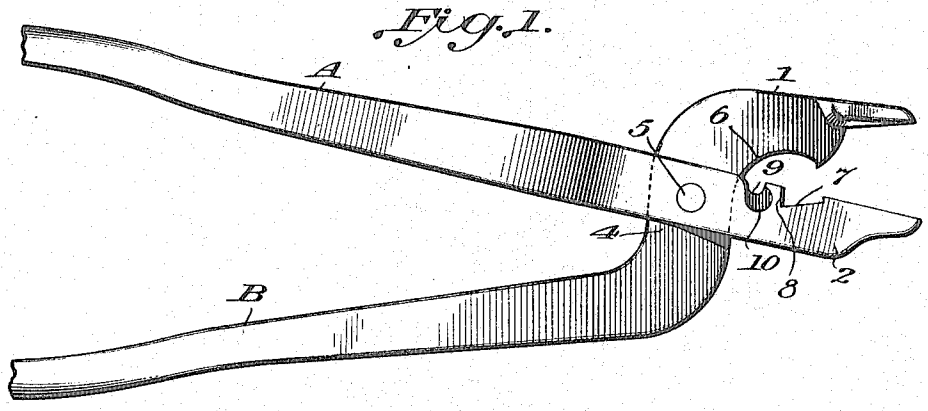


Fig. 2.

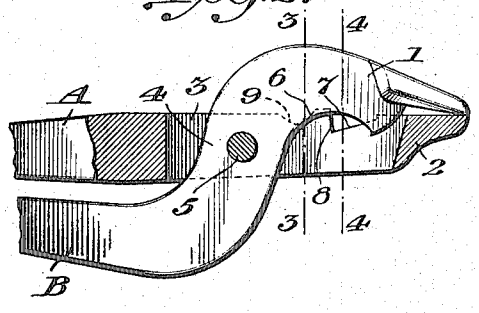


Fig. 3.

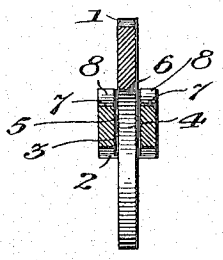


Fig. 4.

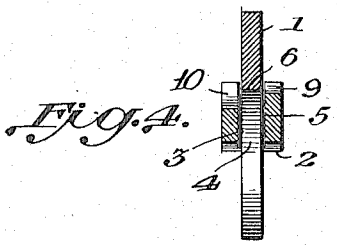
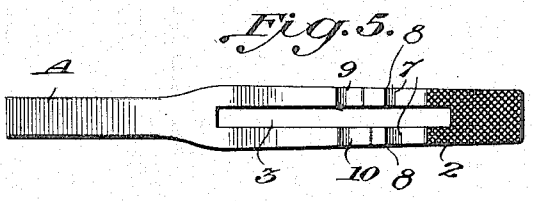


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN MUMFORD, OF FRANKFORT, OHIO.

WIRE-PLIERS.

1,129,828. Specification of Letters Patent. Patented Feb. 23, 1915.

Application filed February 21, 1914. Serial No. 820,230.

To all whom it may concern:

Be it known that I, JOHN MUMFORD, citizen of the United States, residing at Frankfort, in the county of Ross and State of Ohio, have invented certain new and useful Improvements in Wire-Pliers; of which the following is a specification.

My invention relates to an improvement in wire pliers, and the object is to provide means for holding one or more strands of wire of the same or different sizes, so that they will be held from movement, and so that a tool can be applied to the wire for wrapping the free ends of the wires around the strands for fastening the two wire strands together.

The invention consists of still other novel features of construction and combinations of parts which will be hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1 is a view in elevation showing the jaws of the pliers separated; Fig. 2 is a longitudinal sectional view showing the jaws in a closed position; Fig. 3 is a transverse vertical sectional view on the line 4—4 of Fig. 2, looking toward the pivotal connection of the handles; Fig. 4 is a transverse sectional view on the line 3—3 of Fig. 2, looking toward the pivotal connection of the handles; and Fig. 5 is a top plan view of one of the jaws.

A and B represent the handles, which are provided with jaws 2 and 1, respectively. The handle A is provided with an elongated slot 3 in the rear of the jaw 2. A shank 4 of the handle B extends through the elongated slot, and the shank is fastened to the handle A by means of a pin 5 pivotally connecting the two handles together. The under side of the shank 4 is preferably curved, or in the form of an arc, as indicated at 6. This forward end or portion of the shank is adapted to enter the elongated slot 3, as the two jaws 1 and 2 are brought together. The handle A is provided with a recess 7 in the rear of the jaw 2, and the bottom of the recess tapers downwardly and rearwardly. This recess is located directly beneath the curved surface 6 of the shank 4.

When it is desired to fasten two strands of wire together, the two strands are inserted in the recess, and the handles drawn together, causing the curved surface 6 of the shank 4 to come in contact with the wire strands for locking them securely between the two handles, so that they will be locked against movement. There is a coöperation between the tapering surface of the recess and the curved surface of the shank which locks or holds the strands against movement when the jaws are forced toward each other. The curved surface will engage each strand and compress the strands, or force them into the recess. One of the strands will be forced against the shoulders 8 at the one end of the recess, and the forward strand will be forced against the other strand and toward the shoulders, causing the strands to be held close together, and at the same time prevented from becoming disengaged from the pliers. The jaw 2 affords a bearing surface on each side of the slot 3, so that as the shank moves toward the slot, it will exert a force upon the wires for causing them to be brought into each of the recesses on each side of the shank so that the strands are held against any opposite movement.

In Fig. 4 the section shows more clearly the cutting mechanism. In the rear of the recesses 7 are two grooves 9 and 10, the grooves 9 and 10 being on opposite sides of the slot (see Fig. 5). The groove 10 is deeper than the groove 9, so that when the wire is fastened in the grooves and the shank is brought down upon the wire, the wire strand is held in a diagonal position, and affords a very simple means of cutting the wire, as the wire is cut on an angle, rather than straight.

From the foregoing, it will be seen that the jaw of the wire plier comes down vertically parallel, instead of scissors fashion, thereby holding the wire more firmly than the ordinary plier. This wire holder will hold two pieces of wire equally firm, whether the two pieces are of the same or different sizes, and if of different sizes, it does not matter whether the small piece of wire is toward or away from the operator. The result is accomplished by the shape of the wire-holding recesses 7 of the tool, and the recesses being somewhat in a triangular form.

I claim:

1. A tool comprising two handles, each having a jaw, said handles crossing each other and pivotally connected together, a shank on one of the jaws having a recess formed in the rear of the jaw, the bottom of the recess tapering downwardly and rearwardly forming shoulders at the lower ends

thereof, and a shank of the other jaw provided with a curved surface on the under side thereof, the curved surface of said jaw adapted to coöperate with the recess of the other jaw for forcing the wires toward the shoulders and cause one or more strands of wire to be firmly held against movement when the jaws are moved toward each other.

2. A tool comprising handles having jaws, one of the handles provided with an elongated slot in the rear of the jaw thereof, a shank on the other handle extending through the slot and pivotally connected to the handle, whereby the two handles are pivotally connected together, said shank adapted to operate in the slot, and provided with a curved surface on the under side thereof, a recess formed in the rear of the jaw of the first-named handle, on each side of the slot, the bottom of the recesses tapering downwardly and rearwardly forming shoulders at the lower ends thereof, said recesses coöperating with the shank, whereby the curved surface of the shank and the tapering surface of the recesses will force the wires toward the shoulders and cause one or more strands of wire to be firmly held against movement when the jaws are moved toward each other.

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

JOHN MUMFORD.

Witnesses:
CORNELIA C. GILSDORF,
E. A. TINKER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

Correction in Letters Patent No. 1,129,828.

It is hereby certified that Letters Patent No. 1,129,828, granted February 23, 1915, for an improvement in "Wire-Pliers," were erroneously issued to the inventor, John Mumford, of Frankfort, Ohio, whereas said Letters Patent should have been issued to said *Mumford and Elisha A. Tinker and Frank B. Maullar, of Chillicothe, Ohio*, as assignees of *two-thirds* interest in said invention as shown by the records of assignments in this office; 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 16th day of March, A. D., 1915.

[SEAL.]

J. T. NEWTON,

Acting Commissioner of Patents.