No. 776,879. PATENTED DEC. 6, 1904.

J. M. WOLFE.

WIRE GRIP.

APPLICATION FILED FEB. 10, 1904.

NO MODEL.

Fig. 1.

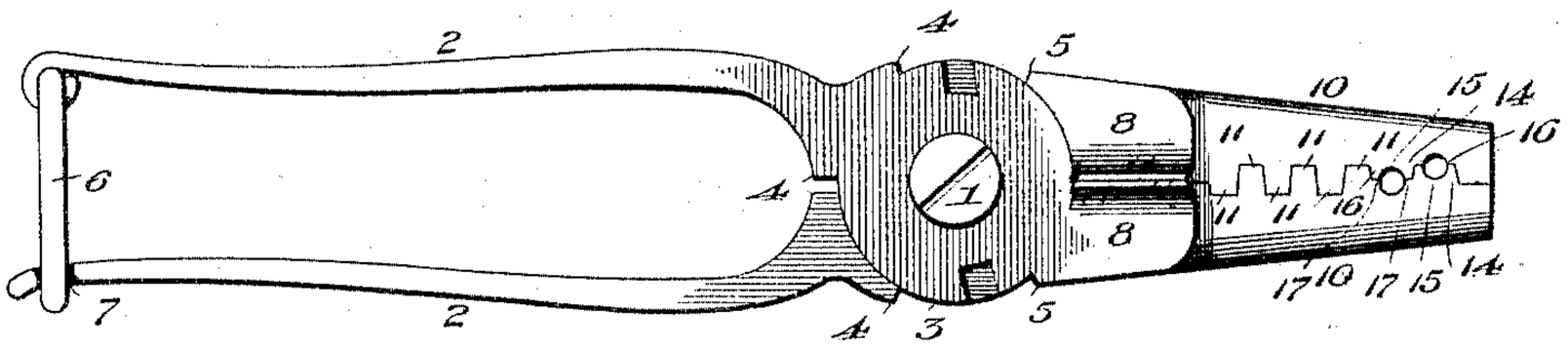


Fig. 2.

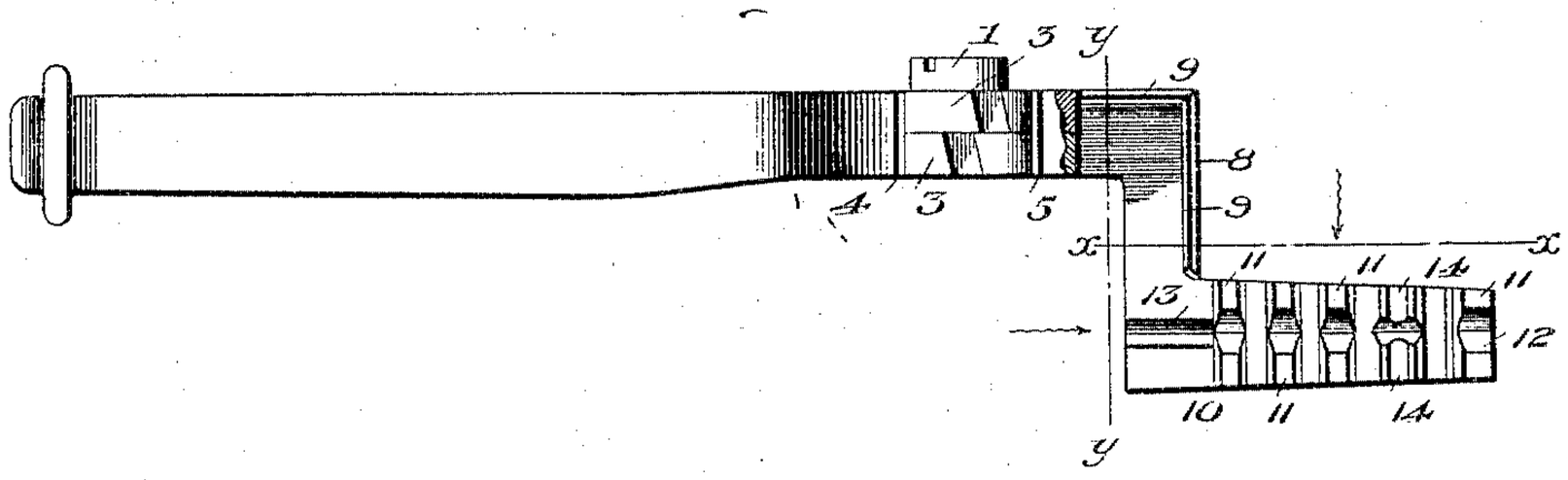


Fig. 3.

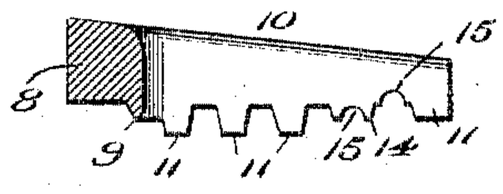
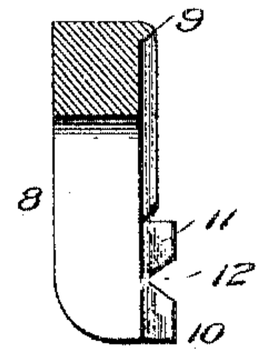


Fig. 4.



Witnesses.

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No. 776,879. Patented December 6, 1904.

UNITED STATES PATENT OFFICE.

JOHN M. WOLFE, OF SEATTLE, WASHINGTON.

WIRE-GRIP.

SPECIFICATION forming part of Letters Patent No. 776,879, dated December 6, 1904.

Application filed February 10, 1904. Serial No. 192,907. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. WOLFE, a citizen of the United States of America, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Wire-Grips, of which the following is a specification.

My invention relates to an improvement in wire-grips which can also be used for stripping the insulation from wires or for cutting the wires, the object being to provide an easily-operated, simple, and compact yet strong and durable tool of this description which shall fulfil all possible requirements.

To these ends my invention consists in an implement constructed on the general order of a pair of pincers or pliers the gripping-jaws of which are offset from the handles, the intermediate angular connection between the jaws and the handles or levers being provided with cutting edges whereby two or more wires may be severed by the same operation and when occupying different positions.

A further object is the provision of a tool of this nature the jaws of which are provided with longitudinally-extending registering grooves for the reception of a strand of wire which it is desired to stretch.

Still another object is the provision of a device of this general nature the abutting faces of the jaws of which are provided with intermeshing serrations, certain of the serrations being provided with concaved faces which register with similarly-shaped concavities formed opposite thereto, the edges of the concaved teeth adapted to abut and rest against shoulders formed in the opposing cavities.

My invention further consists in certain other novel features of construction and combinations of parts, such as will be more fully described hereinafter and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side view of my invention in closed position. Fig. 2 is an edge view, one of the jaws being broken away to disclose the inner face of the remaining jaw. Fig. 3 is an enlarged detail view of a side of one of the jaws, taken on line *x x* of Fig. 2, showing the configuration of the teeth; and Fig. 4 is another detail view of one of the jaws, taken on line *y y* of Fig. 2 looking from the rear.

My improved wire-grippers consist of a pair of members pivotally secured to one another at 1, each member comprising a handle or lever 2, provided with an offset apertured disk 3, a jaw 10, and an angularly-shaped arm connecting the jaw and disk. The disks are recessed on their peripheral edges, which recesses are adapted to have a shearing movement past each other when the jaws are opened or closed and serve as cutters in the usual manner. Both the handle and the connecting-arm where they are offset from the disk are provided with shoulders 4 and 5, adapted to engage the shoulders on the opposite member to limit the movement of the members toward and from each other. The free end of one of the handles is turned over, as shown, to form a loop for the reception of a link 6, adapted to take over the free end of the opposite handle, the latter being slightly offset and having a recess or groove 7 to receive the link, the handles being slightly resilient to permit the placing and removal of the link. Secured to the disks are the connecting-arms 8 8, which arms have cutting blades or edges 9 9 formed thereon, the arms serving to connect the jaws and handles. The arms are preferably right-angular in conformation, the abutting edges being sharpened or having blades inserted, if desired, for the purpose of cutting wires of larger diameters than are receivable in the recesses of the disks. Furthermore, the cutting edges or blades project laterally from the arms, to the end that they may meet before the arms have abutted one another, whereby a space is left between the arms for the reception of the wire being severed, thus enabling the cutters to bite through the material and at the same time affording space for the severed end of the wire between the connecting-arms, which latter would otherwise engage the wire before the cutters had severed it. Projecting forwardly from the outer ends of the connecting-arms are the jaws 10 10, lying, preferably, in a plane parallel with that occupied by the handles. Each jaw is pro-

vided on its inner face with a series of transversely-extending serrations or teeth 11 11, bisected by an inclined groove 12, extending longitudinally of the jaw, and one of the grooves 12 may extend across the lower end of the connecting-arm, as shown at 13, the object of which is to afford passage for a strand of wire when the tool is used for stretching wires, as in fence-making, the wire lying in the registering grooves 12 12 of each jaw and being held or clamped tightly when the handles or levers are brought together and secured by the link, and in such manner the tool is utilized as a wire-grip and may be attached to or connected with any suitable stretching mechanism. The teeth on the opposite jaws are adapted to intermesh when the jaws are brought together, certain of the teeth on each jaw being recessed or concaved on their outer ends and of a reduced height, as at 14 14, which recessed teeth are received in shouldered interstices 15 15, located opposite thereto, the walls or biting edges 16 16 of the recessed teeth engaging the shoulders 17 17 of the interstices, whereby apertures are formed when the jaws are in their closed position, the purpose of which is to receive two strands of wire which are to be spliced or twisted together. The teeth also serve to strip insulation from wires when desired, the insulated wire being inserted longitudinally of the jaws and received in the grooves 12 12 of the jaws, opposite strains being placed on the grip and wire, whereby the angular edges of the teeth abutting the grooves 12 12 bite into the insulation, the tool being twisted to remove the insulation, or the insulated wire can be placed in one or the other of the apertures formed by the conjunction of the teeth 14 14 and shoulders 17 17, the tool being twisted as before, and the jaws when closed present a frusto-conical appearance to permit their insertion into piping and the like.

It is evident that changes might be made in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact construction herein set forth; but,

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a pair of pivoted levers, of angular connecting-arms secured thereto, the outer members of the connecting-arms extending in a plane at approximately right angles to the pivoted levers, gripping-jaws secured to the lower ends of the outer angular members and extending in a plane parallel with the plane of the pivoted levers and cutting edges arranged on the adjacent abutting faces of the angular connecting-arms.

2. The combination with a pair of pivoted handles, of angular connecting-arms secured to the outer ends of the handles, gripping-jaws connected to the lower ends of the depending portion of the angular jaws, intermeshing teeth arranged on the opposing faces of the jaws, the teeth bisected by grooves extending longitudinally of the jaws, one of the jaws having its groove formed from end to end thereof.

3. The combination with a pair of pivoted levers, of angular connecting-arms secured thereto and jaws carried by the connecting-arms, each jaw provided a series of serrations and having a longitudinally-extending groove formed therebetween certain of the teeth provided with recesses and having interstices located on the opposite jaw, the teeth received in the interstices and forming apertures when the jaws are closed.

4. The combination with a pair of pivoted handles, of connecting-arms secured thereto, cutters carried thereby and serrated jaws secured to the connecting-arms, the serrated jaws adapted to intermesh, certain of the serrations provided with recesses on their ends, the opposite jaws provided with interstices for the reception of the recessed teeth, and shoulders formed in the interstices, the recessed teeth abutting the shoulders.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN M. WOLFE.

Witnesses:
O. G. CARROLL,
M. OPAL HATCH.