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J. LOYD

2,660,786

OFFSET CUTTING PLIERS

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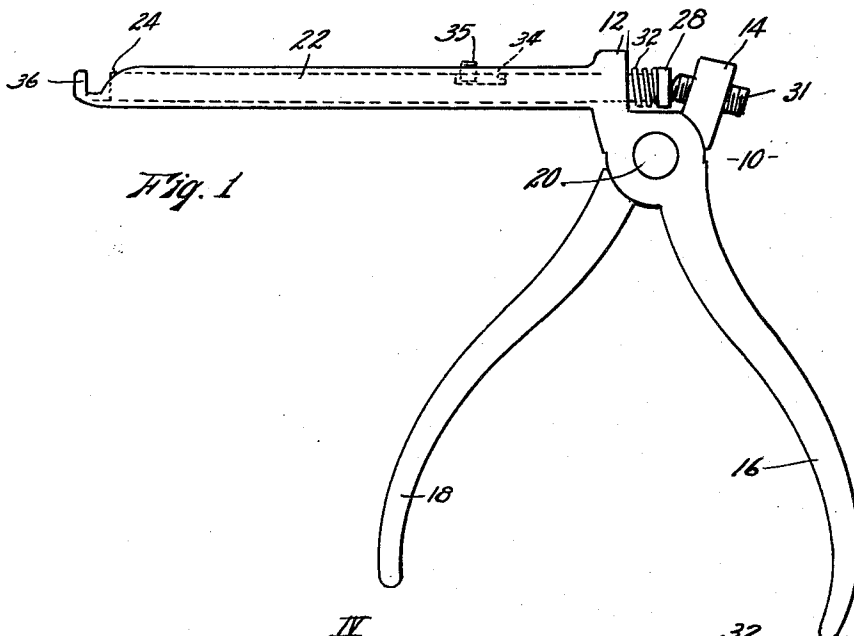


Fig. 1

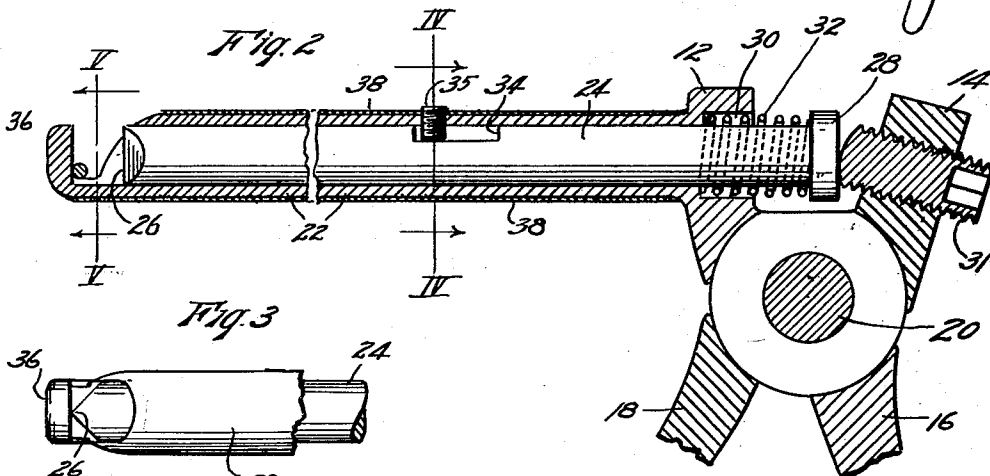


Fig. 2

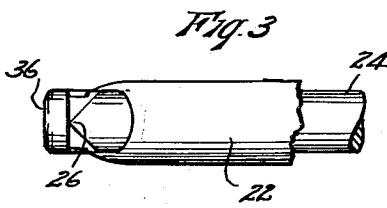


Fig. 3

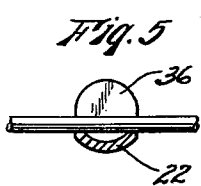


Fig. 5

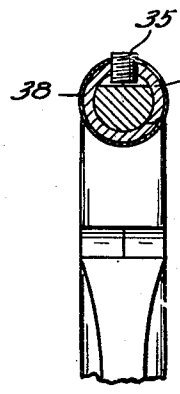


Fig. 4

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UNITED STATES PATENT OFFICE

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OFFSET CUTTING PLIERS

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1 Claim. (Cl. 30—182)

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This invention relates to improvements in offset cutting pliers suitable for insertion in difficult places for severing wires, etc. In many electrical instruments such as radios, etc. where many wires are used it has been found very inconvenient to have access to certain of the wires because of their position in the cabinet and the proximity of other parts.

The principal object of the present tool is the provision of a pair of offset cutting pliers adapted to be manipulated to reach and sever wires located in difficult positions.

Other objects are simplicity and economy of construction, ease and efficiency of operation and adaptability for use in various types of cabinets containing fixed wires.

With these objects in view as well as other objects which will appear during the course of the specification, reference will be had to the drawing wherein:

Fig. 1 is a side elevational view of a pair of offset cutting pliers, embodying this invention.

Fig. 2 is an enlarged fragmentary sectional view of the pliers.

Fig. 3 is a plan view of the outer end portion of cutting jaw.

Fig. 4 is a cross sectional view taken on line IV—IV of Fig. 2.

Fig. 5 is sectional view taken on line V—V of Fig. 2.

Throughout the several views of the drawings like reference characters refer to similar parts and the numeral 10 designates a pair of pliers having relatively movable jaws 12 and 14 having integral therewith respectively hand grips 16 and 18 by means of which the jaws may be caused to move toward and from each other on their pivot pin 20. Extending outwardly from jaw 12 is an elongated tubular member 22 adapted to receive a plunger 24 for longitudinal movement therein. This plunger is wedge shaped at its outer end to form a vertically disposed chisel cutting edge 26 and is provided at its inner end with an enlarged head 28 which extends into the gap between jaws 12 and 14. Jaw 12 is bored to form a recess 30 about plunger 24 to receive a compression spring 32, which is mounted on plunger 24 with its one end resting against head 28 and its other end contacting the inner end of recess 30 to normally maintain the plunger 24 in a retracted position against an adjustable operating screw 34 which is threaded into jaw 14 for contacting and forcing the plunger outwardly against the action of spring 32. Plunger 24 is notched at 34 to receive a set screw which is threaded through the wall of member 22 to engage in notch 34 to prevent rotation of the plunger in the tube. It will be noted that the tubular member 22 is reduced in size at its outer end and is provided with a fixed anvil 36 at its outer end in the path of travel of the chisel cutting edge

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26. Member 22 is notched adjacent anvil 36 to permit the positioning a wire against the inner face of the anvil whereby when the cutting plunger 24 is moved outwardly it will force said cutting edge against said wire whereby it will be easily severed. Normally when this tool is hooked onto a wire, which is positioned in a structure, such as a radio, the wire will take a position such as shown in Figs. 2 and 5 and always be in the path of travel of cutting chisel. It will be apparent that by slight transverse adjustment of the tool wires positioned at substantially any angle to the horizontal may be engaged for cutting.

The hand grips 16 and 18 are conveniently positioned so that the operator will have the best leverage advantage during the cutting of the wire, also this leverage may be varied by adjustment of screw 34. For use of the tool among electric wires it has been found convenient to coat tubular member 22 with an electrical insulating material 38 to prevent accidental shorting of the electric circuits.

This position of the gripping members at one side of tube 22 permits of a good view of the wires being worked on, furthermore the angled relation of the operating plunger may be varied to suit the particular work to be done. While this tool has been designed primarily for cutting wires, however it may be used for any work for which it might be adapted.

What I claim as new and desire to protect by Letters Patent is:

A wire cutting tool comprising pliers having a pair of relatively movable pivoted jaws, one of said jaws having a transversely extending tubular member fixed thereto and provided at its outer end portion with an anvil of less diameter than the diameter of said tubular member and concentric therewith, a plunger extending through said tubular member to a point between said jaws and provided at its inner end with a head and at its outer end with a chisel cutting edge, a spring positioned on said plunger to normally urge said cutting edge away from said anvil, a notch formed in said tubular member adjacent said anvil to receive a wire between said anvil and said cutting edge, an adjustment screw mounted in the other of said jaws adapted to contact the head of said plunger whereby when said pliers are manually operated said cutting edge will be forced toward said anvil whereby the wire positioned therebetween will be severed.

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