

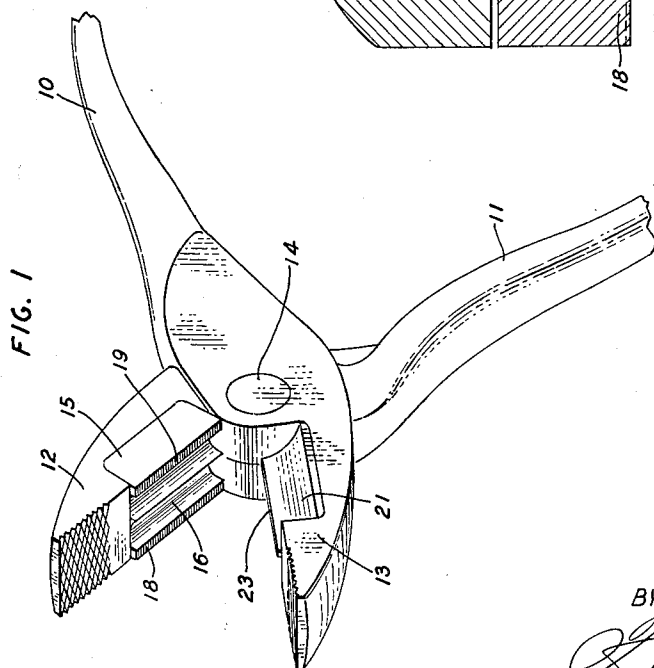
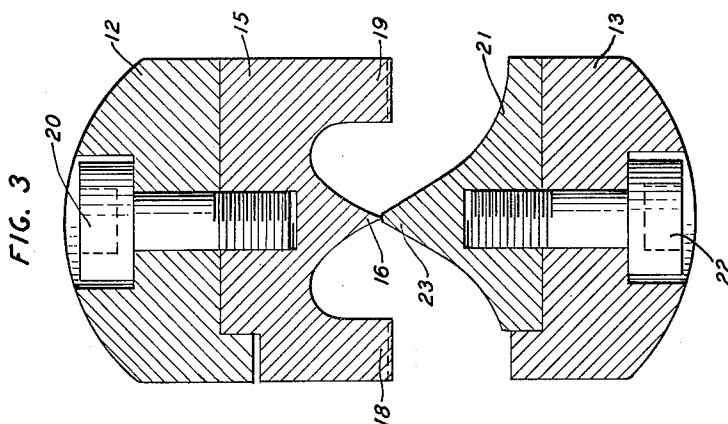
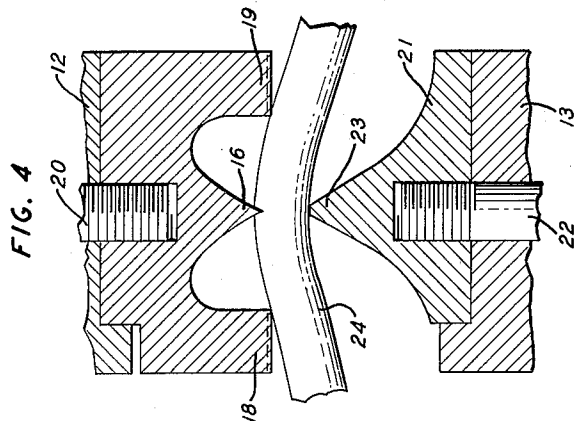
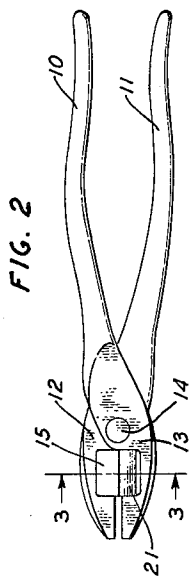
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WIRE CUTTING PLIERS

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WIRE CUTTING PLIERS

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2 Claims. (Cl. 30—186)

This invention relates to tools such as pliers and more particularly to wire cutting pliers intended for severing high strength wires of steel or some other high strength material.

One of the objects of my invention is the provision of a wire cutting tool or pliers which will sever a wire or rod with a minimum amount of effort on the part of the user.

Another object of my invention is the provision of a wire cutting tool in which the strain on the tool is minimized due to the cutting blades being centrally disposed with respect to the jaws of the pliers and in alignment with the fulcrum or pivot point of the tool.

A further object of this invention is the provision of means on one of the jaw members for exerting a bending force on the wire on each side of the cutting edge at the time it is being severed.

A still further object of this invention is the provision of blade members which may be readily removed from the jaw members for replacement.

My invention contemplates a plier structure wherein the severing blades are centrally disposed with respect to the sides of the jaws. Located on one jaw and positioned on each side of the cutting blade and in spaced relationship therewith are longitudinally extending bosses or abutments which serve as bending bars for the material being worked upon. This novel structure facilitates the cutting of heavy wire or the like which is positioned in the jaws and about to be severed, since the abutments will engage the wire on each side of the cutting blades at the same time that the blades begin their severing action, thereby exerting a bending force on the wire, and materially reducing the force required to sever the wire, due to said bending action.

My invention will be more clearly understood from the following detailed description when read with reference to the following drawing, of which:

FIG. 1 is a fragmentary view, in perspective, of the tool of my invention with the jaws therein in their open position;

FIG. 2 is an elevational view of my improved tool;

FIG. 3 is an enlarged cross sectional view taken on line 3—3 of FIG. 2; and

FIG. 4 is an enlarged fragmentary view, similar to FIG. 3, but showing a wire positioned between the jaws of the tool in the process of being severed.

As shown in the drawing, the reference characters 10 and 11 indicate the handle portions of the tool and the characters 12 and 13 indicate the jaw members.

The handle members 10 and 11 are joined together in pivoted relation, by means of the stud pin 14 which serves as the pivot or fulcrum for the handles 10 and 11. The stud pin 14 is located close to the cutting edges 16 and 23 thereby increasing the leverage applied to the handles 10 and 11.

As shown in the various figures, the upper or jaw member 12, which is serrated at its free end, has removably positioned therein, in a suitable recess or depression,

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a cutting member 15. The configuration of this cutting member 15 is novel in that the cutting blade or edge portion 16 is centrally disposed with respect to the sides of the jaws and is flanked on each side by the bosses or abutments 18 and 19. The bosses 18 and 19 extend in parallel relation with respect to the cutting edge 16 and are in spaced relation with respect thereto.

As shown, the bosses 18 and 19 have substantially wide, flat, face portions and extend slightly above the plane of the knife blade 16. The surfaces of the bosses 18 and 19 are knurled to minimize the displacement of the wire being worked upon. The member 15, as heretofore described as being removable, is held in place by the recessed set screw 20. However, this member may be secured therein by any suitable means.

Located in the jaw body member 13, which is also serrated at its free end, is the cutting member 21. This member is also removably secured in place by means of the set screw 22 and is provided with a cutting or knife edge portion 23 which is in alignment with the cutting edge 16 of the upper cutting member 15. Like the cutting member 15, the member 21, while being shown secured in place by a suitable set screw 22, may be secured in place by any suitable means.

It will be readily observed that in the operation of the improved tool of my invention, as shown in FIG. 4, the wire 24 to be severed is bent downward by the bosses 18 and 19 as the cutting edges 16 and 23 are brought toward each other by the force applied to the handles 10 and 11, thereby severing the wire 24 with a minimum amount of effort on the part of the operator and without undue strain on the tool.

While I have shown and described the preferred embodiment of my invention, it is to be understood that various changes and modifications may be made therein without departing from the spirit of the invention.

What is claimed is:

1. A wire cutting tool comprising a pair of handles, a stud disposed in said handles to provide a pivot therefor, jaws on each of said handles adjacent said stud, each of said jaw members provided with an elongated recess extending to the marginal edges thereof and terminating some distance from the end of each jaw, a centrally disposed first blade member, having a cutting edge thereon, removably secured in the recess of one of said jaws and having on each side thereof, in spaced relation, longitudinally extending bosses which project beyond the cutting edge of said first blade member, a second blade member removably secured in the other of said recesses and having a raised longitudinally extending central portion in alignment with said first blade member and adapted to register therewith when said jaws are closed by said handles.

2. A wire cutting tool comprising a pair of handles, a stud disposed in said handles to provide a pivot therefor, jaws on each of said handles adjacent said stud, each of said jaw members provided with an elongated recess extending to the marginal edges thereof and terminating some distance from the end of each jaw, each of said recesses having positioned along one edge thereof a longitudinally extending shoulder portion, a centrally disposed blade member, having a cutting edge thereon, removably secured in the recess of one of said jaws abutting said first shoulder and having on each side thereof, in spaced relation, longitudinally extending bosses which

project beyond the cutting edge of said blade member, a second blade member removably secured in the other of said recesses abutting said second shoulder and having a raised longitudinally extending central portion in alignment with said first blade member and adapted to register therewith when said jaws are closed by said handles.

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