

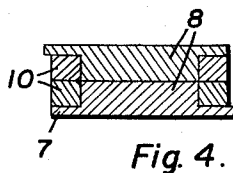
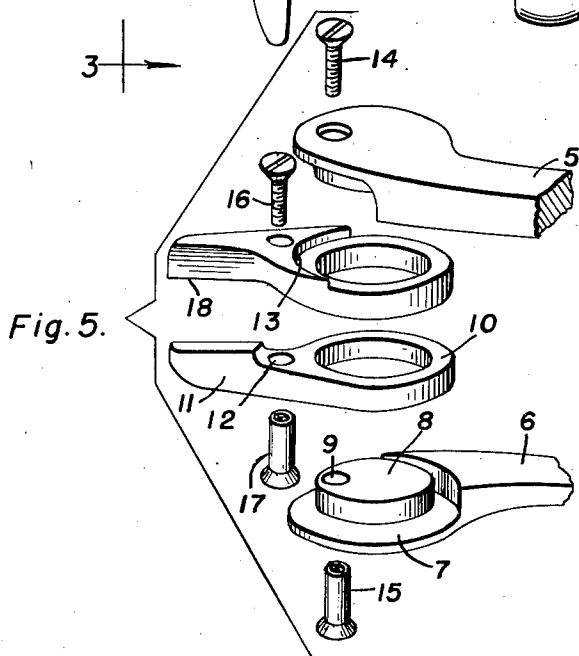
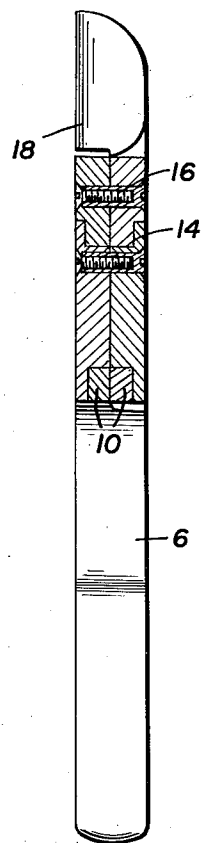
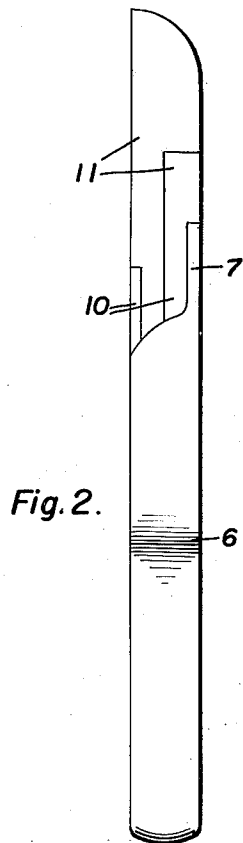
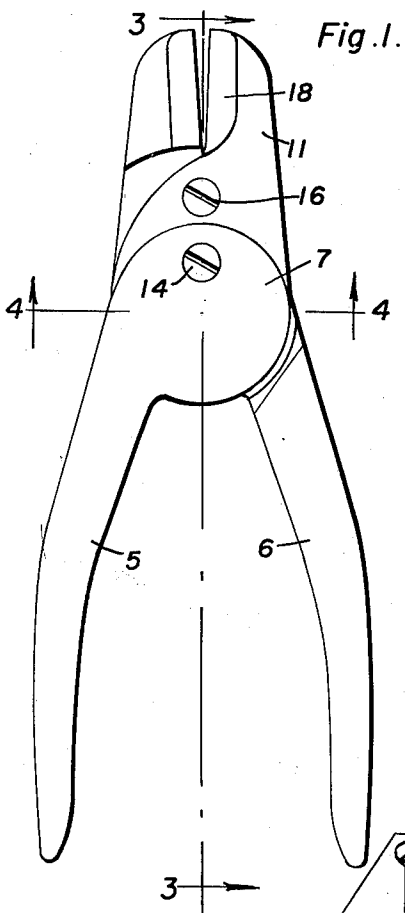
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J. J. SPRUNGER

2,583,346

PLIERS

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PLIERS

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2 Claims. (Cl. 30—266)

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The present invention relates to new and useful improvements in tools of the pivoted jaw or cutter type and more particularly to a novel handle construction for use with cutters, pliers, snips and other types of hand operated tools.

An important object of the invention is to provide a novel handle construction by means of which increased leverage or pressure is provided for the jaws or cutters.

A further object of the invention is to provide a tool of this character including pivoted handles and pivoted jaws or cutters and providing an eccentric operating connection between the handles and the jaws to increase the leverage or pressure against the jaws.

A still further object is to provide a tool of this character of simple and practical construction, which is strong and durable, efficient and reliable in operation, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view.

Figure 2 is an edge elevational view.

Figure 3 is a longitudinal sectional view taken on a line 3—3 of Figure 1.

Figure 4 is a transverse sectional view taken on a line 4—4 of Figure 1 and

Figure 5 is a group perspective view showing the eccentric connection between the handles and the jaws of the tool.

Referring now to the drawings in detail wherein for the purpose of illustration, I have disclosed a preferred embodiment of the invention, the numerals 5 and 6 designate a pair of handles of duplicate construction each formed with a disk or flat head 7 at its outer end and with an annular boss 8 on the inner surface of the disk of reduced diameter from that of the disk.

Each disk 7 and annular boss 8 is formed with an opening 9 adjacent its outer end to position the opening eccentrically with respect to the boss and disk.

The disk 7 is recessed at the inner surface of the handle to position the surface of the boss 8 in the plane of the inner surface of the handle and mounted for rotation on each boss 8 is a ring 10 having a jaw or cutter arm 11 projecting radially from one side thereof. At the inner end of the jaw or arm 11 is an opening 12.

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At the junction of the jaw or cutter arm 11 with the ring 10 is an arcuate shoulder 13 which rises above the plane of the adjacent side of the ring.

In assembling the parts of the tool, one of the rings 10 is mounted on the boss 8 of each handle 5 and 6, the bosses 8 being positioned in opposed relation to each other and the openings 9 of the handles aligned for receiving a screw 14 and internally threaded socket 15 to provide a pivot pin for the handles.

The openings 12 of rings 10 are also aligned for receiving a similar screw 16 and internally threaded socket 17 to also provide a pivot for the jaw or cutters 11.

The outer edge of the disk 7 rides against the arcuate shoulders 13 of the respective rings 10.

The outer ends of arms 11 may be formed with cutters 18 or other types of coacting tool elements.

In the operation of the tool, the rings 10 being rotatable on the eccentric bosses 8 will cause an opposite rotation of the rings by a movement of the handles 5 and 6 toward and away from each other and this opposite rotary movement of the rings resulting in an opposite swinging movement of the pivoted arms 11 to cause an opening and closing movement of the cutters or jaws 18, as the case may be. The handles 5 and 6 being of greater length than the arms 11 will cause an increased pressure or leverage against the arms and against the cutters or jaws carried thereby.

The play between the handles 5 and 6 and the arms 11 carrying the jaws or cutters is reduced to a minimum by recessing the bosses 8 and rings 10 at the inner surfaces of the handles so that the bosses 8 and rings 10 work in close confronting relation with respect to each other as will be apparent from an inspection of Figures 3 and 4 of the drawings.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A tool comprising a pair of jaws members

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pivoted to each other in crossed relation and having a pair of end rings thereon rearwardly of said pivot, a pair of handles having a pair of front end bosses thereon integral therewith and rotatably fitting in said pair of rings, and a pivot extending through the front ends of said handles and through said bosses eccentrically of the bosses and connecting said handles together.

2. A tool according to claim 1 wherein said rings and bosses are recessed in two confronting sides of said handles to provide for said handles rearwardly of said front ends being arranged in a common plane.

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