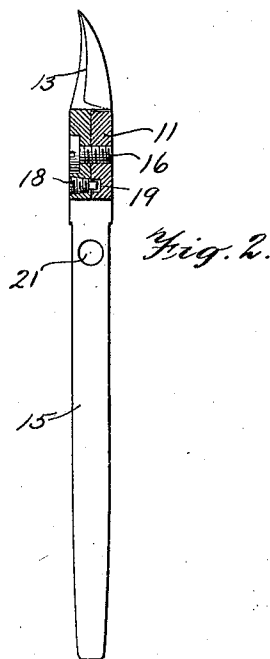
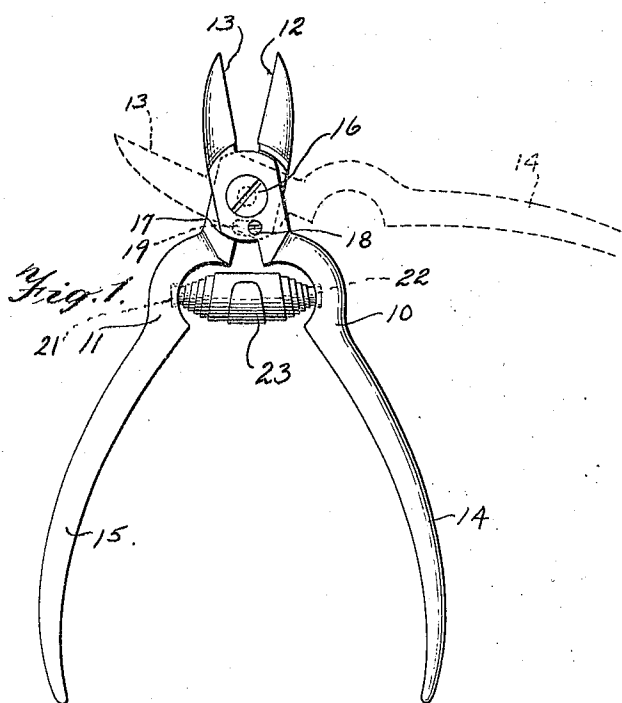


Mar. 13, 1923.

C. B. LARSON,
PIVOTED CUTTING TOOL.
FILED DEC. 10, 1919.

1,447,991.



WITNESS:

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Patented Mar. 13, 1923.

1,447,991

UNITED STATES PATENT OFFICE.

CARL B. LARSON, OF IRVINGTON, NEW JERSEY.

PIVOTED CUTTING TOOL.

Application filed December 10, 1919. Serial No. 343,692.

To all whom it may concern:

Be it known that I, CARL B. LARSON, a citizen of the United States, residing at Irvington, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Pivoted Cutting Tools, of which the following is a specification.

In certain forms of pivoted cutting tools, such as scissors or other similar shears, particularly when the blades are of a character in which the cutting edges are made to meet instead of passing each other, as they do in the ordinary form of scissors, difficulty has been experienced in grinding these cutting edges where the tool has been arranged so that in its normal operation the cutting edges have a limited amount of opening between them. It is one of the objects of my invention to provide an arrangement by which these cutting edges may be ground when the cutting blades are assembled, but when they are widely spaced apart beyond the normal amount of opening which is allowable during the operation of the tool.

With this and other objects in view, my invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and pointed out in the appended claims.

In the drawings, Figure 1 is a side elevation of one form of cutting tool to which my present invention has been applied; Figure 2 is a vertical sectional elevation through the pivot of the shears with some of the parts removed. Similar reference characters indicate similar parts in the several views.

For purpose of illustration of my present invention I have chosen a pair of scissors or shears, such as are used in manicuring, in which two members 10 and 11 are pivoted on the screw 16, these two members being provided respectively with handle portions 14 and 15 and cutting edges 12 and 13. Between the handle portions 14 and 15, in the form illustrated, is placed a spring 23 of a well-known form, having its ends resting in openings 21, 22 of the members 11 and 10.

Adjacent the pivot 16 the members 10 and 11 are cut away as is usual so as to form a joint which, unless other provision were made, would permit the blades 12 and 13 to be moved apart until the back of the blade 13, for instance, contacts with the shoulder 17 when the handle 14 and the cutting edge

13 would be in the dotted line position of Figure 1. It will be obvious that this excessive amount of opening would be greater than would be desirable in the normal use of the tool, because the space between the handles 14 and 15 would then be too wide for the palm of the operator's hand, and, furthermore, the spring 23 would fall out of these handles. It has been the practice, therefore, to arrange the shoulder 17 in such a way that the opening would be much less than this in extent.

With the arrangement heretofore used, however, difficulty is experienced in grinding the edges 12 and 13 which, particularly in the type of tool illustrated, must be ground so that when these two edges meet there will be an exact alinement between them throughout their length. The amount of opening between these blades, shown in full lines in Figure 1, is all that is necessary or desirable in the normal operation of the tool. With this amount of opening, however, difficulty is experienced in passing a grinding wheel between the cutting edges 12 and 13 so that both edges will not be touched at the same time by the wheel, unless a very thin and therefore fragile grinding wheel be used.

In order to overcome this difficulty I provide a removable stop, such as the screw 18, which is provided with a taper thread engaging a tapered thread in the member 10, and having a plain rounded end so that when the screw 18 is in place, its smooth end will engage in a slot 19 in the surface of the joint portion of the member 11. The engagement between the side of the screw 18 and the end of the slot 19 will form a stop to limit the outward motion of the handles 14 and 15 and correspondingly, the cutting edges 12 and 13, in the normal operation of the tool.

In constructing the tool the two members 10 and 11 are first connected by the screw 16, which may with my device be made a permanent joint by riveting, if so desired. Then, with the screw 18 out of place the blades 12 and 13 are open until 13 occupies the dotted line position of Figure 1, when the two edges may be ground and tried against each other until they are in exact alinement. Then, the spring 23 is inserted between the handles which are brought to the full line position of Figure 1, and the screw 18 put into place with its end engaging the slot 19. The opening of the cutting

edges 12, 13 is now limited to the amount shown in Figure 1, but at any time in resharpening the blades the amount of opening may be increased by unscrewing the screw 18.

While I have illustrated a simple screw passing from the face of one of the members 10 into a slot in the face of the other member 11, it will be obvious that any form of removable stop may be used in carrying out my invention. While I have shown my invention applied to a specific form of cutting tool, it will be obvious that it may be applied to any form, and particularly such tools as require cutting edges which exactly meet.

I claim:

1. A cutting tool having a pair of pivoted members with a cutting edge on each, said cutting edges being constructed and arranged to meet edge to edge when the pivoted members are closed, and said members being halved at the pivots to provide a piv-

oted lap joint with the walls of the joint arranged to permit a wide opening of the cutting edges, and a removable stop arranged to limit the opening of the cutting edges to a relatively small opening.

2. A cutting tool having a pair of pivoted members with a cutting edge on each, said cutting edges being constructed and arranged to meet edge to edge when the pivoted members are closed, and said members being halved at the pivots to provide a pivoted lap joint with the walls of the joint arranged to permit a wide opening of the cutting edges, a removable stop arranged to limit the opening of the cutting edges to a relatively small opening, and a spring between the handle portion of the members and adapted to turn them away from each other, the ends of the spring engaging cavities in the members, when said stop is removed, to permit the ends of the spring to be withdrawn from the cavities.

CARL B. LARSON.