J. H. KROUSE.

SCISSORS OR SHEARS.

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927,058.

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Fig. 1.

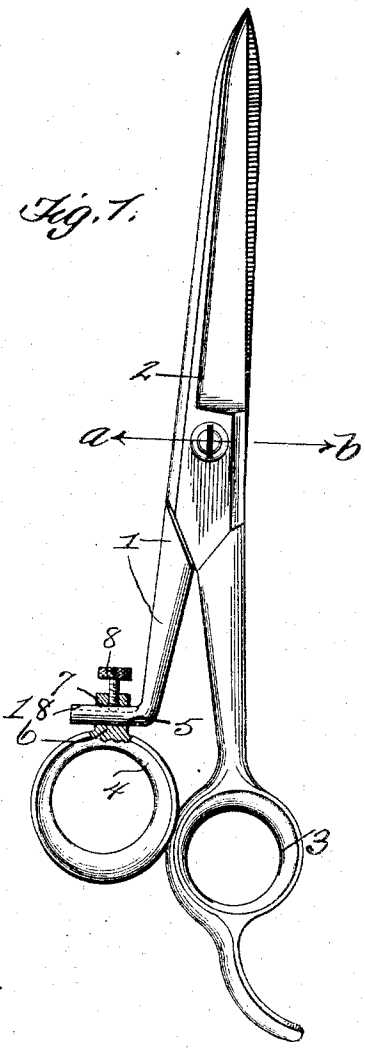


Fig. 4.

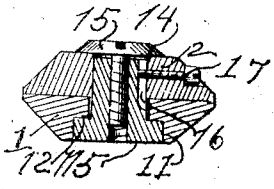


Fig. 5.

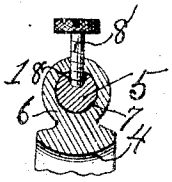


Fig. 2.

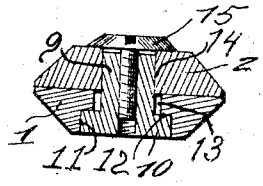
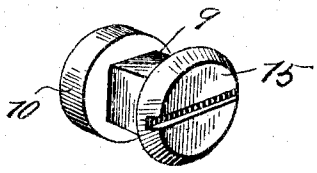


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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SCISSORS OR SHEARS.

No. 927,058. Specification of Letters Patent. Patented July 6, 1909.

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To all whom it may concern:

Be it known that I, JOHN H. KROUSE, a citizen of the United States, residing at Napoleon, in the county of Henry, State of Ohio, have invented certain new and useful Improvements in Scissors or Shears, of which the following is a description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to scissors or shears; and the objects thereof are to provide an improved fastening bolt for pivotally securing the blades of the shears together, which bolt shall be capable of ready and effective adjustment to thereby keep the cutting edges in proper contact; and to provide a detachable and adjustable operating member or thumb hold whereby the distance the cutting edges pass by one another may be regulated and the shears thereby so adjusted that the points of the blades will always come together. Another advantage following from the use of a detachable thumb hold is that different sizes of thumb holds may be used with a given pair of shears, and, furthermore, a given pair of shears may by means of my detachable thumb hold be readily and conveniently adapted for right- or for left-handed persons.

In the drawing accompanying and forming a part of this application: Figure 1 is a view of a pair of shears to which my improvements are shown as applied, said view being principally in elevation; Fig. 2 is a sectional view taken along the blades of the shears and passing through the improved fastening bolt as indicated by the line *a*—*b* Fig. 1; Fig. 3 is a perspective view of my improved bolt whereby the blades of the shears are pivotally secured together. Fig. 4 is a view similar to Fig. 2, but in which a modified form of fastening bolt is shown, and, Fig. 5 is a sectional view illustrating the means whereby the detachable thumb hold is secured in place.

In the drawing, 1 and 2 are the blades of a pair of shears which blades are pivotally connected together intermediate their ends and have operating portions or members 3 and 4 adapted to be grasped by the fingers and thumb of the operator. I refer to the operating member 4 as an adjustable thumb hold, as when the shears are in use the operator will place his thumb within said member, and this member 4 is detachably and adjustably secured to the blade member as follows: The said blade member is bent at right angles, as at 5, the bent over portion lying in the plane in which the blade oscillates when the shears are in use, as will be understood; and the thumb hold 4 is provided with a boss 6 having an opening 7 through which the bent portion 5 of the blade 1 passes.

8 is a set-screw for securing the thumb hold 4 in position, and 18 is a groove formed in the portion 5 into which the lower end of the set screw 8 enters.

With the above construction it will be evident that the farther the member 4 is moved to the left, Fig. 1, the farther the points of the blades will pass each other before the member 4 engages the other operating member 3, and that by varying the position of the member 4 upon the bent portion 5 of the blade 1 the shears may be so adjusted that the points of the blades will always just come together or pass each other slightly, and a proper cutting action thereby secured. A further advantage following from the use of a detachable thumb hold as 4 is that different sizes of thumb holds to suit the requirements of different operators may be provided and attached to a given pair of shears, and: a further advantage following from the use of a detachable thumb hold is that a given pair of shears may be supplied with a thumb hold adapted for a right- or a left-handed person, as it will be understood that the thumb hold is interiorly beveled and shaped so as to fit the hand and thumb of the user, and that the required forms of thumb hold for the right and for the left hand will be reversed.

Figs. 2 and 3 show my improved bolt whereby the blade members are pivotally connected together, and whereby they may be adjusted to keep the cutting edges in contact to thereby secure a proper cutting action of the shears. The said bolt comprises a body or shank portion 9 square or angular in cross-section, and a head portion 10 of cylindrical form, which latter portion forms a bearing for the blade member and is the only portion of the pivot or bolt which is subjected to wear. The head portion 10 has a bearing within a cylindrical recess 11 formed in the blade 1, which recess has an inwardly projecting ledge 12 forming the bottom of the recess 11 and against which the under side of the cylindrical head portion 10 bears. 13 is an opening extending from the bottom

of the recess 11, the diameter whereof is slightly greater than the maximum diameter of the square body portion 9 of the bolt so as not to come into contact therewith. 14 is an opening through the blade member 2, the form of which opening corresponds with the cross-section of the body portion 9 of the bolt, and is square in the form shown in the drawing. 15 is a screw engaging a threaded opening in the portion 9 of the bolt, and the periphery of the head of said screw engages the blade 2 as will be understood from Fig. 2.

With a bolt constructed as above described it is evident that the body portion 9 will move with the blade 2, because of the engagement of the squared body portion with the correspondingly shaped opening in the blade member 2, and it is also evident that the head portion 10 of the bolt is the only portion thereof that is subjected to wear. The blades may be drawn together by means of the screw 15, it being understood that a slight space is left between the end of the body portion 9 and the under side of the head of the screw 15; and the screw 15 will not tend to work loose when the shears are in use as there is no relative movement between the screw-head and the blade 2.

If after long use the bottom 12 of the recess 11 and the blades become worn so that the end of the body portion 9 comes into contact with the under side of the head of the screw 15, thereby interfering with further adjustment, the bolt may be removed and the end of the part 9 filed or ground off, whereby further capability of adjustment is secured without affecting the cutting qualities of the shears.

Instead of forming the fastening bolt with a square shank as 9 I may obviously use any form of construction of shank whereby the fastening bolt is caused to move with the blade member 2. I illustrate such a modification in Fig. 4 in which the shank of the fastening bolt 115 is round and is provided with a slot 16 into which the end of a set screw 17 enters. It will be seen that with this construction the fastening bolt is caused to move with the blade member 2 by means of the engagement of the set screw 17 with the slot 16, and that the set screw when tightened affords additional means for holding the fastening bolt securely in position.

Having thus described my invention and explained the mode of operation thereof, I claim and desire to secure by Letters Patent:

1. In shears, blades provided with cooperating cutting portions and with operating members which come into contact with one another when the shears are closed; a pivot intermediate said operating members and cutting portions for securing said blades together; and means whereby one of said operating members may be adjusted relatively to the remaining portion of the blade with which it is connected to thereby regulate the extent to which said cutting edges pass one another in the operation of the shears.

2. In shears, a blade member; an operating member; means whereby said operating member may be adjusted in a direction at right angles to said blade member and in the plane of movement thereof when the shears are in use; and means for securing said operating member in position upon said blade member.

3. In shears, a blade member having one of its ends bent at right angles and extending in the plane of movement of said blade when the shears are in use; an operating member supported by and movable upon the bent portion of said blade; and means for securing said operating member in position upon the bent portion of said blade.

This specification signed and witnessed this 4th day of February A. D. 1908.

JOHN H. KROUSE.

In the presence of—
HAROLD S. CAMPBELL,
W. A. HANNA.