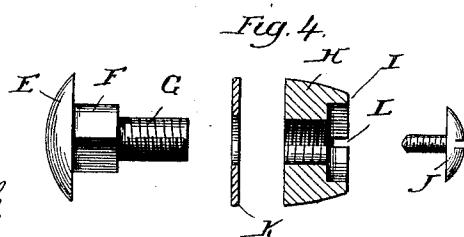
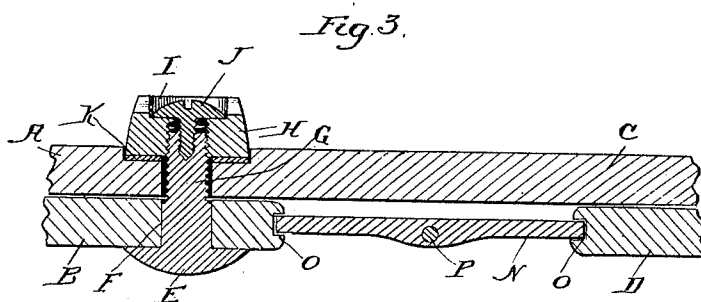
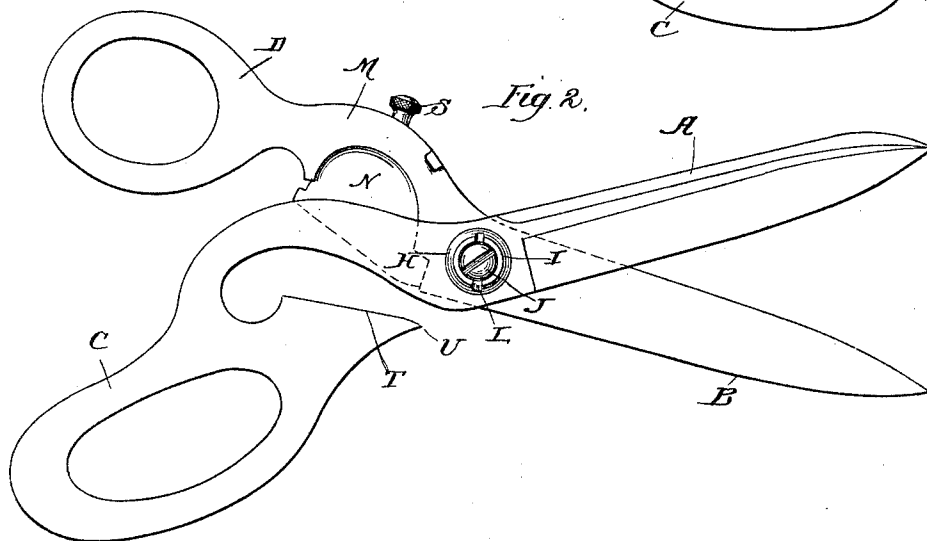
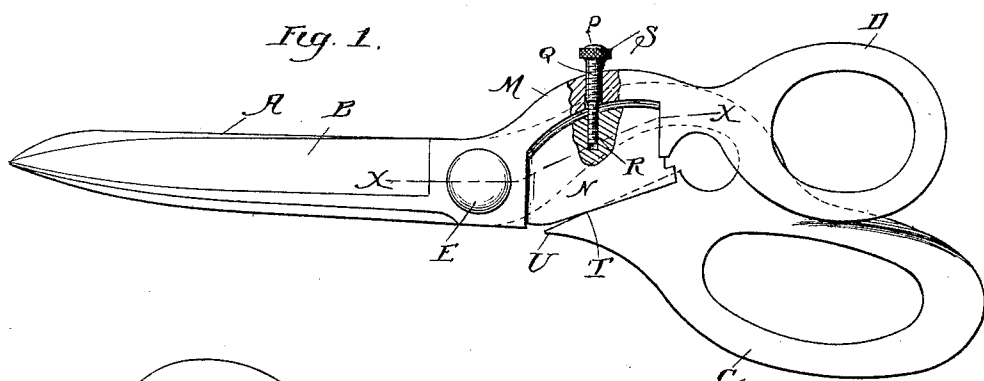


(No Model.)

C. J. REDIFER.
COMBINED SHEARS AND BUTTONHOLE CUTTER.
No. 581,615. Patented Apr. 27, 1897.



Witnesses:

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UNITED STATES PATENT OFFICE.

CHARLES J. REDIFER, OF MUNSON STATION, PENNSYLVANIA.

COMBINED SHEARS AND BUTTONHOLE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 581,615, dated April 27, 1897.

Application filed July 30, 1896. Serial No. 601,078. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. REDIFER, a citizen of the United States, residing at Munson Station, in the county of Clearfield and State of Pennsylvania, have invented certain new and useful Improvements in a Combined Shears and Buttonhole-Cutter, of which the following is a specification.

My invention relates to a new and useful improvement in combined shears and buttonhole-cutters, and has for its object to provide a device of this description which will be simple in construction and efficient in operation, and to so arrange the eyebolt as to prevent its becoming loosened by the movements of the shear-blades, and also to provide for the adjustment of one of the buttonhole-cutter blades relative to the opposite blade.

With these ends in view my invention consists in the details of construction and combination of elements hereinafter set forth, and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction and operation in detail, referring by letter to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a side elevation of a pair of shears made in accordance with my improvement, a portion being broken away so as to show the relative position of the adjustable screw and its connection with the adjustable blade; Fig. 2, a similar view showing the blades of the shears swung open; Fig. 3, an enlarged section upon the line *xx* of Fig. 1; and Fig. 4, a detailed view of the eyebolt, washer, nut, and jam-screw for securing the shear-blades together.

Referring to the drawings in detail, A and B are the two blades of the shears, which terminate in the handles C and D, respectively, and these blades are secured together by the bolt E, adapted to pass through the eyes, said bolt having a square shank F, which fits in the eye of the blade B, so as to turn with said blade. The remainder of the bolt is provided with right-handed threads G. A nut H is adapted to run upon these threads, and has a recess I formed in its outer end for the accommodation of the head of the jam-screw

J, which latter is provided with left-handed threads for engagement with corresponding threads formed in the end of the bolt E. A washer K is interposed between the nut H and the blade A, and is preferably let into a recess formed in said blade. The outer surface of the washer is roughened and the inner surface of the nut correspondingly roughened, so that when the two surfaces come together they will be bound, which will permit the free movement of the shear-blades without affecting the nut. Thus it will be seen that when the blades are secured together in this manner the jam-screw will prevent the backing off of the nut, since the threads on the latter are right-handed and the threads upon the former are left-handed.

It is obvious that the washer K may be omitted and the under side of the head of the screw J roughened, thus accomplishing the same object aimed at by the use of the washer.

As seen in Fig. 3, the end of the bolt terminates before reaching the recess I in the nut, the object of which is to permit an adjustment of the nut in tightening up the shear-blades to compensate for wear, and this is accomplished by backing off the jam-screw and setting the nut up the required amount, when the jam-screw is again forced thereagainst to prevent any retrograde movement of said nut.

To facilitate the operations of the nut, I provide slots L of a size and shape adapted to receive the nose of an ordinary screw-driver.

The handle D has a curved portion M, which is recessed to receive the adjustable buttonhole-blade N, the latter being held in guide-ways O, so as to have a vertical movement, but prevented from lateral movements. A screw P is passed through the curved portion of the handle and threaded therein with right-handed threads Q and into the blade with left-handed threads R, and the upper end of this screw is provided with a knurled head S, by means of which it may be manipulated for the purpose hereinafter set forth.

The handle C has formed therein a stationary blade T, so arranged as to match with the adjustable blade N in such manner as to cut after the manner of ordinary buttonhole-shears.

When a buttonhole is to be formed, the goods are passed within the space between the blade T and the handle C until brought into proper position relative to said blade, 5 when by moving the handles toward each other the blade N will be brought into conjunction with the blade T, as shown in Fig. 1, thus cutting the desired length of buttonhole, which may be regulated by the relative 10 position of the blade N to the handle in which it is guided, and this is determined by the proper manipulation of the screw P, as before described, it being noted that the lower the blade N is adjusted the longer will be the 15 buttonhole cut until the edge of said blade is brought into conjunction with the entire length of the blade T from the rear thereof to the point U. When the buttonhole-blades are not to be used, the blade N may be 20 carried out of conjunction with the blade T by adjusting it to its highest point, when the shears will act in all respects like the ordinary shears without the buttonhole attachment. This will prevent the wear which would otherwise 25 be occasioned by the constant chafing of the blades N and T when coming in conjunction with each other. The adjustment of the blade N is greatly facilitated by the fact that the screw P is provided with the 30 right and left handed threads, as it will be seen that the movements of the blades will be thereby quickly accomplished, as both threads tend to move the blade in the same direction.

35 Having thus fully described my invention, what I claim as new and useful is—

1. A pair of shears consisting of the blades A and B, handles formed with said blades, one of said handles having a curved portion 40 with a recess formed therein, said recess having guideways formed along the sides thereof, an adjustable blade secured in said recess,

a screw passed through the handle for adjusting the blade, a curved portion formed with the other handle to conform with the 45 curve of the first-named handle, a stationary blade projecting from the second handle to match the adjustable blade, substantially as described.

2. The herein-described combination of the 50 blades A and B, handles C and D formed therewith respectively, a blade T formed with the handle C, blade N set within a recess in the handle D, screw P having right-handed 55 threads formed upon one portion thereof and left-handed threads upon the remainder thereof, the former engaging with suitable threads in the handle and the latter with suitable threads in the blade N, a bolt E for passing 60 through the eyes of the blades A and B, said bolt having a squared shank and right-handed threads formed thereon, a nut adapted to engage said threads, a washer interposed between said nut and the blade B, and a jam- 65 screw having left-handed threads for engagement with corresponding threads formed in the end of the bolt, substantially as and for the purposes set forth.

3. A pair of shears consisting of the blades A and B, handles formed with said blades, one 70 of said blades having a recess formed therein with guideways formed along the side of the recess, an adjustable blade secured in said recess, a screw passed through the handle for adjusting said blade, a stationary blade formed 75 with the other handle, as and for the purpose described.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

CHARLES J. REDIFER.

Witnesses:

S. S. WILLIAMSON,
WILLIAM BERG.