

J. N. RANDLE & E. B. GOODCHILD.

SCISSORS OR SHEARS.

APPLICATION FILED JAN. 20, 1910.

996,674.

Patented July 4, 1911.

Fig. 1.

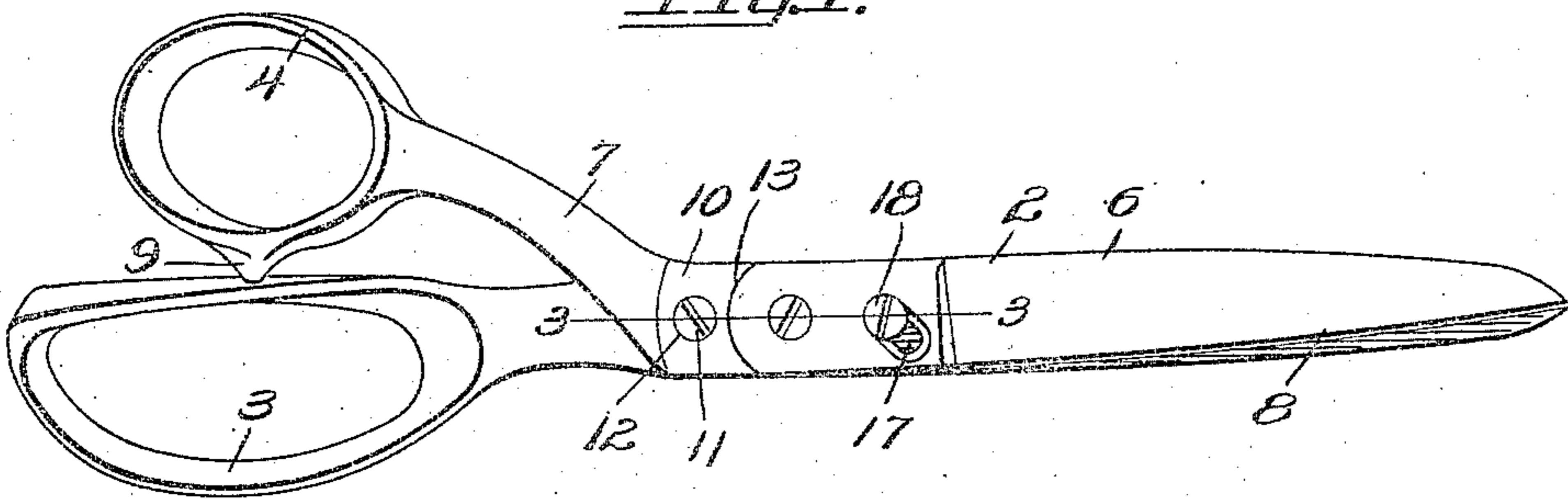


Fig. 2.

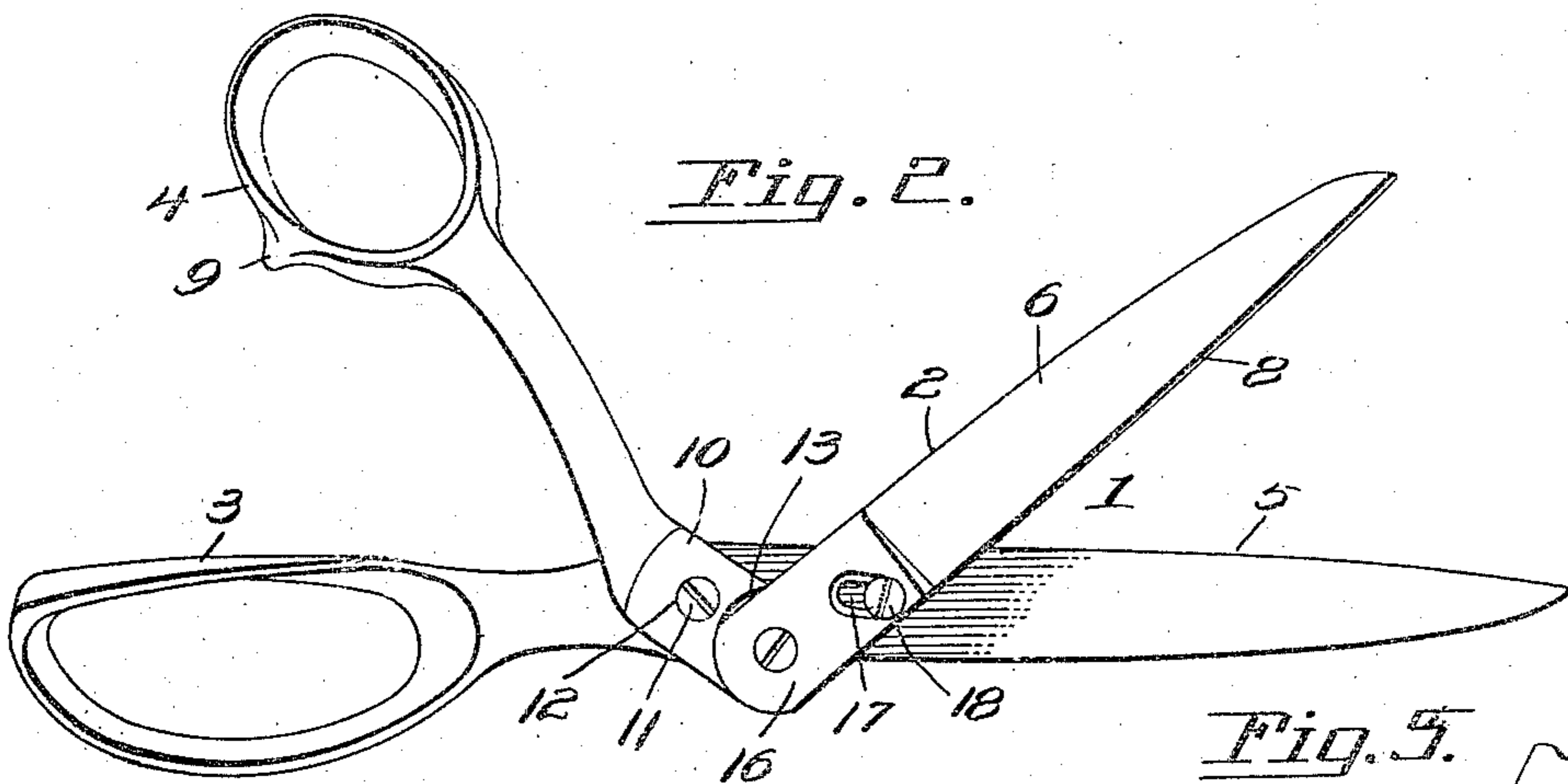


Fig. 4.

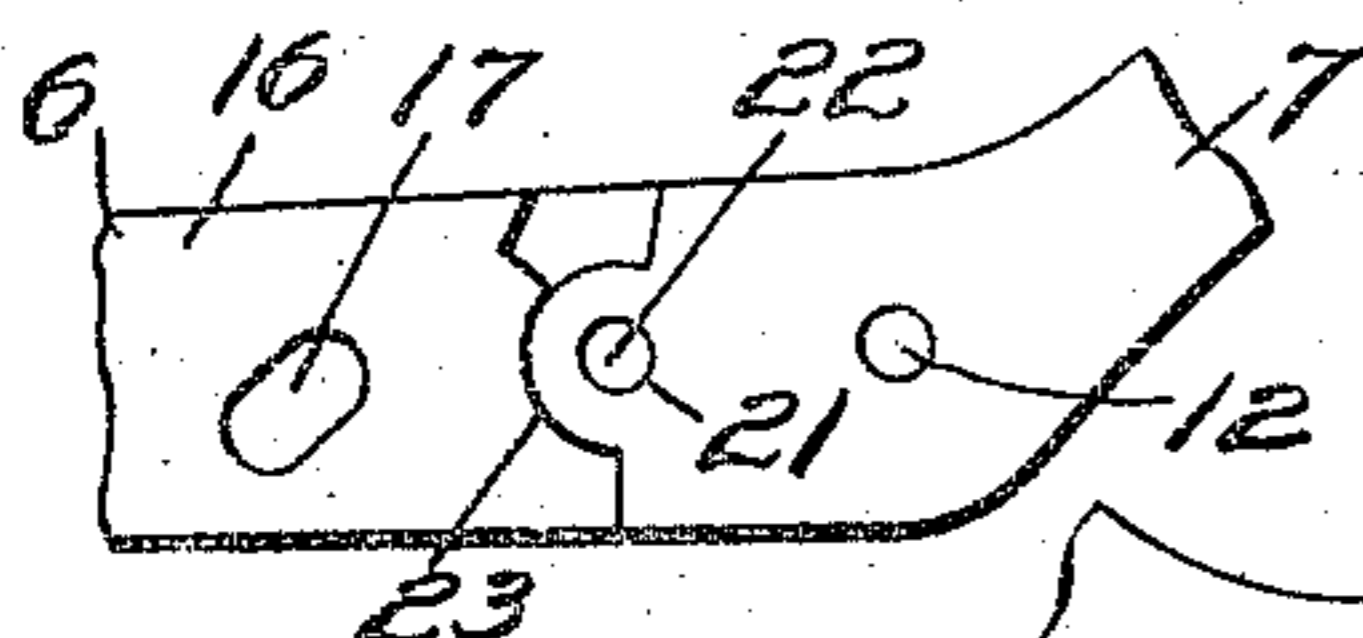


Fig. 3.

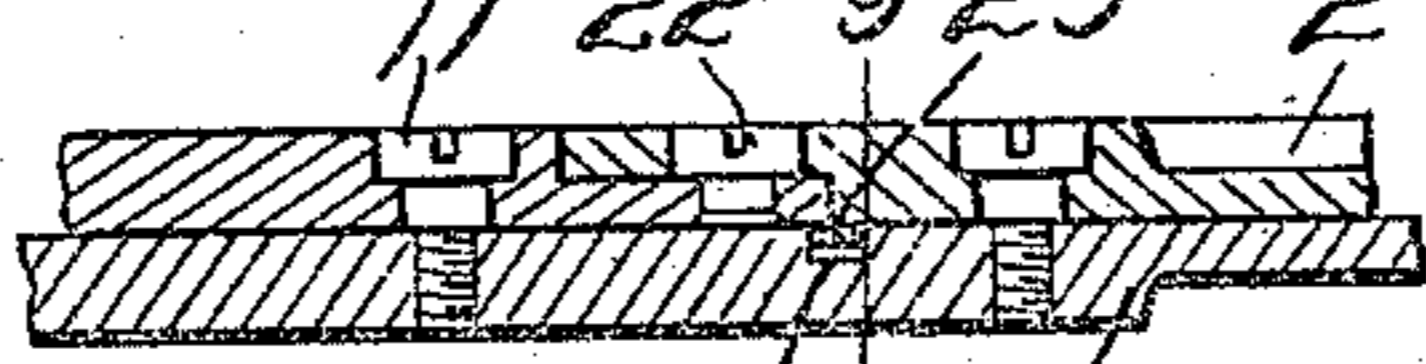


Fig. 5.

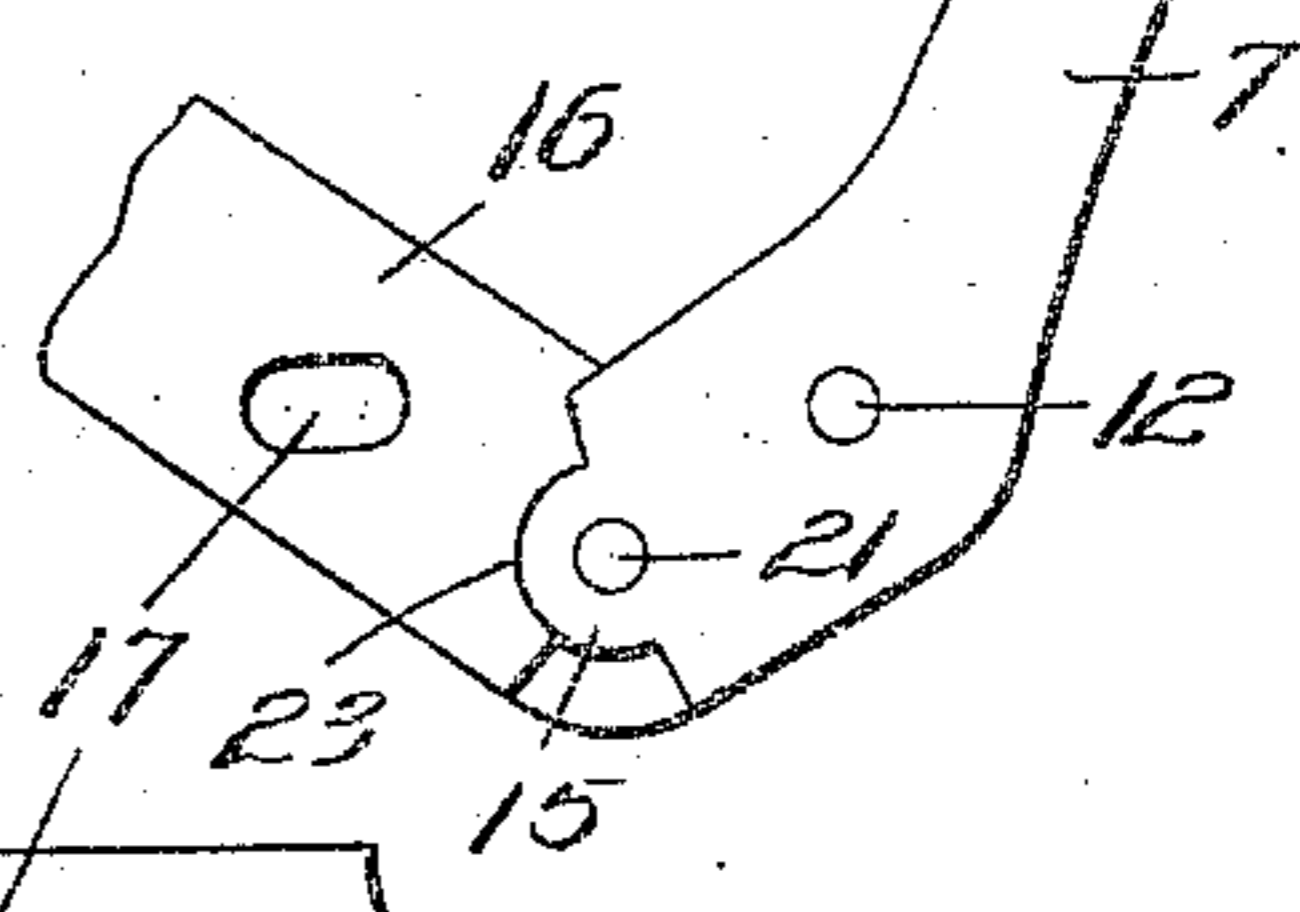


Fig. 6.

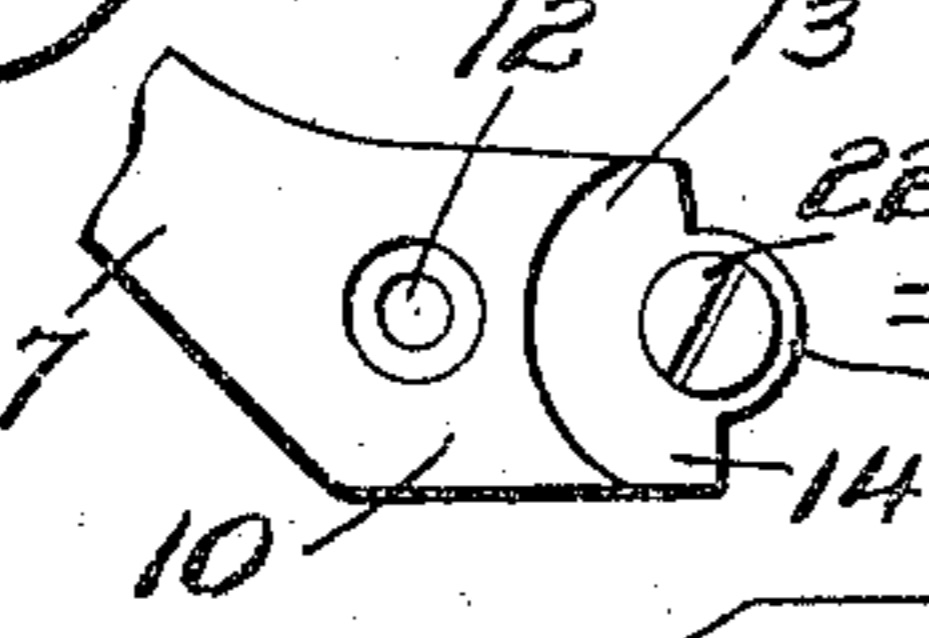


Fig. 8.

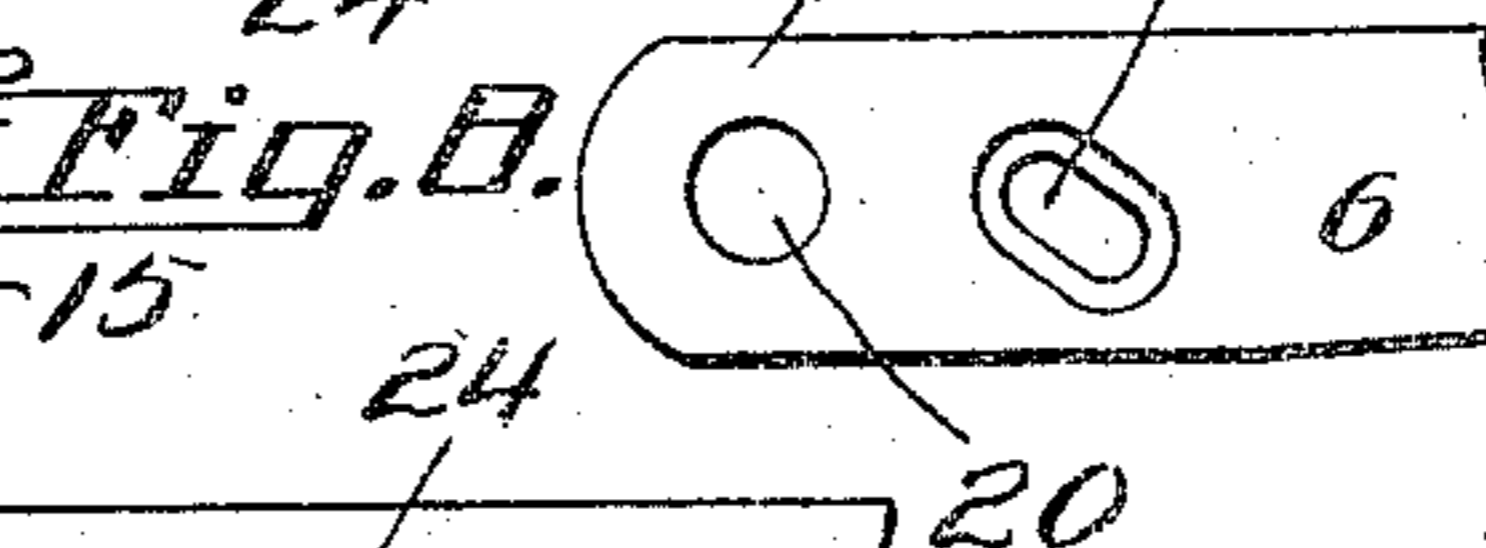


Fig. 7.

Fig. 9.



Witnesses

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# UNITED STATES PATENT OFFICE.

JAMES N. RANDLE AND EDWARD B. GOODCHILD, OF EUGENE, OREGON.

SCISSORS OR SHEARS.

996,674.

Specification of Letters Patent.

Patented July 4, 1911.

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*To all whom it may concern:*

Be it known that we, JAMES N. RANDLE and EDWARD B. GOODCHILD, citizens of the United States, residing at Eugene, in the county of Lane and State of Oregon, have invented new and useful Improvements in Scissors or Shears, of which the following is a specification.

This invention relates to improvements in scissors or shears, one of the objects of the invention being to provide a pair of scissors or shears in which one of the blades is relatively stationary and the other relatively movable in action, and further to provide a construction which affords a draw-cut with a high degree of leverage or cutting power in the operation of the blades, a desirable feature in cutting heavy materials.

A further object of the invention is to provide a simple construction for attaining these ends, to provide means for maintaining the blades in proper relation and preventing their deviation from their proper lines of relative movement from wear and loosening of the pivots, and to provide a construction whereby the lower blade will always lie beneath an unsevered portion of the material in cutting.

The invention consists of the features of construction, combination and arrangement of parts hereinafter fully described and claimed, reference being had to the accompanying drawings, in which:—

Figure 1 is a side elevation of a pair of shears embodying our invention, showing the blades closed. Fig. 2 is a similar view showing the blades opened for a cutting action. Fig. 3 is a longitudinal section on line 3—3 of Fig. 1. Figs. 4 and 5 are inner side views of the pivoted ends of the sections of the movable blade, and respectively showing them in the relative positions they occupy when said blade is closed and opened. Figs. 6 and 7 are outer side views of the parts shown in Figs. 4 and 5 detached. Fig. 8 is an inner side view of a portion of the stationary blade. Fig. 9 is a detail cross section on line 9—9 of Fig. 3.

Referring to the drawing, 1 designates the relatively fixed blade and 2 the relatively movable blade of the scissors or shears, which are respectively provided with the finger and thumb loops 3 and 4. The blade 1 is in a single piece and is provided with a cutting edge 5, while the blade 2 is composed of a cutting member 6 and an operating

member 7, the former having a cutting edge 8, and the latter carrying the loop 4. The said loop 4 is provided with a stop lug 9 which is adapted to engage the loop 3 when the blades are in fully closed position.

The member 7 constitutes an operating handle or lever having an arm 10 which lies parallel with the blade 1 when the two blades are closed. The arm 10 is pivoted by a screw 11 passing through a countersunk opening 12 therein to the blade 1 and in advance of said opening is formed on its outer side with a segmental recess 14 and its end portion terminates in a partially circular tooth or projection 15. The section 6 is provided at its rear end with an arm or tang 16 having at its forward end a diagonal slot 17 countersunk in its outer side to receive the head of a screw 18 which passes through said slot and enters the blade 1, thereby pivoting said section to the blade.

The rear end of the arm or tang 16 is provided with a reduced portion or tongue 19 having a rounded end and which overlaps the end of the arm 10 and fits and moves within the recess 13. This tongue is formed with an opening 20 registering with a threaded opening 21 in the arm 10, through which opening passes a screw 22 pivotally connecting the sections 6 and 7 together. The body of the arm or tang 16 is formed with a partly circular recess 23 receiving the tooth or projection 15, thus forming a connection which insures an easy relative pivotal motion of the sections 6 and 7 and prevents undue strain and wear from falling on the pivot 22.

In operation, the blade 1 is preferably disposed below and the blade 2 above the cloth or material to be cut and one or more fingers of the hand are inserted into the loops 3 and the thumb into the loop 4. The scissors or shears as a whole are then removed forwardly in the usual way while the member 7 is oscillated on its pivot 11 to oscillate the member 6, which thus moves toward and from the blade 1, so that the cutting edges 5 and 8 will effect a draw cut. It will be understood that the diagonal slot and screw 18 form a guiding connection between the blade 1 and section or blade proper 6, whereby the latter is permitted to move in the arc of a circle and its plane of movement rendered a prescribed one, so that the edges 5 and 8 will always move in close relation. As a result, a toggle lever action between the blade proper

6 and its operating handle or lever 7 is obtained, insuring great power, and at the same time excess strain on the pivotal connections is prevented.

5 Formed in the inner face of the blade 1 is a transverse recess 24 in which is a bowed spring 25 which laps across and bears against the tooth 15 and arm 16 at their point of junction and serves as a tension device to maintain the alinement of the pivoted parts and secure a proper degree of friction to prevent looseness of movement when the parts become worn, so that the cutting edges of the blades will always have the proper degree of clearance and no more.

10 If desired, the blade 1 may be provided with an extension point 26 projecting beyond the end of the blade 6 in order that a portion of the blade 1 will always lie beneath the fabric in advance of the cut, the advantage of which will be obvious.

15 Having thus described the invention, what is claimed as new is:—

20 Scissors or shears comprising a stationary blade having a recess therein, and a movable blade, said movable blade embodying a blade section having a diagonal slot and cut away on its inner side to provide a tongue or re-

duced portion formed with an opening and a semi-circular recess, a lever section pivoted to the stationary blade and cut away on its outer side to provide a reduced portion to receive and underlap the tongue of the blade section and having a semi-circular projection provided with an opening registering with the opening in said tongue, a pivot member engaging said registering openings and connecting said sections, a bowed spring disposed in the recess of the stationary blade and bearing upon the edge of the body portion of the blade section and the free end of the reduced portion of the movable blade, and a pivot member on the stationary blade passing through said diagonal slot, the three aforesaid pivotal connections being arranged in longitudinal alinement when the blades are relatively closed, whereby a toggle joint connection is secured.

In testimony whereof we affix our signatures in presence of two witnesses.

JAMES N. RANDLE.  
EDWARD B. GOODCHILD.

Witnesses:

M. SVARVERUD,  
W. W. CHESSMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."