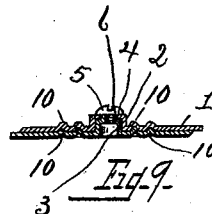
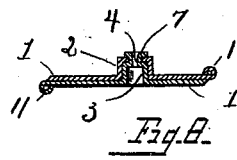
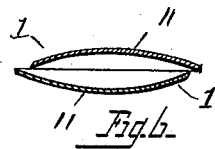
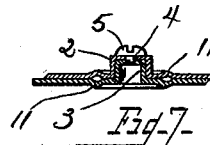
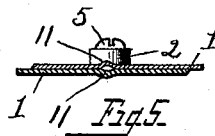
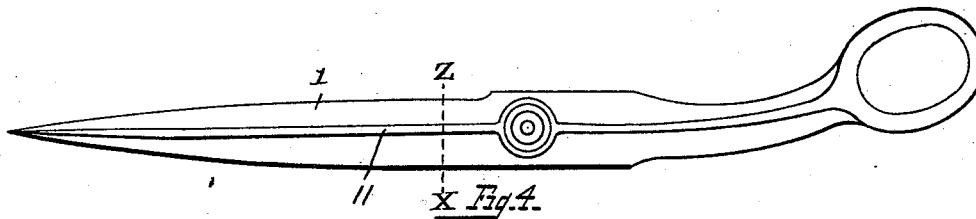
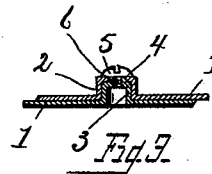
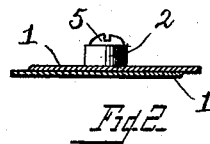
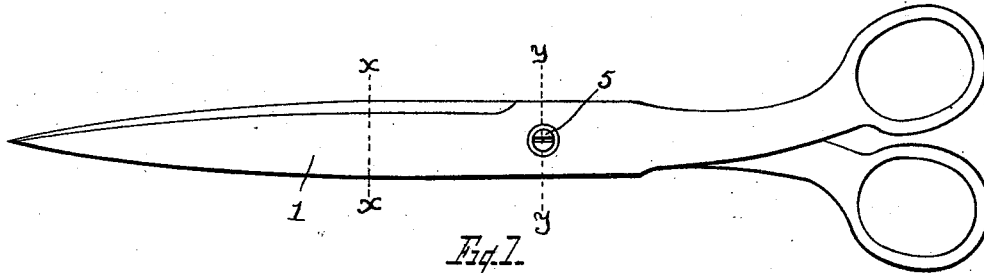


(No Model.)

C. THOMPSON.  
SHEARS.

No. 523,950.

Patented July 31, 1894.



WITNESSES.

Carroll J. Webster  
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INVENTOR.

Charles Thompson  
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# UNITED STATES PATENT OFFICE.

CHARLES THOMPSON, OF FREMONT, OHIO.

## SHEARS.

SPECIFICATION forming part of Letters Patent No. 523,950, dated July 31, 1894.

Application filed April 13, 1893. Serial No. 470,172. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES THOMPSON, of Fremont, county of Sandusky, and State of Ohio, have invented certain new and useful  
5 Improvements in the Manufacture of Shears; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use  
10 the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form part of this specification.

My invention relates to shears, and has for  
15 its object to so cheapen the product that a superior article can be produced at the present cost of an inferior grade.

A further object is to form the pivot points for the sections from the metal of each to in-  
20 sure rigidity and economy of construction.

With these objects in view the invention consists in striking from each section co-acting tubular pivots upon which the sections  
may move.

25 The invention consists also in certain details and combinations hereinafter described and claimed.

In the drawings: Figure 1 is a plan view of a pair of shears, in which the sections are  
30 formed from sheet metal and pivotally united upon integral pivot points. Fig. 2 is a cross sectional view on lines X—X, Fig. 1. Fig. 3 is a like view on lines Y—Y showing the pivot points in cross section. Fig. 4  
35 is a top plan view of a section of shears, in which there is formed a longitudinal corrugation to afford rigidity and prevent flexure of any portion of the section. Fig. 5 is a cross sectional view on lines z—z, Fig. 4. Fig. 6 is  
40 a cross sectional view taken through the blades, showing the same inversely convexed to insure rigidity. Figs. 7, 8 and 9 are cross sectional views taken through the pivot points as at Y—Y, Fig. 1 and show different means  
45 of strengthening the sections. In Fig. 7 there are two corrugations shown, and in Fig. 8 the outer edges of the sections are rolled to form a strengthening rib. Fig. 9 shows the blades corrugated concentrically around the pivot  
50 points to strengthen the blades, and provide a more substantial pivotal bearing.

In the manufacture I employ a thin sheet

of steel or other sheet metal, and by suitable dies strike the sections 1 from the sheet, forming at the same time a tubular pivot upon  
55 each section by which the two sections are joined. These pivot sections are struck from the metal of the sections, and may be varied greatly in form as illustrated by the modifications shown in Figs. 3, 7, 8, and 9, in  
60 which the upper section is struck up to form a circular bearing 2, into which a circular bearing 3 of a diameter to closely fit bearing 2, which is struck up to form the lower section, the two forming pivot bearing. In or-  
65 der to secure the sections together at the pivotal point, bearing 2 may be formed with an orifice 4 of a diameter slightly less than the screw head 5 and bearing 3, punched through  
70 the cap, or end to form an annulus 6, which projects through orifice 4, and being screw-threaded internally receives the threaded end of the screw.

In Fig. 7 the caps or ends of both bearings are perforated, and the orifice in bearing 3  
75 threaded to receive the screw, and in Fig. 8 the cap or bearing 3 is punched through, forming an annulus 6 of a length to protrude through an orifice in cap or bearing 2, and the end 7 is flared in the manner of an eyelet to  
80 secure the parts together.

In Fig. 9 is shown a plurality of annular corrugations 10 upon each section surrounding the bearings 2 and 3, and serve to form a broad bearing as well as to lend rigidity to  
85 the sections.

While I have shown a screw for securing the sections together, it will be understood that a rivet or bolt may be employed if de-  
sired.

90 In order to strengthen the sections, I may form one or more ribs 11 upon their length either by corrugating as shown in Figs. 5 and 7 or by the concave in Fig. 6 or by the roll shown in Fig. 8 or I may concave and roll  
95 corrugate and roll the parts to cause rigidity, and prevent flexure of the sections.

It will be apparent that my invention may be varied greatly in details without departing from the spirit of my invention, as for ex-  
100 ample, the blades may be made in accordance with my invention and secured to handles, a modification strictly within the scope of my invention.

In the use of the word "shears" in the description I wish to be understood as generically embracing all articles of analogous classes.

5 What I claim is—

1. In shears, the sections formed of sheet steel, and each provided with an integral tubular pivot which has an opening in its top and a fastening device passed through said openings to secure the sections and pivots together.

10 2. In shears, the sections formed of sheet

steel and each provided with an integral tubular pivot and concentric corrugations around each pivot and means for securing said pivots together. 15

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

CHARLES THOMPSON.

Witnesses:

WILLIAM WEBSTER,  
FLOYD R. WEBSTER.