

(No Model.)

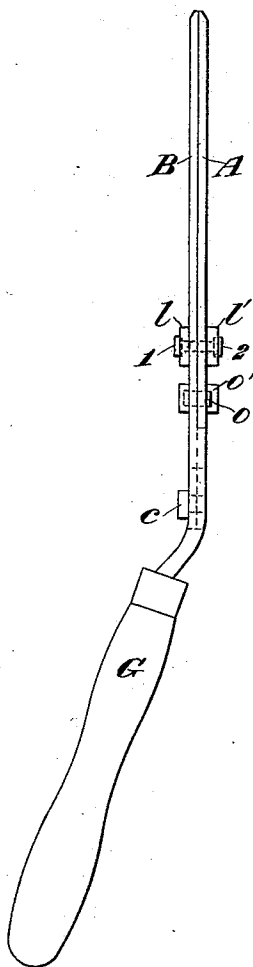
C. HAMANN.  
SHEARS.

3 Sheets—Sheet 1.

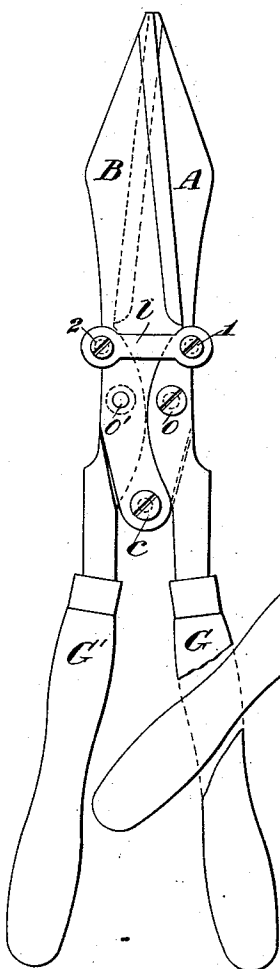
No. 509,125.

Patented Nov. 21, 1893.

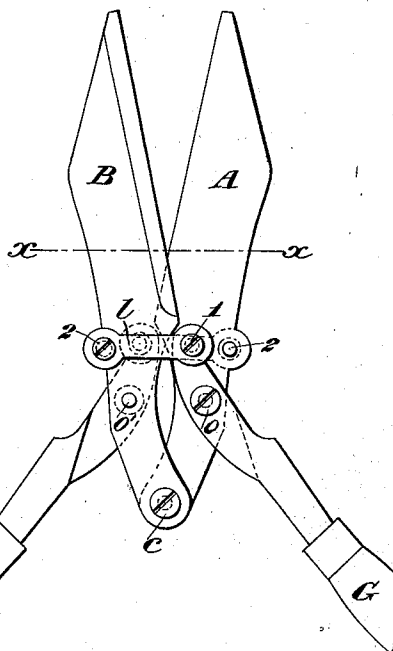
*Fig.1.*



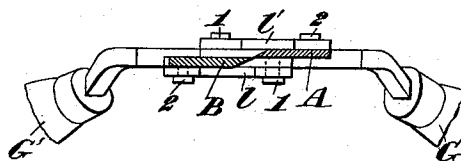
*Fig.2.*



*Fig.3.*



*Fig.4.*



Witnesses:-  
George Barry,  
C. Sundgren

Inventor:-  
Carl Hamann  
by attorneys  
Brown & Seward

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Fig. 6.

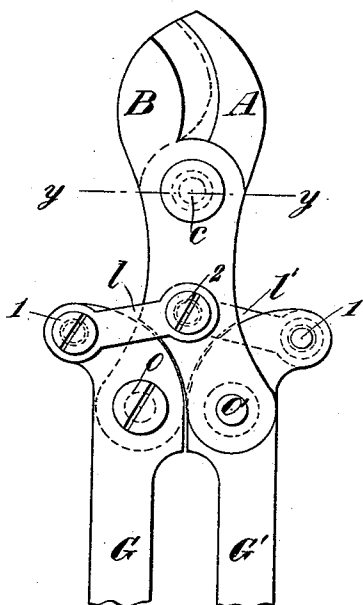


Fig. 7.

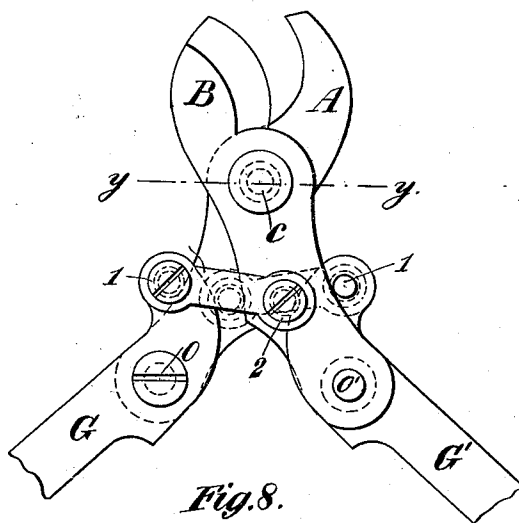


Fig. 8.

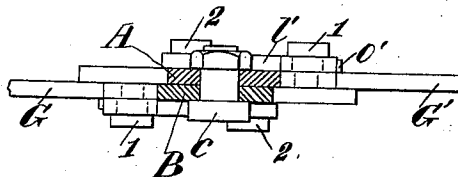
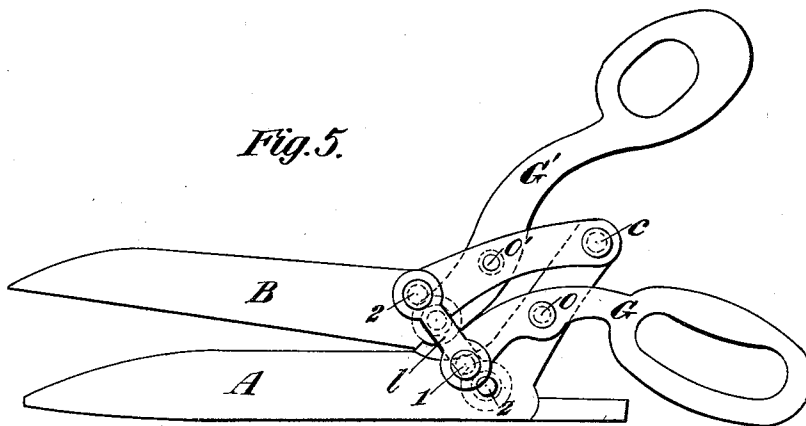


Fig. 5.



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(No Model.)

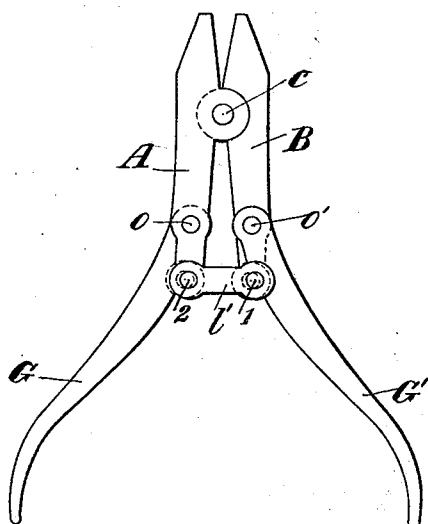
C. HAMANN.  
SHEARS.

3 Sheets—Sheet 3.

No. 509,125.

Patented Nov. 21, 1893.

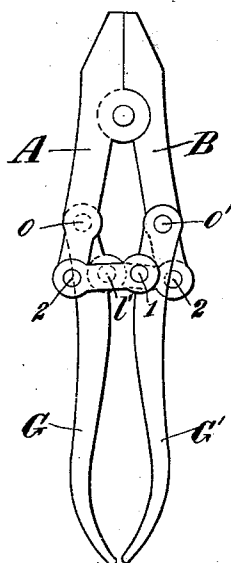
*Fig. 9.*



*Fig. 10.*



*Fig. 11.*



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# UNITED STATES PATENT OFFICE.

CARL HAMANN, OF REINBECK, GERMANY.

## SHEARS.

**SPECIFICATION** forming part of Letters Patent No. 509,125, dated November 21, 1893.

Application filed February 14, 1893. Serial No. 462,272. (No model.)

### *To all whom it may concern:*

Be it known that I, CARL HAMANN, of Reinbeck, in the Kingdom of Prussia, German Empire, have invented a new and useful Improvement in Shears, Scissors, Nippers, and the Like, of which the following is a specification.

This invention relates to an improved construction of shears, scissors, pinchers and the like, the essential features of which are that the handles are pivoted separately on the blades or jaws, one handle on one blade or jaw and the other handle on the other blade or jaw, while the said blades or jaws are themselves pivoted together on a pivot common to both and each handle is connected by means of a link to that blade or jaw to which the other handle is directly pivoted. In this new construction pressure applied to either of the handles is transferred to the sharp edges of the blades or meeting faces of the jaws, namely, to that blade or jaw to which the handle is connected by means of the link and also to that blade or jaw on which the handle has its point of support.

In comparison to other known constructions this invention provides that the pressure applied upon the handles is practically fully utilized, while in all cases where the handles possess only one pivot common to both a great deal of the pressure exercised upon the handles is practically lost in this pivot.

This invention is illustrated in the accompanying drawings in which—

Figures 1, 2, 3, 4 illustrate my invention applied to garden shears, Fig. 1 being an edge view, Figs. 2 and 3 side views showing the shears in different positions, and Fig. 4 representing a transverse section in the line *xx* of Fig. 3. Fig. 5 is a side view of a pair of tailor's shears embodying the invention. Figs. 6, 7, 8 illustrate the invention as applied to pruning shears, Figs. 6 and 7 being side views showing them respectively closed and open, and Fig. 8 representing a transverse section in the line *yy* of Figs. 6 and 7. Figs. 9, 10, 11 represent a pair of nippers embodying my invention, Figs. 9 and 11 being side views showing them respectively open and closed and Fig. 10 being an edge view.

Similar letters and numerals of reference

designate corresponding parts in all the figures.

Referring to Figs. 1 to 4, *G G'* show the handles pivoted severally on the pins *o o'* on the cutting jaws or blades *A* and *B*, which latter are also pivoted together on the pivot *c* common to both. The handles *G G'* are connected to the blades *B A* respectively, the handle *G* to the blade *B* and the handle *G'* to the blade *A*, by means of the respective pivoted links *ll'*, each of these engaging on a pin *1* on the respective handle and on a pin *2* on the respective blade, the pivots of the said link connections being separate from the pivots by which the handles and blades are pivoted together. In pressing the handles together from their open position shown in Fig. 3 to their closed position shown in Fig. 2, the pressure of each handle is transferred from two working points to the two blades, namely, from the handle *G* through one working point consisting of the pivot *o*, directly to the blade *A*, and through a second working point, consisting of one of the pivots *1*, through the link *l* to the blade *B*, also in like manner, from the handle *G'* through one working point, consisting of the pivot *o'*, directly to the blade *B*, and through a second working point, consisting of the other pivot *1*, through the link *l'* to the blade *A*. Consequently the pressure exerted on the handles is completely transferred to the blades, which is not the case in shears in which the handles have a pivot in common. Moreover by this system of connection between the blades themselves and between the blades and the handles a very powerful leverage is produced and a great movement of the handles relatively to that of the blades is obtained without making the handles of a length disproportionate to the blades.

In the tailor's shears shown in Fig. 5, the construction is the same as in Figs. 1, 2, 3, 4, the pivot in common *c* of the blades *A* and *B* being below or behind the working points of the links, the consequence of which is a superior cutting effect since the blades form a more acute angle when in their open position, the points of support of the handles being between the links and the pivot *c* of the blades.

In Figs. 6, 7, 8, the pivot *c* of the blades is

above the links and below the latter are the points of support *oo'* of the handles. In other respects the construction is as above described with reference to Figs. 1, 2, 3, 4.

5 In the pinchers shown in Figs. 9, 10, 11, the only variation from the construction described with reference to Figs. 1, 2, 3, 4, is that the pivoted points are inverted, in consequence of which the closing of the jaws is  
10 effected by a pushing of the links so that the links are here in compression while in Fig. 1 the blades are drawn together by means of the links which are thus in tension.

What I claim as my invention is—

15 The combination in scissors, shears, pinchers and the like, of two blades or jaws piv-

oted together by one common pivot, two handles pivoted directly one to one and the other to the other of said blades or jaws, and two links pivotally connecting the handles respectively each with that one of the two blades to which the other handle is directly pivoted, the pivotal connections of said links with the handles and blades being separate from the pivots which connect the handles directly  
25 with the blades, substantially as herein set forth.

CARL HAMANN.

Witnesses:

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