

S.H. Wood.

Die for Making Shears.

N^o 97015.

Patented Nov. 16. 1869.

Fig: 1

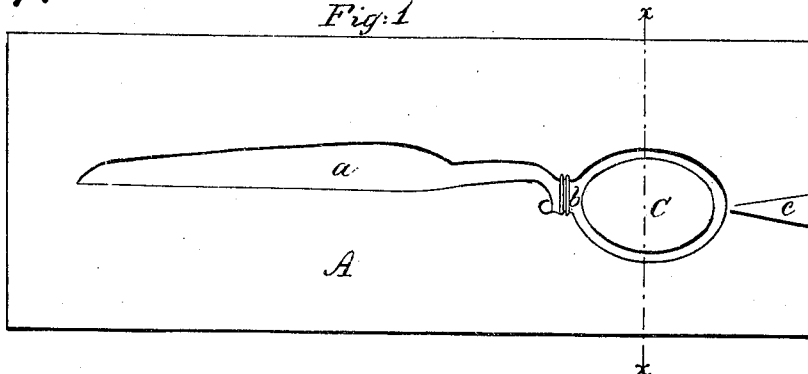


Fig: 2

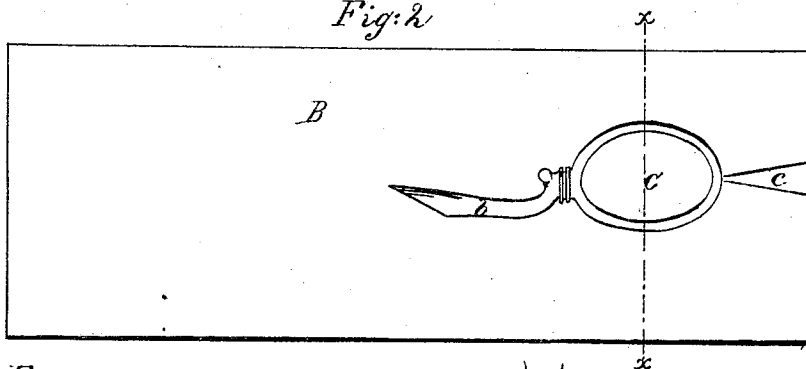


Fig: 3

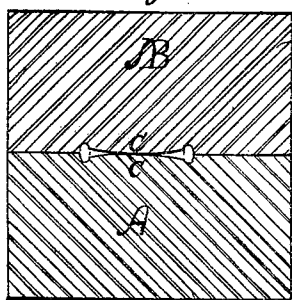
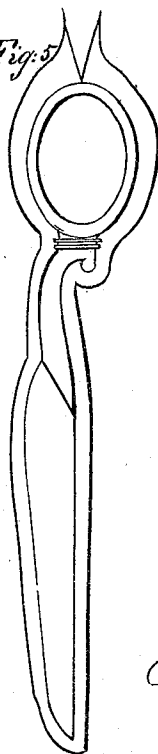


Fig: 4



Fig: 5



Witnesses

Geo W. Smith

Charles H. Wilson

Inventor

Solomon H. Wood

United States Patent Office.

SOLOMON H. WOODS, OF BERLIN, ASSIGNOR FOR ONE-HALF TO RUSSELL S. GLADWIN, OF WEST MERIDEN, CONNECTICUT.

Letters Patent No. 97,015, dated November 16, 1869.

IMPROVED DIE FOR MAKING SHEARS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, SOLOMON H. WOODS, of Berlin, county of Hartford, and State of Connecticut, have invented a new and useful Improvement in Dies for Forming Scissors and Shears; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon; said drawings constitute part of this specification, and represent, in

Figure 1, a face view of the lower die; in

Figure 2, a face view of the upper die; in

Figure 3, a vertical cross-section of the two dies together, taken through line X X, and showing the convex surface of the portion of the dies which form the aperture in the centre of the circle or bow of the handle; in

Figure 4, a view of the blank, after it is forged, and before it has been operated on by the dies; and in

Figure 5, a-view of the same, after passing through the dies.

Similar letters of reference, when they occur in the separate figures, indicate like parts.

My invention relates to an improvement in dies for forming the one-half of a pair of scissors or shears, (blade, shank, and bow,) from a blank formed by forging or otherwise approximating in shape to that of the finished article.

The object of my invention is to provide a means of rapidly forging this class of cutlery, and to furnish an article of superior quality at a price much below the present market value.

To enable others skilled in the art to make and use my improved dies, I will proceed to describe their construction and operation.

A is the lower die, and is provided with an indentation, *a b*, sunk in its surface. The portion *a* of this indentation receives the blade of the article, and the other portion, *b*, receives one-half the handle, as shown in fig. 1.

B is the upper die, and is provided with an indentation, to exactly correspond with the portion marked *b* of the lower die. As the blade *a* is formed entirely upon one side, this portion of the upper die is left flat and smooth, as shown in fig. 2.

c is a small aperture, or groove, for the purpose of admitting the rod to which the article is attached, and upon which it is held until it is finished. Before the metal is placed in the dies, it is drawn under a hammer from a rod or bar, to form the blank as near as possible to the proper shape and size, and the said blank is left in form similar to that shown in fig. 4. It is next placed in the dies, to be swaged or forged.

The dies are set in operation, and as they strike the metal, the tendency is to spread and fill the indentations.

The portions C C of the dies which form the aperture in the bow or handle may be made slightly convex, as shown in fig. 3, in order to facilitate the operation, and more effectually spread the metal from the solid lump. I do not, however, consider it absolutely necessary to make the said portions in this form, as a flat surface may be made to answer the purpose.

The portions C C, whether flat or convex, operate first upon the lump, or portion of the blank which forms the handle, pressing it outward, and forming the aperture.

After the article has passed through the dies, there will be a thin film of metal around the edges and across the bow or circle of the handle. This makes it necessary to pass it through a set of trimming-dies, which cut away all the superfluous amount of metal, and leave the article ready for finishing.

Both of the two parts of a pair of scissors can be made under one set of dies, as the said parts are exactly alike, and by placing the flat portions of the blades together, they are brought into position for riveting and use.

In shears, however, where the handles are of different dimensions, two sets of dies must be used—one set for each portion or half of the pair.

My improvement is equally adapted to any size of scissors or shears. The size of the dies in each case must, of course, be adapted to the size of the article to be formed.

It may also be adapted to making the kind of shears styled "slip-shears," which are used by mechanics for cutting tin or other sheet-metals. For this purpose, I make a set of dies which shall form simply the circle or bow of the handle upon the bar, using the same form as before described for pressing the metal outward and into the proper indentations in the dies, and forming the aperture in the centre of the said circle or bow.

I do not, broadly, claim a die for forming the blade of the scissors, as such is not new; but

What I do claim as new and useful, and desire to secure by Letters Patent, is—

The dies, constructed as shown and described, for forming scissors or shears from a wrought blank, substantially in the manner as herein specified.

SOLOMON H. WOODS.

Witnesses:

GEORGE W. SMITH,
ELISHA H. WELLES.