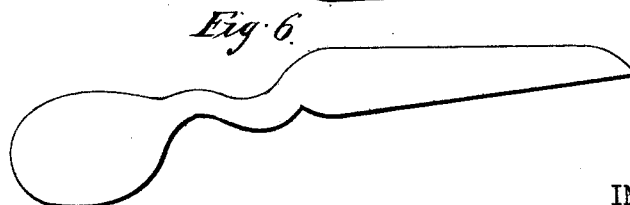
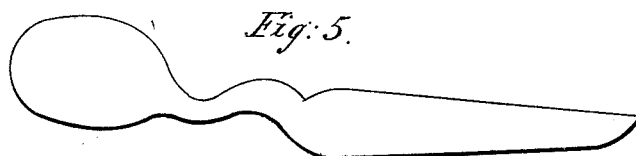
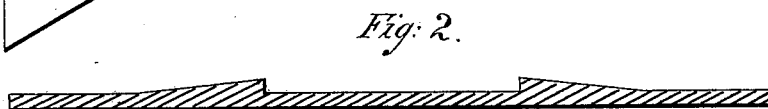
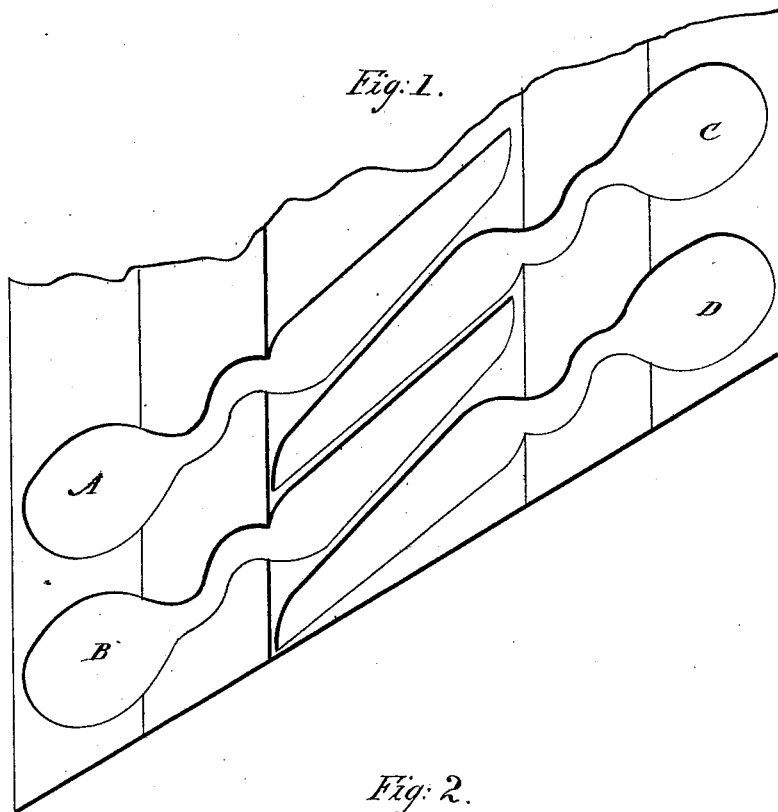


A. CLARKE.
Manufacture of Scissors.

No. 213,621.

Patented Mar. 25, 1879.



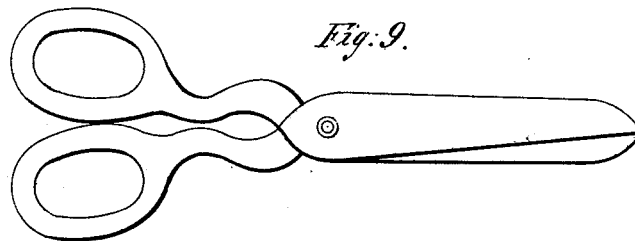
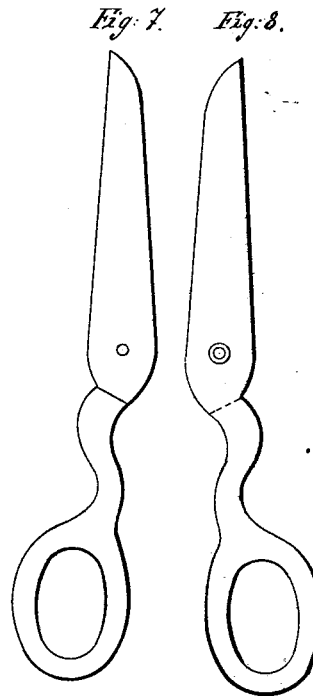
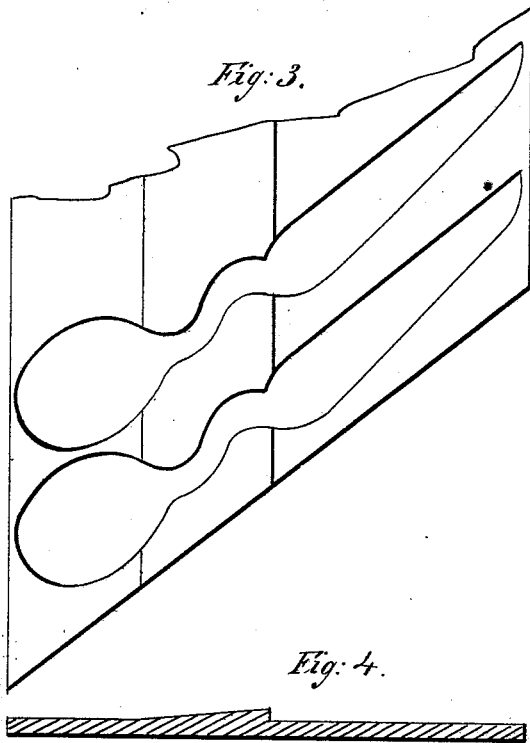
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UNITED STATES PATENT OFFICE.

ALBERT CLARKE, OF SHEFFIELD, ENGLAND.

IMPROVEMENT IN THE MANUFACTURE OF SCISSORS.

Specification forming part of Letters Patent No. **213,621**, dated March 25, 1879; application filed October 29, 1878.

To all whom it may concern:

Be it known that I, ALBERT CLARKE, of Sheffield, in the county of York, England, have invented a new and useful Improvement in the Manufacture of Scissors, of which the following is a specification:

My improvements relate to the process of manufacturing scissors—that is to say, the production in the rough state of scissor-blanks, such as are now ordinarily produced by hand-forging, my improved process rendering unnecessary the expensive operations of such hand-forging.

My improvements consist in flying out scissor-blanks from a sheet or strip which has one or more projections or indentations on one of its sides thereof, the said projections being so arranged as to produce the shoulder or other projection on the scissor-blank, and the flying out of the scissor-blank being so performed as that the shoulder will be of the proper angle, by which means scissor-blanks are produced which will fit together in pairs, as would those forged by hand in the ordinary manner.

In the accompanying sheets of drawings, Figure 1 shows a plan, and Fig. 2 a cross-section, of a sheet or strip so formed that the two rows of scissor-blanks can be cut therefrom. Fig. 1 also shows the position in which the blanks are cut out from the sheet or strip, so that the shoulder will be of the required angle. Fig. 3 shows a plan, and Fig. 4 a cross-section, of a sheet or strip so formed that one row only of scissor-blanks can be cut therefrom. Fig. 3 also shows the position in which the blanks are cut out from the sheet or strip, so that the shoulder will be of the required angle. Figs. 5 and 6 show a pair of scissor-blanks as cut out from the sheet or strip shown in Fig. 1. Figs. 7 and 8 show a pair of scissor-blanks after the holes in the bows or eyes have been flyed out, and the holes for the screw or rivet have been punched or drilled therein. Figs. 9 and 10 show a pair of scissors complete.

In carrying my invention into effect the steel (or other suitable metal, metallic alloy, or combination of metals,) can be cheaply produced, of the form or shape shown in Figs. 1,

2, 3, and 4, (or other similar and suitable shape corresponding to the pattern of scissor-blank required,) by the ordinary operation of rolling in a rolling-mill, and the scissor-blanks can be cut out therefrom by an ordinary fly-press, (or other similar and suitable machine.)

The scissor-blanks can be cut out from the aforesaid sheets or strips on double rows, as shown in Fig. 1, A B showing the space from which the blanks Figs. 5 and 6 have been cut out, and C D showing the spaces from which the blanks Figs. 6 and 8 have been cut out; and in practice it will be found convenient to fly out from one side of the sheet or strip a row of blanks of one form, as A B, Fig. 1, and afterward to fly out from the other side of the sheet or strip a row of blanks for the reverse side of a pair of scissors, as C D, Fig. 1.

The flying-out tools, known as the “bed” and “punch,” can be so formed and fitted into the fly as that either the flat side of the sheet or strip or the irregularly-shaped side thereof can be uppermost when the scissor-blanks are being cut therefrom; but it is preferred to arrange the said tools so that the irregularly-formed side of the sheet or strip is on the bed, as each projection on the sheet or strip would fit into a corresponding recess in the said bed, and the sheet or strip would be thereby guided in its proper course when moved along the said bed.

In order to produce a scissor-blank with the shoulder at an angle, the said scissor-blank is cut out from the sheet or strip at an angle—greater or less than a right angle—to the longitudinal center line of the sheet or strip, as shown in Figs. 1 and 3. By this means the blanks, as shown in Figs. 5 and 7, and Figs. 6 and 8, will forthwith fit together, as shown in Figs. 9 and 10.

Scissor-blanks could be cut out from the sheets or strips at right angles to the longitudinal center line thereof; but the shoulders would have to be subsequently formed at the required angle either by stamping, filing, or other means before the blanks would fit together in pairs. After the blanks, as shown in Figs. 5 and 6, have been cut out from the sheet or strip, the holes in the bows will be flyed

out by a punch and bed of a form corresponding to the hole required in the said bows, as shown in Figs. 7 and 8.

The improved process above described produces a scissor-blank corresponding in a great measure to one produced by hand-forging; but if it is desired to produce a scissor-blank equal to or superior to hand-forged scissor-blanks, it is only necessary to subject the scissor-blank produced by the aforesaid improved process to the ordinary operation of stamping in a stamp or drop, in which case a pair of top and bottom dies would be made having the exact form which it is desired to give to the scissor-blank; and these dies being placed in the stamp, the blank, after being sufficiently heated, would be placed therein, and the top die being actuated in the ordinary manner would descend on the blank with such force as to cause it to assume the exact form of the dies.

The above-described operation of stamping, being well known and in general use at this time for forming various articles, is not claimed as being part of this invention.

I am aware that it has already been pro-

posed to fly out scissor-blanks from sheets or strips of uniform thickness, and then to form shoulders on the said blanks by the ordinary process of stamping; but it will be evident to those persons who are employed in the ordinary process of stamping that the shoulders or other projections cannot be formed properly from blanks cut out from sheets or strips of uniform thickness.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A rolled sheet of metal of the form shown, with projections or shoulders, and adapted to be cut into scissor-sides, as shown and described.

2. A process of forming scissor-sides that consists in first rolling a sheet of metal into the form shown, and flying them out therefrom at an oblique angle to the sheet, as specified.

Sheffield, October 8, 1878.

ALBERT CLARKE.

Witnesses:

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