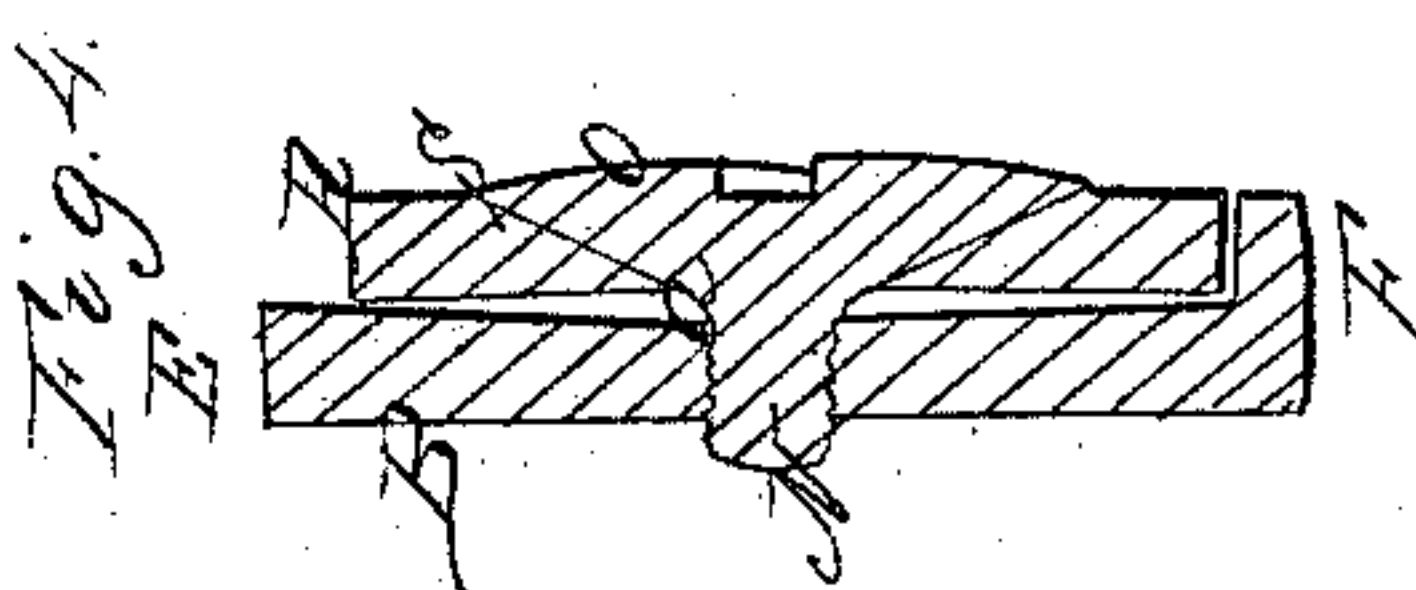
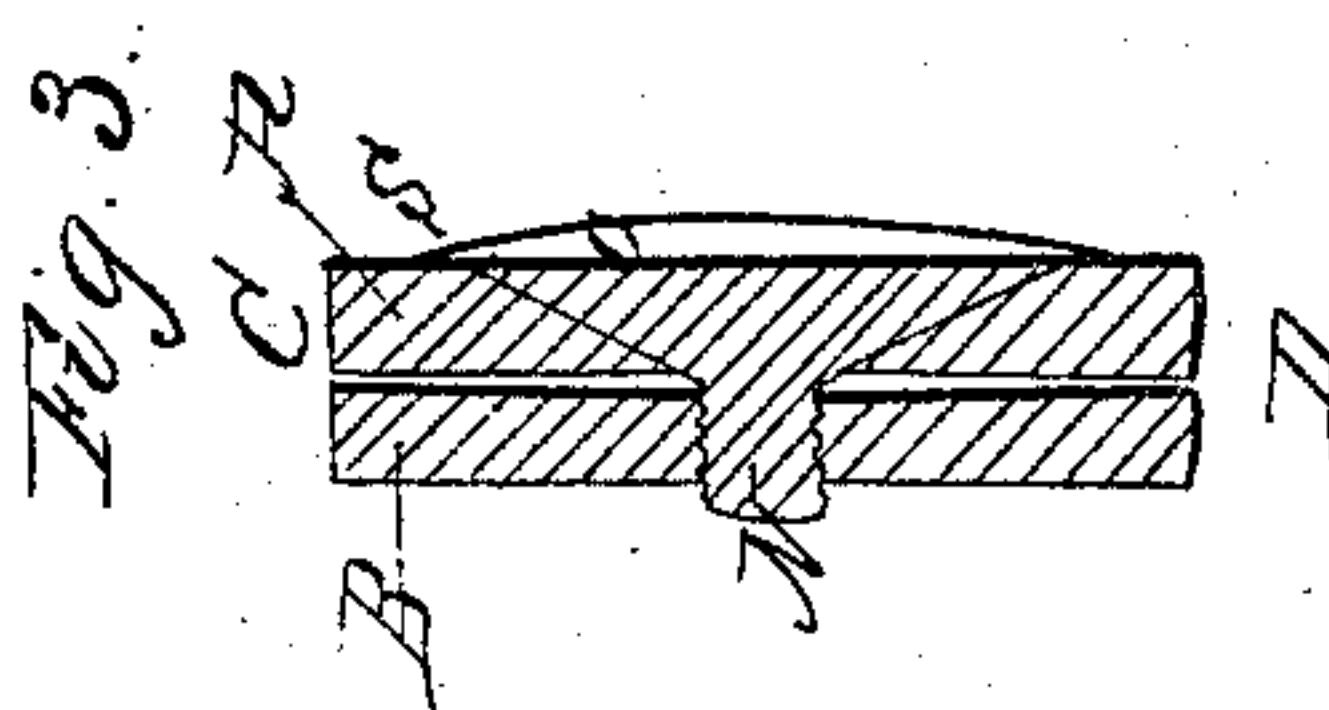
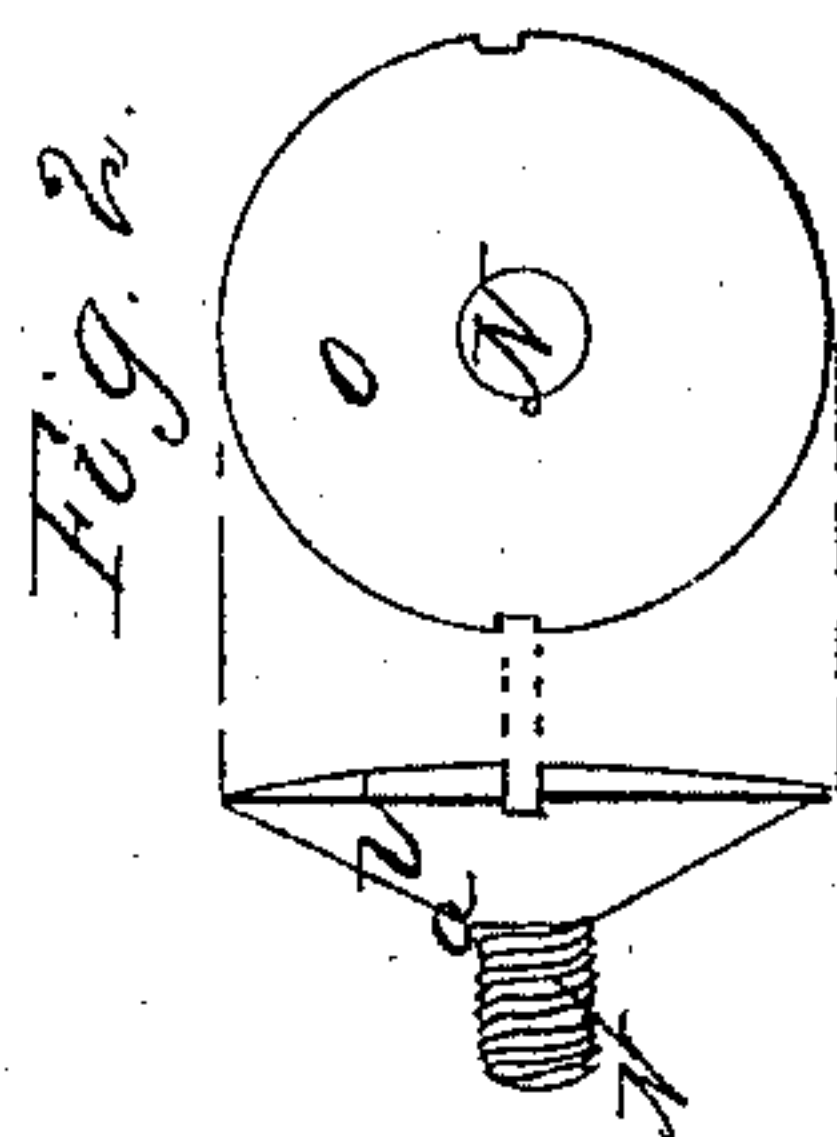
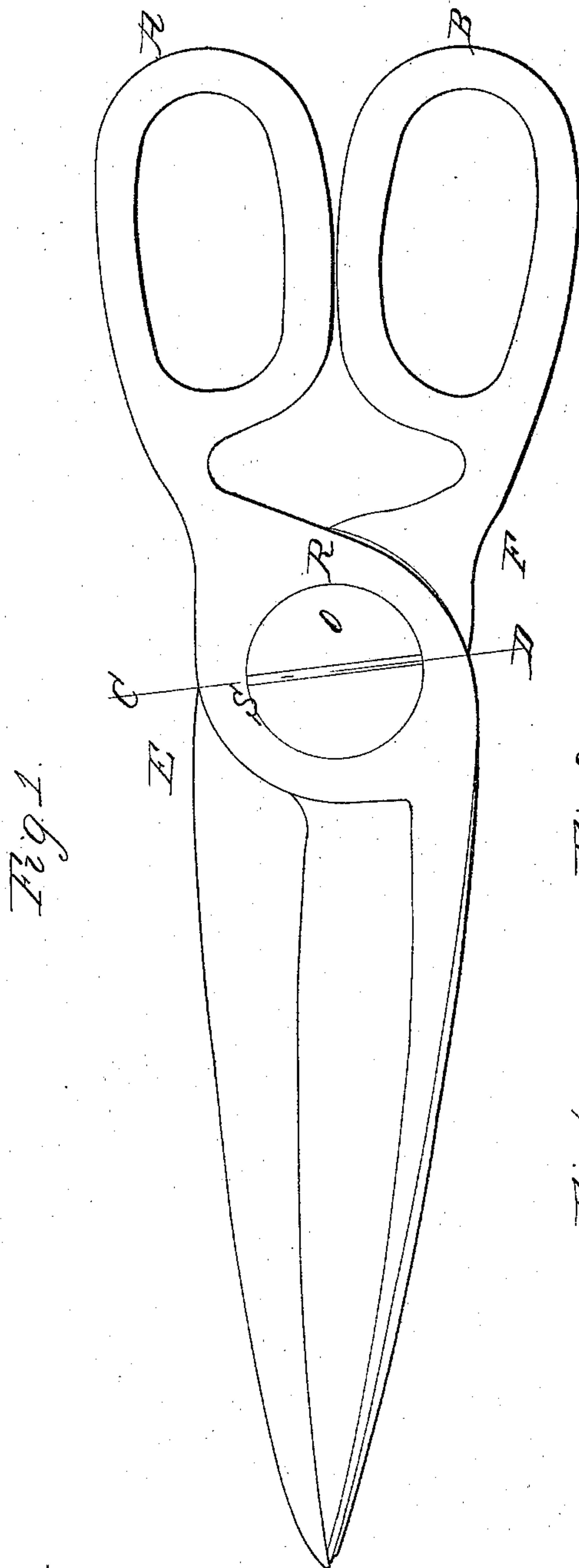


J. C. Symmes,

Scissors.

N^o 8,696.

Patented June 27, 1852.



UNITED STATES PATENT OFFICE.

J. C. SYMMES, OF WEST TROY, NEW YORK.

SHEARS.

Specification of Letters Patent No. 8,696, dated January 27, 1852.

To all whom it may concern:

Be it known that I, JOHN C. SYMMES, of West Troy, in the county of Albany and State of New York, have invented certain
5 new and useful Improvements in Scissors and Shears and All Two-Edged Cutters of a Similar Nature; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had
10 to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan of a pair of scissors. Fig. 2 exhibits a side and end view of the pivot. Fig. 3 is a section of the scissors
15 through the line C, D, shown in Fig. 1, and Fig. 4 a section through the line E, F, in Fig. 1.

Similar letters of reference indicate corresponding parts in each of the several
20 figures.

This invention relates to an improvement in the pivot, by which the edges are drawn together sidewise in cutting, and all inconvenience arising from the looseness of the
25 pivot in ordinary scissors and shears is effectually remedied.

To enable those skilled in the art to make and use my invention, I will proceed to describe fully its construction and operation.
30

A, and B, are the two sides or limbs of the scissors and N, O, is the pivot. The part N, of the pivot is screwed into the side or limb B, in the usual manner, but the part, O, which fits in A, is in form the frustum of a cone, the hole in A, being of corresponding form.
35 The cutting edges of the blades are each curved in the form of a logarithmic spiral the axis of the pivot O, being the eye of the spiral.
40

The operation of the scissors in cutting is as follows: When any substance is placed between the edges and power is applied to

the handles so as to draw them together, the pressure is received on the side S, of the part O, of the pivot, which acts as a wedge
45 and draws the faces and edges of the blades toward each other. This effect must be produced no matter how loose the pivot may be fitted or how it may wear—provided that there is room at the neck *a*, of the pivot or
50 at the smaller end of the opening in the limb A, to allow it to slide. This may be provided for by making the inner face of A, slightly concave. If the two edges are correctly set out in the logarithmic spiral form,
55 the spirals diverging in opposite directions, and the pivot is at the eye of the spirals, they (the edges) have a common radius vector to the point where the edges meet, wherever it is, and hence must meet at a
60 constant angle, throughout the whole of their length.

The effect produced by the form of that part of the pivot O, fitting in A, may be produced, though not as perfectly, by making it in the form of a frustum of a sphere,
65 spheroid, ellipsoid or of almost any other solid body. The pivot might also be made of such form at each end, and the hole in each side or limb of the scissors be of suitable form to receive it.
70

What I claim as my invention and desire to secure by Letters Patent, is—

Making the pivot and the hole in one or both limbs in which it fits, of such form, as
75 exemplified at O, as to cause the edges of the blades to be drawn together sidewise by the power applied in cutting, as herein fully set forth.

JNO. C. SYMMES.

Witnesses:

MARTIN HUME,
THOS. M. DEANE.