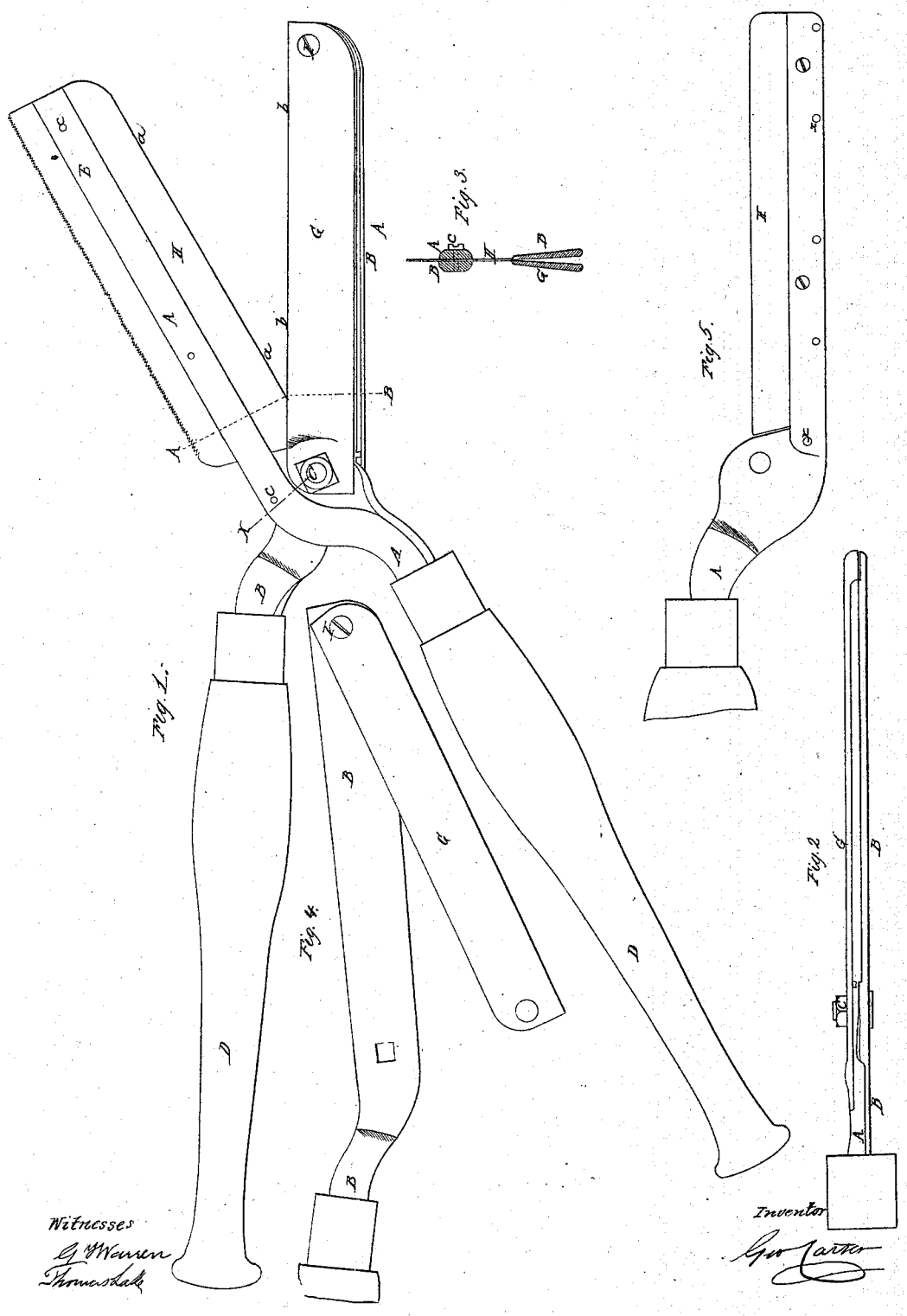
G. Carter,

Shears.

No. 47,250. Patented Apr. 11, 1865.



UNITED STATES PATENT OFFICE.

GEORGE CARTER, OF NOTTINGHAM, ENGLAND.

SHEARS.

Specification forming part of Letters Patent No. **47,250**, dated April 11, 1865.

To all whom it may concern:

Be it known that I, GEORGE CARTER, of Nottingham Lodge, Eltham, Kent, England, a subject of the Queen of Great Britain, have invented new and useful improvements in shears, scissors, and other cutting instruments of a similar character thereto; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure I is a side elevation of a pair of shears constructed according to this invention, adapted for agricultural purposes, shown partly open; Fig. II, an edge view thereof at A, Fig. I; Fig. III, a section through the line A B at Fig. I; Figs. IV and V, the cutting parts of the shears detached from each other at each of the foregoing figures.

Similar letters of reference are employed to denote corresponding parts at each of the figures, respectively.

The nature of my invention consists in forming the cutting-edges of shears, scissors, and other cutting instruments thereto, in the following manner: I form one cutting-edge of a thin piece of tempered steel plate, one edge whereof is ground to a knife-edge, and the other may either be left plain or have saw-teeth formed thereon. This piece fits into a long recess formed in one of the jaws of the shears and may be securely held therein by screws or nuts. The other jaw of the instrument is formed in two parts—that is to say, the whole length of the jaw is formed with cutting-edges beveled inward—and there is a long plate of tempered steel, also formed with a cutting-edge beveled inward. This plate is securely connected to the aforesaid jaw by a screw at the extremity thereof, and by the screw or pivot on which the jaws move as a fulcrum. The upper single edge aforesaid fits between the two lower cutting-edges and is thus always kept in close contact with the lower or compound cutting-edges throughout their entire length, the effect of which is to enable the cutting instrument to make a clean cut and divide a thick or soft substance with very little exertion. The cutting-edges may either be straight or curved or a combination of both, as may be found desirable, and the single cutting-blade aforesaid may be used as a saw by reversing its position in the jaw that holds it, and also by disconnecting the two jaws, or the saw may be made wide enough to pass through the jaw, and thus disconnection of the jaws may be dispensed with.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation, as follows:

A B are pieces of metal, carrying the cutting-edges *a a b b*.

C is a screw-bolt and nut for connecting the parts A and B together, and serving as the fulcrum of the shears; D D, wooden handles. The pieces A and B are each formed of one entire piece of metal, and have other pieces of metal, E and G, connected thereto by screws and rivets *c*, *d*, and *i*, as at Figs. — and —. The piece A carries a blade of tempered steel, H, which may be securely held between the parts and E by the screws *c*. The edge *a* of the piece H is ground to a knife-edge, and the opposite edge has saw-teeth formed thereon, as shown. The parts B and G have their upper edges beveled to a knife-edge, as at Fig. III, and are in contact, the lower edges being held apart to allow the cutting-edges to clear themselves of fragments of materials when cut.

The operations of these improved shears are as follows: Suppose the shears to be open, as at Fig. I, and the material which it is desired to divide placed between the cutting-edges *a* and *b* in the act of cutting, the edge *a* will pass between the pieces B and G, and thus be supported and prevented from moving sidewise throughout its entire length, thereby insuring a clean cut with very little effort. Instead of forming the piece as at Fig. I, it may be formed as at Fig. —, the outer edges of the pieces being close instead of open, and said pieces may be riveted together, as at *x*. Scissors and other similar cutting instruments may be made on this plan, and may have springs adapted thereto for opening them, the feature of novelty in this invention consisting in making the edge of one of the cutting instruments pass between two other cutting-edges so as to prevent side movement of the cutting-edges.

Having now fully described my invention and the manner of operation, I hereby de-

clare that what I claim as my invention, and desire to secure by Letters Patent, is as follows:

Constructing shears, scissors, and other cutting instruments of a similar character thereto with three edges—namely, one cutting-edge and two edges for keeping the cutting-edge in proper position, and for preventing same moving sidewise—substantially as set forth and described.

GEO. CARTER.

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