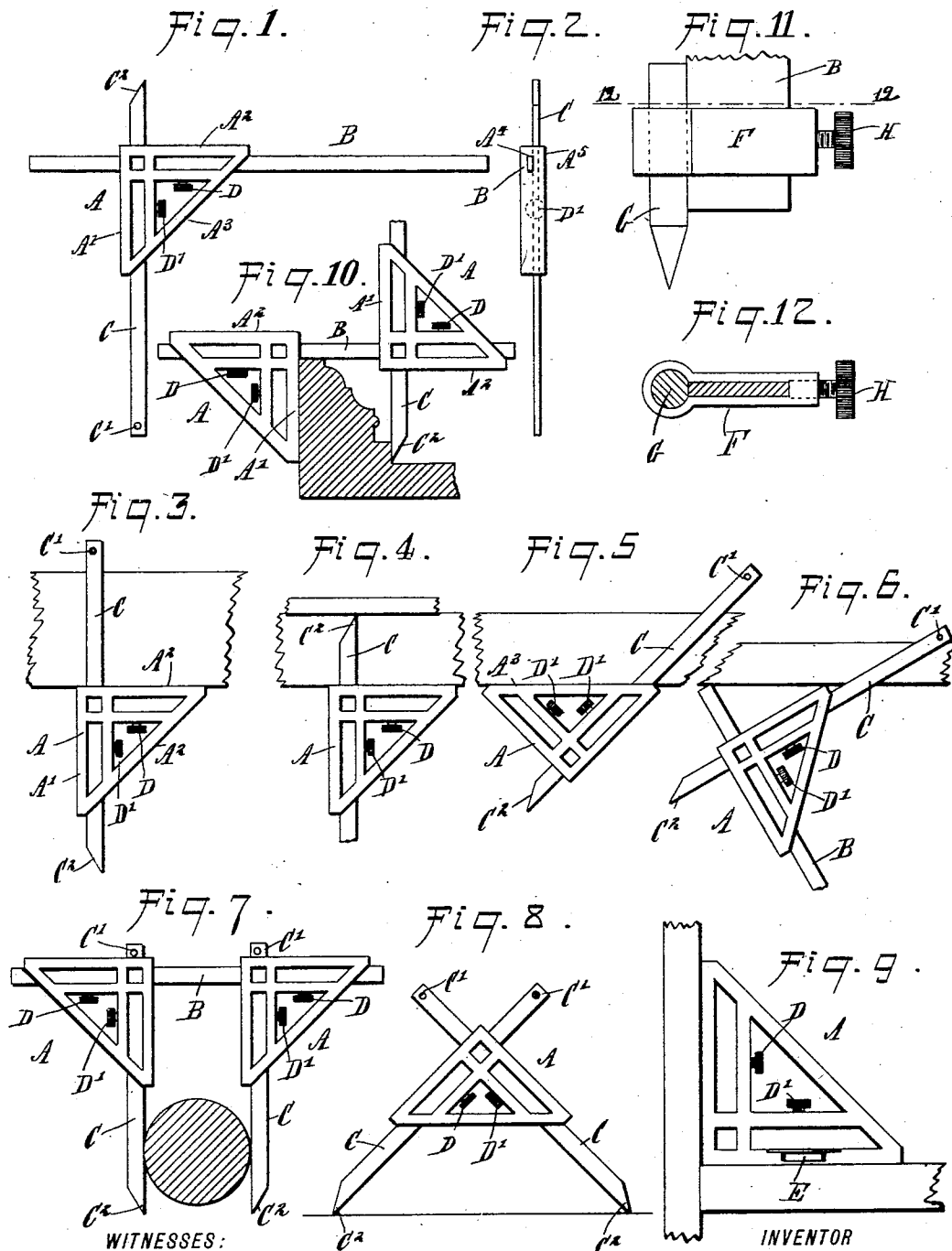


(No Model.)

R. CAMPBELL.
COMBINATION TOOL.

No. 579,952.

Patented Apr. 6, 1897.



WITNESSES:

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ROBERT CAMPBELL, OF ELIZABETH, NEW JERSEY.

COMBINATION-TOOL.

SPECIFICATION forming part of Letters Patent No. 579,952, dated April 6, 1897.

Application filed May 2, 1896. Serial No. 589,976. (No model.)

To all whom it may concern:

Be it known that I, ROBERT CAMPBELL, of Elizabeth, in the county of Union and State of New Jersey, have invented a new and Improved Tool, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved tool designed for use as a square, marking-gage, miter, trammel, caliper, &c., and which is simple and durable in construction and readily set for the intended use.

The invention consists principally of a stock provided with bearings standing at right-angles to one another and in different planes and a blade adapted to engage either bearing and adjustably held therein.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a face view of the improvement. Fig. 2 is an edge view of the same. Figs. 3 to 10, inclusive, show the improvement applied. Fig. 11 is an enlarged side elevation of the pencil-carrier, and Fig. 12 is a section on the line 12 12 of Fig. 11.

The improved tool is provided with a stock A, made in the form of a triangle having the two equal right-angle sides $A^1 A^2$ and the diagonal side A^3 , standing at an angle of forty-five degrees to the sides $A^1 A^2$. On the stock A are formed two bearings $A^4 A^5$, arranged alongside the sides $A^1 A^2$ and standing at right angles to one another and in different planes to receive blades B and C, respectively, adjustably held in the bearings and adapted to be fastened therein by suitable set-screws D D', respectively, screwing in the open stock A, as is plainly shown in Fig. 1.

The blade C is formed at one outer end with an opening C' for the passage of a lead-pencil or similar tool for marking lines when the tool is used as a gage, and the other end of the blade C is beveled, as at C², to form a marking-point on one edge.

If desired, either or both blades may be

provided with a graduation-indicating linear measurement.

Now it will be seen that, as shown in Fig. 3, only one blade C is used, and the tool thus formed is a try-square in which the blade C is adjustably held in the stock.

As shown in Fig. 4, the beveled end C' is used for marking, the tool being an adjustable square.

As shown in Fig. 5, the tool is used for mitering, the side A^3 being held against the article to be mitered by the blade C.

As shown in Fig. 6, the two blades B and C are used for producing a beveled set for the end of the blade B, and one point rests against the material.

As illustrated in Fig. 7, two stocks A are used, held on the single blade B and provided with two blades C, forming caliper-arms to be used as such.

By using two blades C, as shown in Fig. 8, the tool can be formed into a pair of compasses, with the points of the beveled ends C² as the points of the compass.

The stock A can be used as an ordinary inside square, as shown in Fig. 9, and, if desired, one of the sides can be provided with a spirit-level E.

As shown in Fig. 10, two stocks A are employed and held on the blade B. The blade C is used on one of the stocks to indicate with its point the depth and breadth of the article on which rests the other stock, as well as the blade B.

It is evident from the foregoing that by adjusting the blades B and C in the stock A the tool may be readily used for a number of purposes not mentioned.

When it is desired to use the instrument as a trammel, for instance, then one of the blades B or C is provided with a pencil-clamp F, adapted to receive a pencil G and adapted to be fastened on the blade by a set-screw H. (See Figs. 11 and 12.)

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

1. A stock in the form of a right-angle triangle, and provided with bearings standing at right angles to one another and parallel to the right-angle sides of the triangle, and

blades adjustably held in said bearings, substantially as shown and described.

2. A stock in the form of a right-angle triangle, and provided with bearings standing
5 at right angles to one another and parallel to the right-angle sides of the triangle, and blades adjustably held in said bearings, one of the blades being provided with an aperture for the passage of a lead-pencil or like tool,
10 substantially as shown and described.

3. A stock in the form of a right-angle tri-

angle, and provided with bearings standing at right angles to one another and parallel to the right-angle sides of the triangle, and blades adjustably held in said bearings, one 15 of the blades being provided at one end with a bevel for forming a point, substantially as shown and described.

ROBERT CAMPBELL.

Witnesses:

JAMES DIXON,
JOHN MCKENNA.