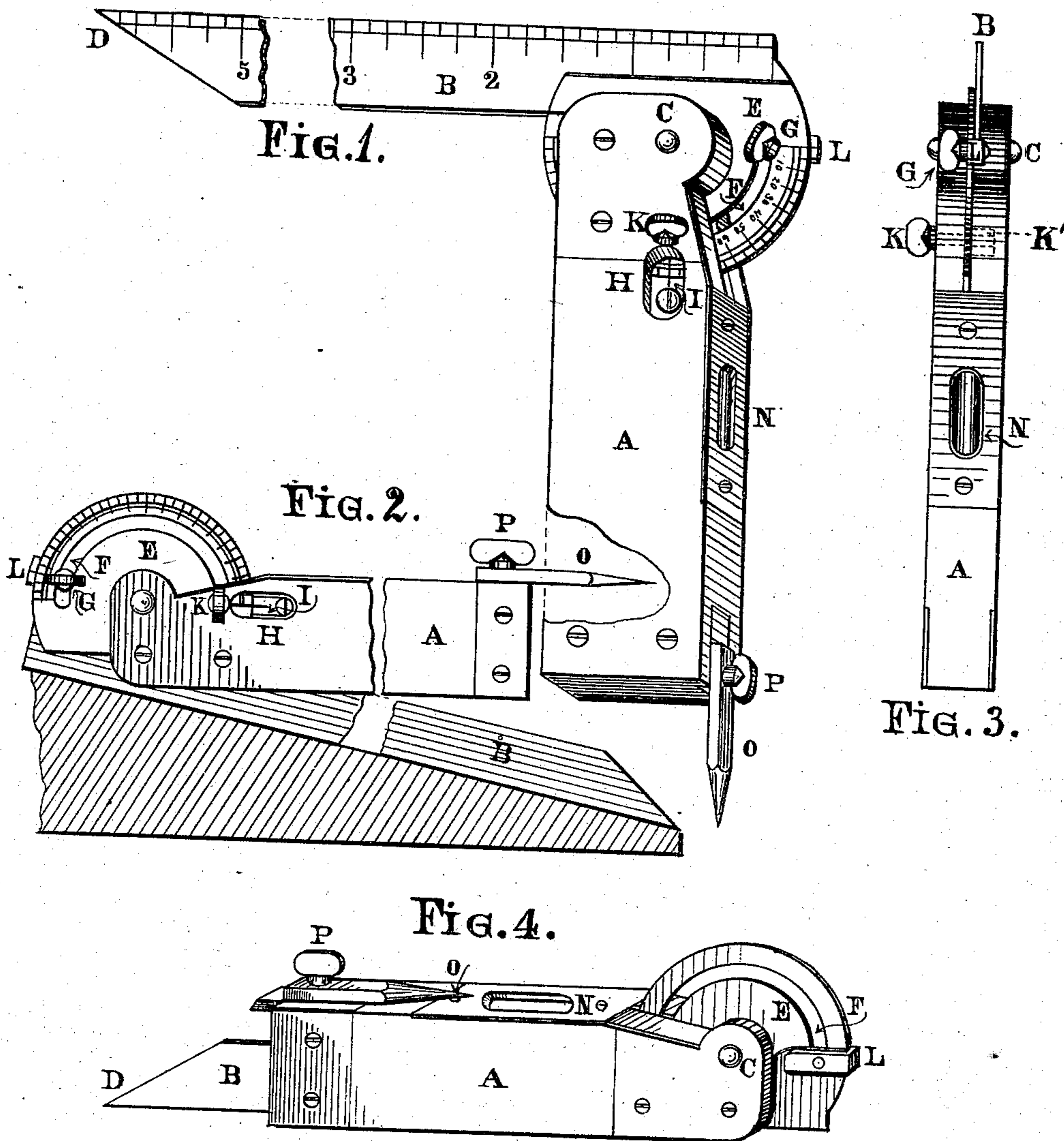


W. ASCOUGH.
Combined Bevel, Try-Square, and Divider.
 No. 160,503. Patented March 9, 1875.



WITNESSES:
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UNITED STATES PATENT OFFICE.

WILLIAM ASCOUGH, OF BUFFALO, NEW YORK.

IMPROVEMENT IN COMBINED BEVELS, TRY-SQUARES, AND DIVIDERS.

Specification forming part of Letters Patent No. 160,503, dated March 9, 1875; application filed December 29, 1874.

To all whom it may concern:

Be it known that I, WILLIAM ASCOUGH, of Buffalo, in the county of Erie and State of New York, have invented a Combined Bevel, Protractor, Rule, Try-Square, Level, and Compasses, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a perspective elevation of my improved instrument, illustrating its application as a try-square and as a pair of compasses. Fig. 2 is a front elevation, showing its application as a slope-level. Fig. 3 is a side elevation, and Fig. 4 a perspective view, showing my instrument as a spirit-level.

Like letters of reference indicate like parts in the various figures.

This invention consists in the combining of a number of tools in such a manner as to make a handy, neat, and practical device for carpenters', joiners', stone-cutters', and machinists', &c., use, that can easily be carried about the person using the same. It furthermore consists in the arrangement of details, as hereinafter described, and pointed out in the claims.

A is the stock of a bevel-square, made of any suitable material and properly mounted with metal. It is slotted on one of its ends for the passage of a tongue, B, and a protractor, E, both being made to turn upon pivot C. B is the tongue, made of steel or the like, and divided on its sides into inches and fractions of inches, or any other division. One end of B is pointed or tapered at D, for the purpose hereinafter to be described, and the opposite end provided with a projection, L, provided with a line or mark to serve as a gage to set the tongue B. E is a protractor, consisting of a circular disk of sheet metal. It is divided in the usual degrees of a circle, and turning upon pivot C. It has a semicircular slot hole, F, concentric with pivot C, for the passage of a thumb-screw, G, by means of which it can be securely attached to the tongue B at any desired position. H is a recess in stock A. It is provided with a plate, I, fastened therein by a screw in such a manner that it will be flush with the face and edge of the protractor E. Its purpose is to serve as a sight to ad-

just the protractor, and it is therefore provided with a single line or mark on its face. L is a sight attached to the tongue B, and serves the purpose of adjusting the same to any desired angle by means of the protractor E. N is a spirit-level let into the edge of the stock A. O is a compass-point sliding tightly into a dovetail of the stock A, and may be further secured there by the thumb-screw P.

In order to enable this instrument to be used as a try-square, it is necessary to place the protractor E in the position shown in Fig. 1, in such a manner that the ninetieth degree of the protractor will coincide with the mark on sight I, and the mark on sight L of tongue B correspond with the nought of the protractor, when the tongue will be correctly set at right angles with A, and will be held there by the thumb-screws G and K. The thumb-screw K passes through the stock A and engages with a nut, K', (Fig. 3,) let loosely into a mortise, so that the protractor E can be securely fastened to the stock without also engaging the tongue B, which, in turn, is attached to the protractor E by means of the thumb-screw G. The sight I is let into the recess H, and can be adjusted therein laterally to set the blade B correctly when the instruments are made, or when, by accident, it should have become displaced.

To use my improved instrument as a bevel it is only necessary to adjust the tongue B to the desired angle by means of the sight L and the protractor E. Fig. 2 illustrates the application of the instrument as a slope-level, the degree of inclination being determined by the protractor E in conjunction with the level N.

Fig. 4 shows my improved instrument as a spirit-level, the tongue B being now incased by the stock A, a groove therein of sufficient depth admitting the tongue B.

It will be observed that the tongue B is tapered or pointed on one of its ends. This, in conjunction with the adjustable point O, enables me to use the device as a pair of compasses or dividers, the point O being adjustable, compensating for any wear of the point D. The point O is attached to a dovetail tenon, and slides in a like mortise provided at the end of the stock A in such a manner that it

can be reversed and put in the position shown in Fig. 4, for convenience in carrying the instrument, and for protection of the point O.

Having thus fully described my invention, in order to enable any one skilled in the arts to which it pertains to make and use the same, I desire to secure to me by Letters Patent the following claims:

1. The combination, with the stock A of the pointed tongue B, provided with the projection L, thumb-screw G, fastening-screw K, passing through one side of the stock A and the protractor E, and engaging with a nut, K', and the adjustable plate I let into the recess

H, all when arranged substantially as described, and for the use and purpose set forth.

2. The combination, with the stock A, of the pointed tongue B and the reversible compass-point O, provided with a dovetail tenon, and engaging with a like mortise in the stock A, and fastened therein by the thumb-screw P, in a manner substantially as described, and for the use and purpose set forth.

WM. ASCOUGH.

Witnesses:

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