(No Model.)

F. W. G. BOETTCHER.

COMBINED SQUARE, LEVEL, AND TRIANGLE.

No. 304,601. Patented Sept. 2, 1884.

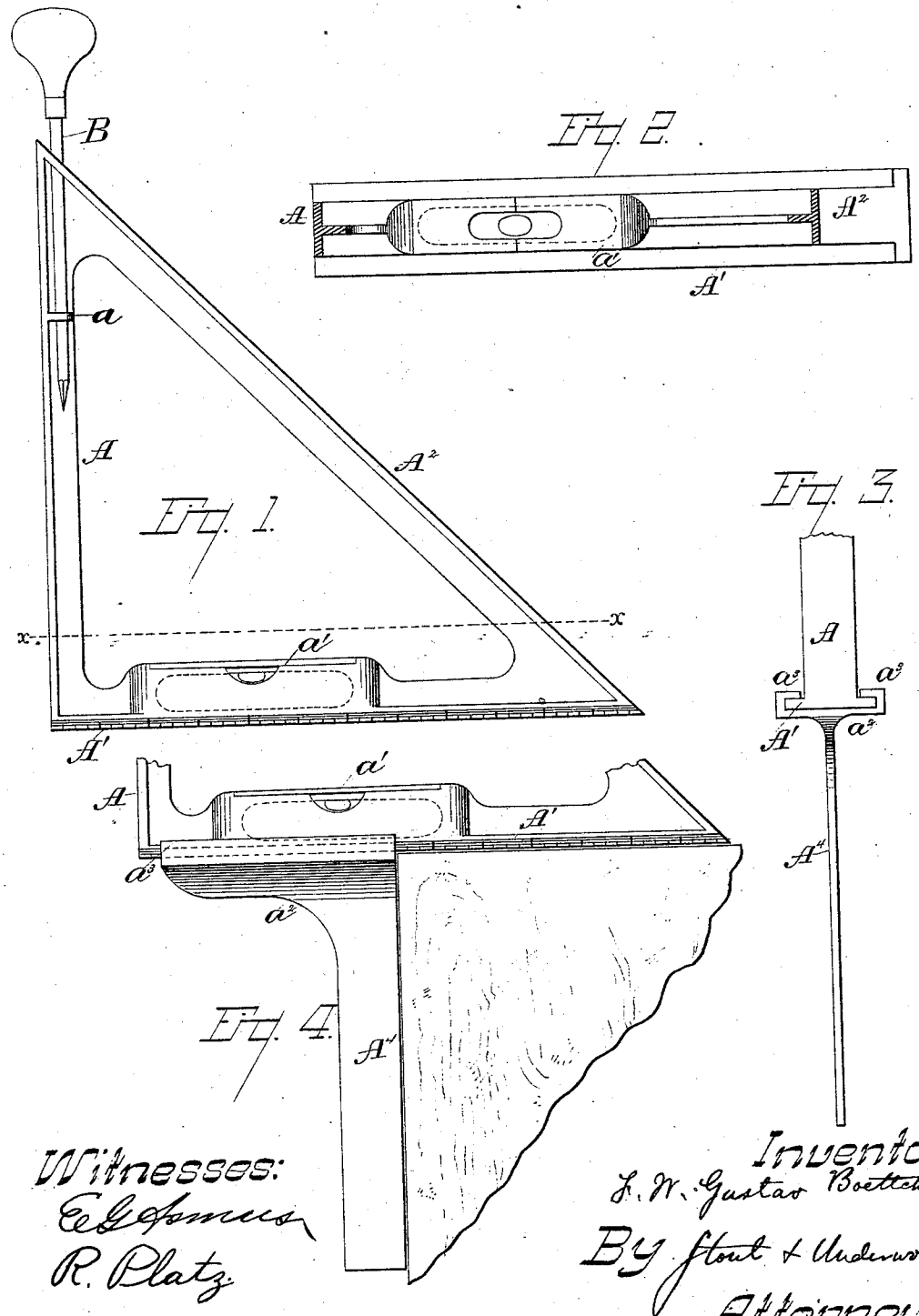


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

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UNITED STATES PATENT OFFICE.

F. W. GUSTAV BOETTCHER, OF MILWAUKEE, WISCONSIN.

COMBINED SQUARE, LEVEL, AND TRIANGLE.

SPECIFICATION forming part of Letters Patent No. 304,601, dated September 2, 1884.

Application filed February 18, 1884. (No model.)

To all whom it may concern:

Be it known that I, F. W. GUSTAV BOETTCHER, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in a Combined Square, Level, Plumb, and Triangle; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to an improved combination implement, chiefly designed for the use of carpenters, machinists, and builders; and it consists in certain peculiarities of construction, all as will be more fully set forth hereinafter.

In the drawings, Figure 1 is a side elevation of my improved device. Fig. 2 is a horizontal cross-section on the line x x of Fig. 1, and Figs. 3 and 4 are views showing the movable and detachable square in position for use.

My improved device constists, primarily, of a solid triangular piece of metal, two sides of which are square, the several sides being marked A, A′, and A^2, (the two former sides making the square,) and their exterior surfaces are smooth and mathematically true. The side A′ is of greater width than the other sides, and its edges are provided with marks indicative of measurement, as shown, and in the upper surface of this side A′ is located the level a'. On the inner surface of the side A is a perforated lug, a, and above this the side A^2 is perforated, this being to afford a seat for the marker B when not in use.

A^4 is the movable square, adapted for use in connection with the solid square side A′, and is formed with a flange, a^2, and guides a^3 a^3, which are adapted to embrace and slide upon the flanges of the side A′, as shown in Fig. 4. The square formed by the sides A A′ is a fixed square, while that formed by the sides A′ A^4 is a movable one.

As the exterior of the sides A and A′ form a true and perfectly rigid square, my device may be used as a plumb, and when so used the bubble in the level a' will always indicate whether the side A is exactly vertical or at some inclination from a true vertical line.

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

1. The rigid triangular tool described, having the straight sides A and A′ and oblique side A^2, the side A′ being of greater width than the other two sides, and carrying the level a', substantially as set forth.

2. In a tool for carpenters' and mechanics' use, the combination of the rigid triangle, having the side A′, with projecting flanges, with the movable piece A^4, with square inner surfaces, and flange a^2, provided with guides a^3 a^3, adapted to embrace and slide upon the projecting flanges of the side A′, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

F. W. GUSTAV BOETTCHER.

Witnesses:

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