No. 725,230. PATENTED APR. 14, 1903.

G. DUNCAN & G. W. BYARS.

MITER FINDER.

APPLICATION FILED SEPT. 5, 1901.

NO MODEL.

Fig. 1.

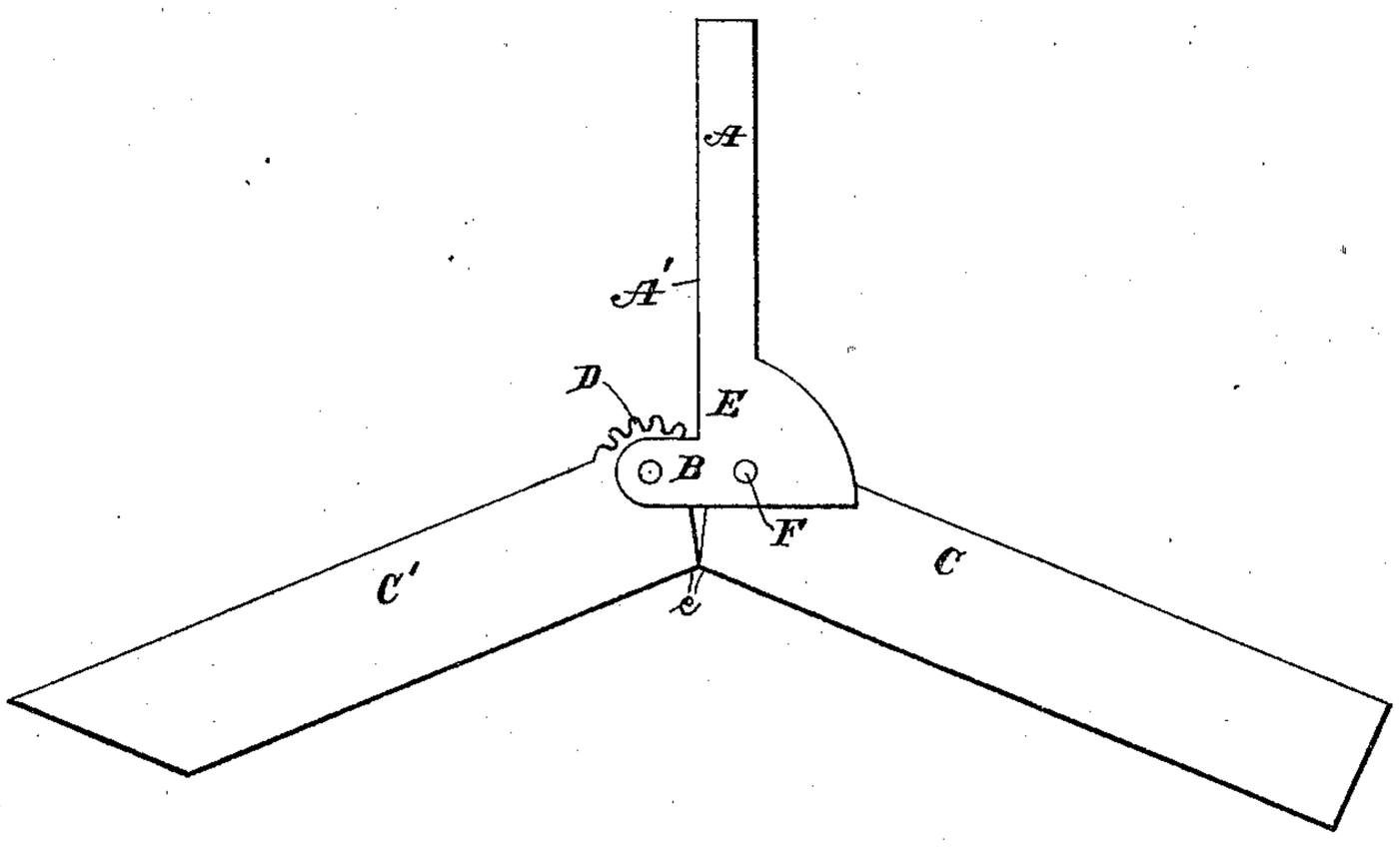
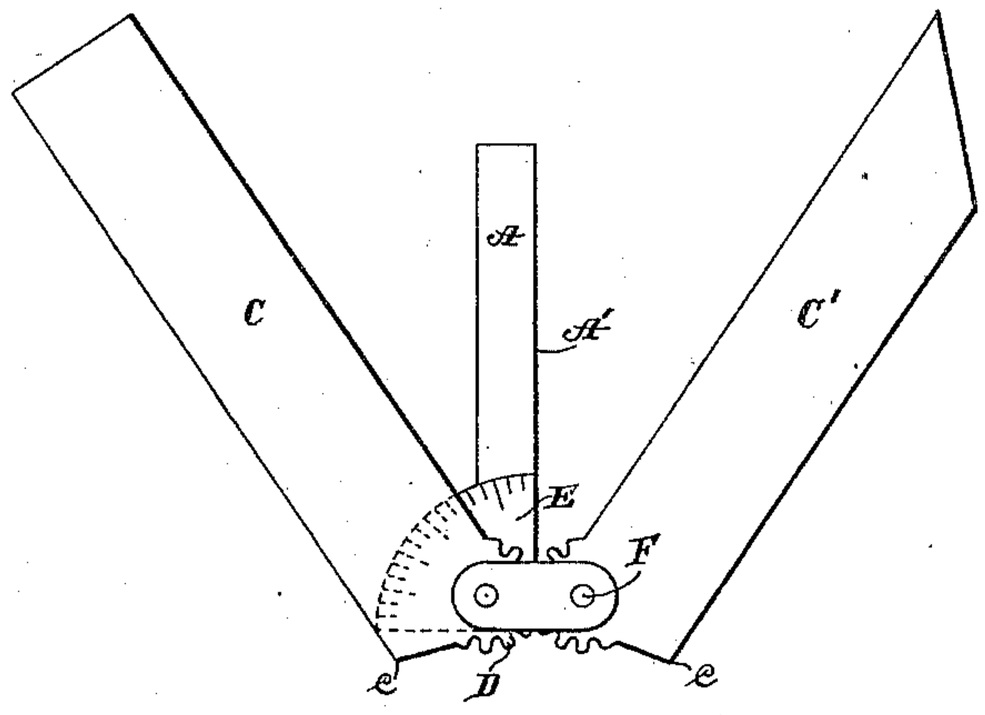


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

GARNETT DUNCAN AND GEORGE W. BYARS, OF NORWALK, CALIFORNIA.

MITER-FINDER.

SPECIFICATION forming part of Letters Patent No. 725,230, dated April 14, 1903.

Application filed September 5, 1901. Serial No. 74,451. (No model.)

To all whom it may concern:

Be it known that we, GARNETT DUNCAN and GEORGE W. BYARS, both citizens of the United States, residing at Norwalk, in the county of Los Angeles, State of California, have invented new and useful Improvements in Miter-Finders, of which the following is a specification.

Our invention relates to a convenient tool to enable a person to determine the line on which a piece of timber must be cut to fit into a corner or in framing a structure without the necessity of taking measurements; and the object of our invention is to provide a tool for use in cutting timbers to fit in irregular corners or angles which will readily indicate the miter-line on which the timber to be used must be cut to fit in these irregular corners or angles. We accomplish this object by the tool described herein and illustrated in the accompanying drawings, in which—

Figures 1 and 2 are plan views of the opposite sides of our miter-finder.

In the drawings, A is the miter-indicator, the edge A′ of which will indicate the desired miter-line. The miter-indicator is provided with a base B, which projects on both sides of the miter-line, and one side thereof may be quadrant-shaped, as at E, on which may be stamped a scale which shall indicate the degree of the miter-line.

Pivotally secured to the base of the finder by the pivots F are the miter-wings C and C′. These pivots are equidistant from the miter-line and in a line that passes through the miter-line at right angles. The pivoted ends of the wings are provided with cogs D, adapted to mesh together and secure a uniform movement of both wings, the lines of the edges of which, if protracted, will at all times intersect on the miter-line. That the wings may be thrown back into a more acute angle, if desired, than that shown in Fig. 1 the contacting corners *c* may be cut away and the circling-cogs extended farther around.

To find the line on which the miter is to be cut, the outer edges of the wings are given the angle required. Often this angle is easily obtainable by the structure on which the operator is employed, when the wings may be crowded into the proper angle by being pressed against the surface indicating the angle, and when the wings are given the proper angle the edge of one of the wings is placed along the edge of the substance to be cut. The miter-finder will indicate the miter-line on which the cut is to be made.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A miter-finder comprising a central stationary finder; a straight edge thereon to represent the miter-line, and having at one end a quadrant with a graduated scale marked thereon; miter-wings having straight edges pivoted to said end, the pivots being disposed at points in said end equidistant from the central miter-line, whereby the produced lines of the edges of the wings will intersect the miter-line at the same point; cogs on the pivoted ends of said wings adapted to mesh together.

2. The herein-described means to find a miter, comprising a stationary finder having a straight edge to indicate the miter-line and a base for pivoting the wings thereon; two movable wings, each pivoted at one end to the base of the stationary finder the pivots being so disposed on the base that the lines produced by the edge of the wings will always intersect each other on the miter-line; cogs on the pivoted ends of the wings arranged to engage and maintain an equal angle of the wings to the straight edges of the stationary finder as the wings are moved on their pivots, the straight edge of the stationary finder indicating the miter-line when the wings are in place.

3. The herein-described miter-finder, comprising the central stationary finder A having straight edge A′ and movable wings C and C′ pivoted to the base of a central miter-finder and equidistant from the central miter-line; cogs D on the pivoted ends of said wings, adapted to mesh together and maintain an equal angle of the wings with the miter-finder; said miter-finder A, provided at one end with the base B, to which the wings are pivoted, and also provided with the quadrant E, having a graduated scale marked thereon, substantially as herein shown and described.

4. A tool to find the miter required on which a cut is to be made on the substance to be cut

to cause it to fit into any corner, or angle, comprising two pivoted wings having straight edges; the said wings being pivoted to the base of a central stationary member, equidistant from the line of the straight edge of the central member; said central stationary member, having one edge thereof straight to indicate the central miter-line; engaging cogs on the pivoted ends of the wings whereby the straight edge of the central member will point at all times to the point of intersection of the produced lines of the edges of the pivoted wings, no matter at what angle they may be placed.

In witness that we claim the foregoing we have hereunto subscribed our names this 29th day of August, 1901.

GARNETT DUNCAN.
GEORGE W. BYARS.

Witnesses:
JOHN F. FREEMAN,
JOHN M. SETTLE.