

(No Model.)

T. R. COOK.
COMBINED TRY-SQUARE AND BEVEL.

No. 485,456.

Patented Nov. 1, 1892.

Fig. 1.

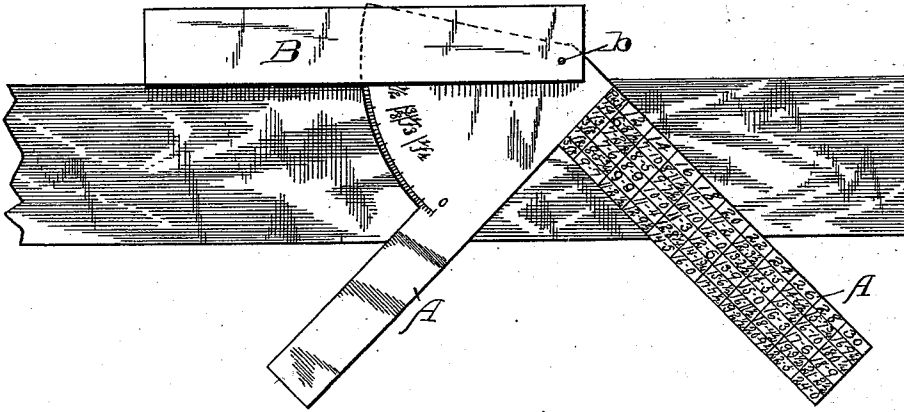
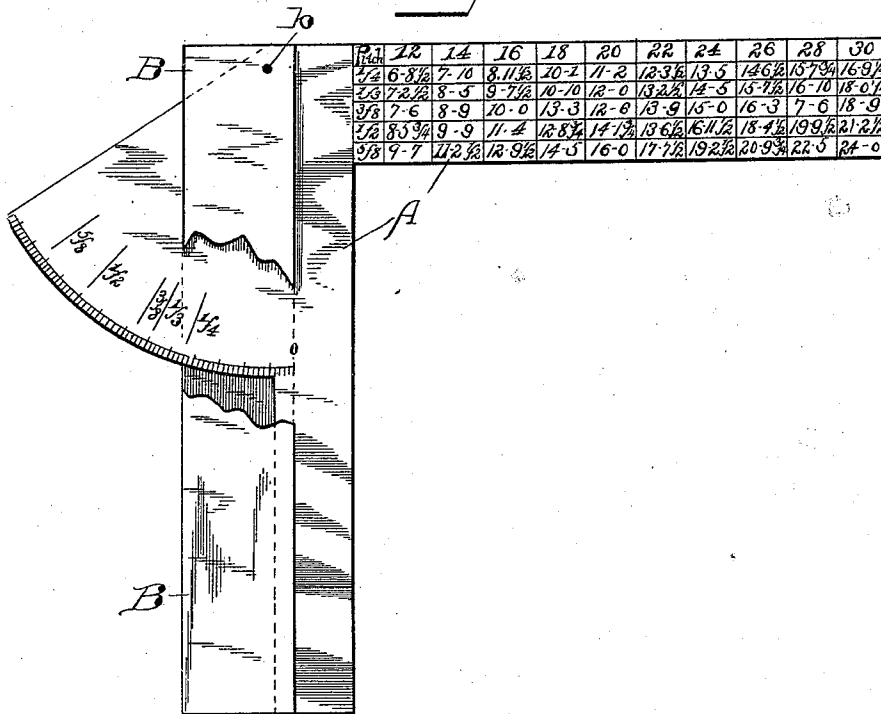


Fig. 2.



WITNESSES.

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UNITED STATES PATENT OFFICE.

THOMAS R. COOK, OF IRVINGTON, ASSIGNOR OF ONE-FOURTH TO HARRY M. BARNARD, HEBER S. PARAMORE, AND GEORGE A. TOPP, OF INDIANAPOLIS, INDIANA.

COMBINED TRY-SQUARE AND BEVEL.

SPECIFICATION forming part of Letters Patent No. 485,456, dated November 1, 1892.

Application filed December 7, 1891. Serial No. 414,277. (No model.)

To all whom it may concern:

Be it known that I, THOMAS R. COOK, a citizen of the United States, residing at Irvington, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in a Combined Rafter-Gage, Try-Square, and Bevel, of which the following is a specification.

The object of my said invention is to produce a tool which will embody the ordinary try-square and bevel, and also a rafter-gage and scale, by which the ends of rafters for any desired pitch of roof may be accurately and conveniently marked for cutting and their length determined, all as will be hereinafter more particularly described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a plan view of my improved tool as it appears when placed on a rafter ready for use; and Fig. 2, a view of the tool separately, on a somewhat enlarged scale, and in form to be used as a try-square, a fragment of the stock being broken away to show fully the sector and the markings thereon.

In said drawings, the portions marked A represent the blade of the tool, and B the stock pivoted thereto. The blade is in the general form of an ordinary steel square, having two blades running at right angles with each other, but provided with an extension in substantially the form of a sector of a circle on the rear outer side of one of the blades. The stock is pivoted thereto by a pivot *b* at a convenient point near the outer edge and is grooved and slotted to permit the sector-shaped piece to pass through it and to receive one edge of that blade upon which said sector-shaped piece is formed. The stock being thicker than the blade and projecting on both sides thereof like the handle of an ordinary bevel or try-square is enabled to serve the usual purposes of the stock to such a tool. The sector-shaped extension of the blade has preferably a scale upon its edge marked regularly for the degrees similarly to an ordinary quadrant. It has further markings, which are denominated, respectively, " $\frac{1}{4}$," " $\frac{1}{3}$," " $\frac{2}{3}$," " $\frac{1}{2}$," and " $\frac{3}{4}$," as shown, which markings indicate the pitch of the roof. In the use for

which it is specially designed, by swinging the stock so that its inner or operative edge is in line with the marking desired and placing the tool upon a rafter, as indicated in Fig. 1, said rafter may be marked to be cut for the pitch indicated, as will be readily understood by an examination of said Fig. 1. The line " $\frac{1}{2}$ " in the position shown being coincident with the line of the inner face of the stock cannot be seen in said Fig. 1; but the the marking " $\frac{1}{2}$ " is exposed and thus the pitch desired is clearly seen. The other blade of the square carries a table of figures. In a vertical column (when in the position shown in Fig. 2) are the same markings that are on the sector. In a horizontal column or row are figures indicating the width of the structure upon which the roof is to be placed. Below the figures of said horizontal row and to the right of the figures in the vertical column are placed the lengths in feet and inches of the rafters required in the respective cases. For illustration: In case of a roof having what is known as a "three-eighths pitch" on a building twenty-two feet wide the rafter should be thirteen feet and nine inches long, which measurement is found by running out horizontally from the figure " $\frac{3}{8}$ " in the vertical column to directly below the figures "22" in the horizontal row. Any other pitch of roof and width of building may be treated in a similar manner, as will be readily understood.

The use of my invention is illustrated in Fig. 1 of the drawings, where the tool is shown as set to mark rafters for what is known as "one-half pitch." When used for any other pitch the stock is simply swung to the desired marking on the sector-shaped projection. When properly set and placed on the rafter, the inside of the square is used for marking the notches in the rafters which rest upon the plate of the building when the rafters are in place. The outside of the right-hand blade is used for marking the perpendicular at both ends of the rafters when moved to the proper points, and the inside of the left-hand blade is correspondingly used to mark the horizontal portion at the foot of the rafter. As will be readily understood, this tool is equally applicable for use in marking braces or cornice-

pieces. I prefer to make the blades of the square about eight inches in length, with the right-hand blade about one and three-fourths inches wide and the left-hand blade about one
5 and one-eighth inches wide at its narrow end, with the sector extension substantially in proportion, as shown in the drawings.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—
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1. A combined tool, as described, consisting of a square having a projection upon the outer edge of one of its blades, provided with markings corresponding to the various pitches of
15 roof, and a stock pivoted to and adapted to swing over said blade and its projection, whereby rafters can be marked for any required pitch of roof by the use of said tool without calculation, substantially as set forth.

20 2. In a combination-tool, a square having a sector-like projection on the outer edge of one blade, provided with markings, as specified, a stock pivoted thereto and adapted to swing over the same, and a table on the other

blade of the square, bearing the same markings in a vertical column, the widths of the building in a horizontal row and the lengths of the required rafters at intersecting points of lines projected from said vertical column and horizontal row, substantially as set forth.
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3. As a new article of manufacture, the tool described, consisting of a combined try-square, bevel, and rafter-gage, the two blades whereof are integral and extend out at right angles with each other and wherein one blade has
35 a projection on its outer edge upon which are desired markings, and a stock pivoted thereto and adapted to swing over said projection and in varying relations to said blade, substantially as set forth.
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In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 30th day of November, A. D. 1891.

THOMAS R. COOK. [L. S.]

Witnesses:

CHESTER BRADFORD,
J. A. WALSH.