

P. KRANZ.
COMBINATION SQUARE AND MITER MARKER.
APPLICATION FILED SEPT. 21, 1911.

1,040,214.

Patented Oct. 1, 1912.

2 SHEETS—SHEET 1.

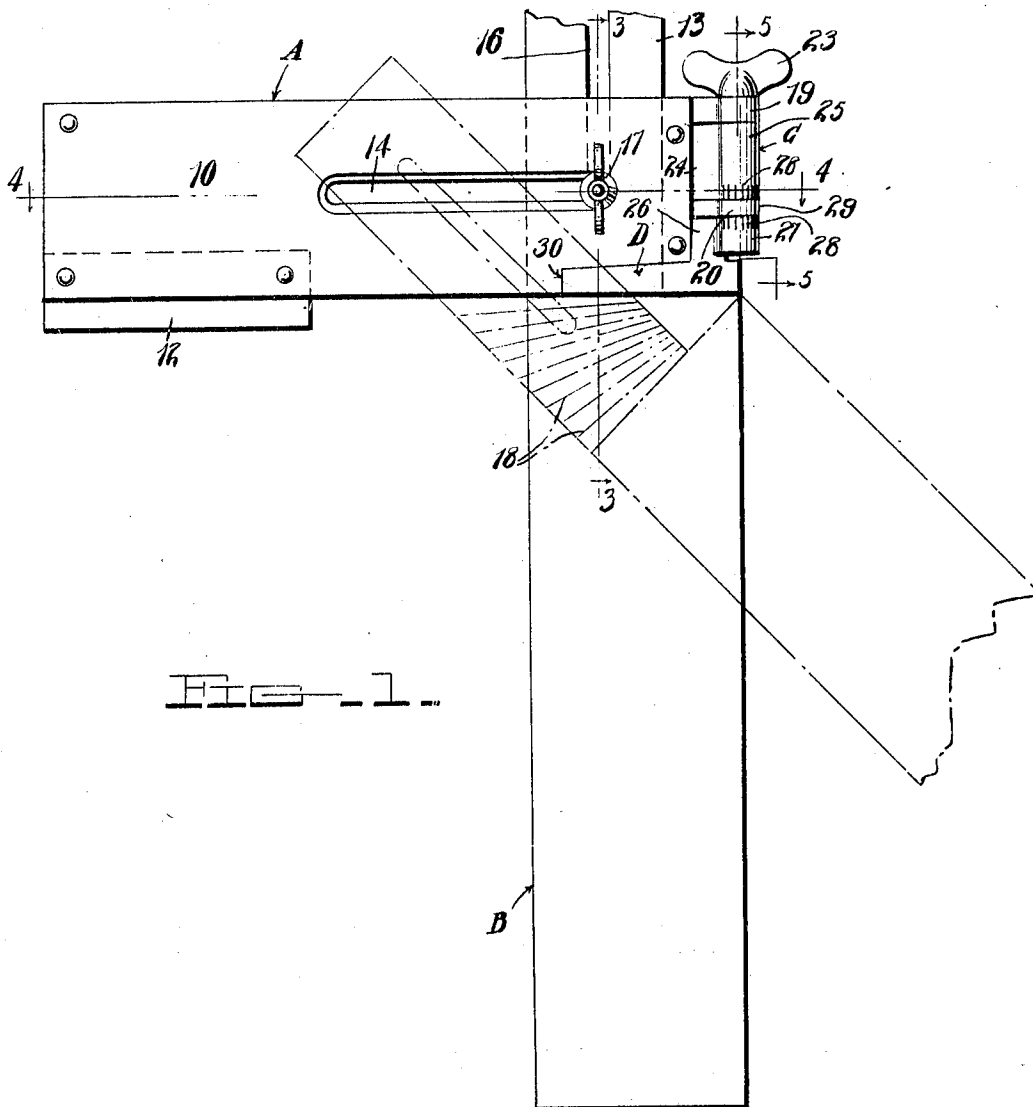


Fig. 1.

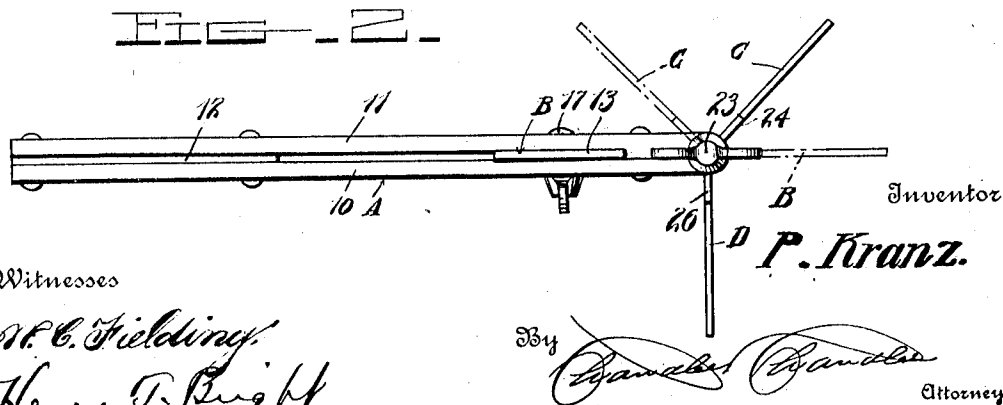


Fig. 2.

Witnesses

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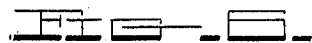
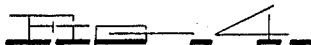
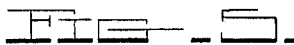
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UNITED STATES PATENT OFFICE.

PETER KRANZ, OF LA JUNTA, COLORADO.

COMBINATION SQUARE AND MITER-MARKER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PETER KRANZ, a citizen of the United States, residing at La Junta, in the county of Otero, State of Colorado, have invented certain new and useful Improvements in Combination Squares and Miter-Markers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to combination square and miter markers.

The object of the invention resides in the provision of a square of the type used by carpenters, in which the blade and tongue are adjustably connected so that they may be disposed at different angles to each other, and which also carries in addition to the blade and tongue miter arms which are capable of adjustment to different positions with respect to the tongue and blade of the square and which are so positioned that both the square and the miter cuts of a timber may be marked by a single application of the square to the timber.

With the above objects in view the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully described and particularly pointed out in the appended claims.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters of reference denote corresponding parts in the several views, and in which—

Figure 1 is a view in elevation of a square constructed in accordance with the invention, the blade being shown in full lines in a position at right angles to the tongue and in dotted lines adjusted to another angle with respect to the tongue, Fig. 2, an edge view of the square looking at the tongue end thereof with the miter arm shown in one position in full lines and in another position in dotted lines, Fig. 3, a section on the line 3—3 of Fig. 1, Fig. 4, a section on the line 4—4 of Fig. 1, Fig. 5, a section on the line 5—5 of Fig. 1, and Fig. 6, a detail perspective view showing the mounting of the miter arm of the square.

Referring to the drawings, A indicates the tongue of the square and B the blade. The tongue A is shown as comprising a pair of mutually connected spaced plates 10 and 11

which have secured therebetween and projecting beyond the inner edge thereof a guide 12. The blade B has its upper end reduced as at 13 and slidably mounted between the plates 10 and 11 whereby said blade may be moved to various angles with respect to the tongue A. In order to effect the various adjustments of the blade B with respect to the tongue A the plates 10 and 11 of the latter are provided with corresponding longitudinal slots 14 and 15 respectively, while the reduced ends 13 of the blade B is provided with a longitudinal slot 16. Extending through the slots 14, 16 and 15 is a binding screw 17 by means of which the blade B may be clamped against movement or released for movement between the plates 10 and 11. One face of the blade B is provided with a plurality of angle scales 18 which may be brought into coincidence with the inner edge with the tongue A to secure the adjustment of the blade B at a desired angle to said tongue, the binding screw 17 being utilized to clamp the blade B against movement from said adjusted position. The inner end of the plate 11 of the tongue A terminates in the longitudinally directed spaced ears 19 and 20 the former of which is disposed at the outer edge of said plate and the latter intermediate the terminals of the inner end of the plate. The ears 19 and 20 are provided with alined openings 21 and 22 respectively through which extends the binding screw 23. Rotatably mounted upon the binding screw 23 between the ears 19 and 20 is the inner end of a miter arm C, while another miter arm D has its inner end disposed inwardly of the ear 20 and threaded upon the inner end of the binding screw 23. The inner end of the miter arm C is provided with an angular portion 24 having a laterally directed enlarged tubular extension 25 through which the binding screw 23 extends. Likewise the miter arm D is provided with a short angular extension 26 disposed at its inner end and which has a laterally directed enlarged tubular extension 27 in which the inner end of the binding screw 23 is threaded. As a result of the difference in width of the angular extensions 24 and 26 of the miter arms C and D respectively, said arms are positioned so as to lie and rotate in the same plane. The tubular extensions 25 and 27 of respective miter arms C and D are provided with scales 28 indicating various angles while the ear 20 is provided

at its outer end with a single scale 29 with which the scales 28 are adapted to register during the rotation of the miter arms C and D. When a given scale on either of the miter arms D registers with the scale 29 then the scale on the miter arm or rather the tubular extension of said arm which registers with the scale on the ear 20 indicates the angle of the miter that will be traced by the miter arm when the square is applied to a desired timber. The miter arms C and D are adapted to be locked in desired adjustments by the manipulation of the binding screw 23 as will be apparent.

In order that the miter arms C and D may lie close to respective plates 10 and 11 when said arms are not in use said plates are provided at their inner ends respectively with cut away portions 30 adapted to receive said miter arms.

In utilizing the square to determine both the square cut and the miter cut of a piece of timber the tongue B is adjusted at right angles to the blade A in a manner heretofore referred to and the miter arm C adjusted to the proper angle to give the desired miter cut. This square is then applied to the timber at the proper point in its length in the usual manner, the blade B being disposed across one face of the timber and the miter arm C across an adjacent face. When the square is thus applied both the marking for the square cut and the marking for the miter cut can be obtained without any additional adjustment of the square or without any additional mathematical calculation on the part of the workman.

While the utility of the square to simul-

taneously obtain the square cut and miter cut of a piece of timber has been referred to in detail, it will be apparent that the same may be employed as an aid in building constructions on various other occasions without in any manner altering the construction of the device as herein described and claimed.

What is claimed is:

1. A square and miter marker including a tongue and blade, spaced ears on the inner end of said tongue, a binding screw mounted in said ears and disposed in the plane of the tongue and blade, a pair of miter arms rotatably mounted on said binding screw and movable in a plane at right angles to the tongue and blade.

2. A square and miter marker including a tongue and blade, connected together for angular adjustment, and a pair of miter arms rotatably mounted on the inner end of the tongue and adjustable in a plane disposed at right angles to the plane of the tongue and transversely of the blade.

3. A square and miter marker including a tongue and blade connected together for angular adjustment, a pair of miter arms rotatably mounted on the inner end of the tongue and adjustable in a plane disposed at right angles to the plane of the tongue and transversely of the blade, and means for locking said arms in various adjustments.

In testimony whereof, I affix my signature, in presence of two witnesses.

PETER KRANZ.

Witnesses:

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JESSIE P. CAIN.