

No. 832,285.

PATENTED OCT. 2, 1906.

T. L. WILSON.
COMBINATION FRAMING SQUARE.

APPLICATION FILED MAR. 15, 1906.

Fig 2

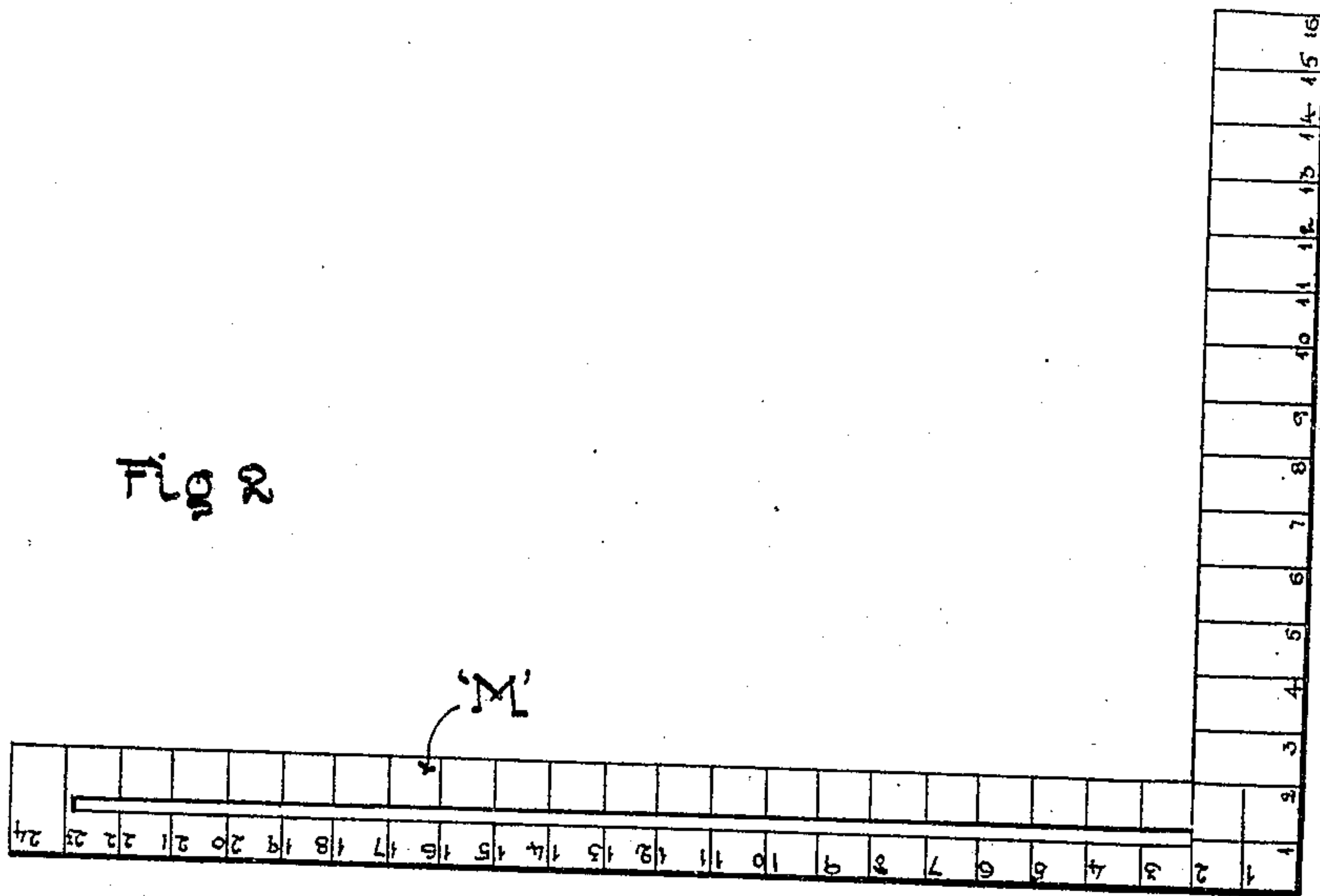
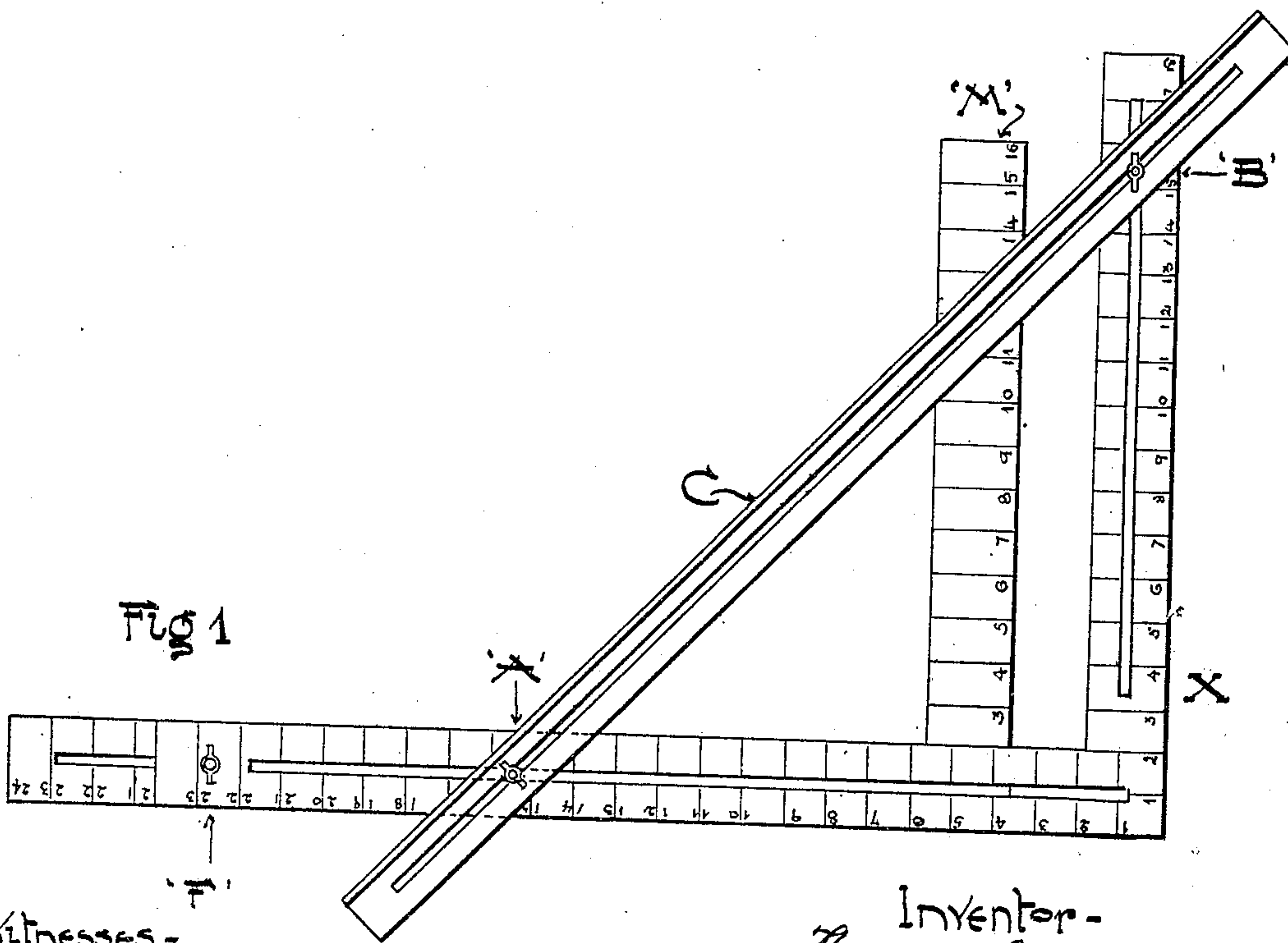


Fig 1



Witnesses -
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UNITED STATES PATENT OFFICE.

THOMAS L. WILSON, OF PASADENA, CALIFORNIA.

COMBINATION FRAMING-SQUARE.

No. 832,285.

Specification of Letters Patent.

Patented Oct. 2, 1906.

Application filed March 15, 1906. Serial No. 306,308.

To all whom it may concern:

Be it known that I, THOMAS L. WILSON, a citizen of the United States, residing at Pasadena, in the county of Los Angeles and State of California, have invented a new and useful Combination Framing-Square, of which the following is a specification.

My invention relates to improvements in calculators or pitch-finding squares used in framing wood or iron roofs.

The object of my improvement is to secure with greater speed and greater accuracy the length of rafters and hip-rafters, and also to obtain the length of the jack-rafters by a simple mechanical process. I obtain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents the entire contrivance, and Fig. 2 shows sliding-square M detached from the other parts.

The device consists of three separate parts: first, X the principal square, having arms twenty-four inches and eighteen inches in length, in each of which are slots three-sixteenths of an inch in width; second, the sliding square M, having arms twenty-four inches and sixteen inches long, respectively, with a three-sixteenth inch slot in the longer or horizontal arm, as shown in Fig. 2. A thumb-screw passes through the end of the longer arm of the principal square X and through the slot of the sliding square M. The third part consists of a diagonal rule C, one and one-fourth inches in width, thirty inches in length, and having a slot, as shown. Thumb-screw at A, Fig. 1, holds these two pieces together in such a manner that the ends of C may be moved along the slots in the arm of square X. Thumb-screw B, Fig. 1, works in a similar manner in the upper ends of C and X. Thus it will be seen that by merely loosening the thumb-screw the sliding square M, Fig. 1, can be moved right or left and the diagonal rule C, Fig. 1, may be adjusted to any of the figures on either arm of the principal square X, Fig. 1.

The whole of the material used is nickel-plated steel one-eighth of an inch in thickness. The width of the diagonal rule is one and one-fourth inches, the longer or horizon-

tal arms of the squares to be two inches in width, the shorter arms one and one-half inches. All the arms are to be marked in one-inch scales graduated into one-fourth-inch, one-eighth-inch, one-sixteenth-inch, and one-twelfth-inch parts in the manner common to all mechanics' squares and rules.

The method of working is as follows: Given a roof of twenty-four span, with a pitch of one-third, wanted the length of rafter, hip, and jack-rafter. Loosen the thumb-screws A and B, adjust lower arm of diagonal rule C to "12" (half the span) on the long arm of X and the upper arm of C to "8," (the rise or pitch being one-third of twenty-four feet, equals eight feet.) The reading on C will be "14-5," the scale representing one inch to a foot. The length of rafter will be fourteen feet and five inches. To obtain the length of the hip-rafter, loosen thumb-screw B and readjust diagonal rule C to "12" on lower arm and "14-5" on vertical arm of principal square X, and the reading on C, "18-9," represents the length in feet of the hip. To obtain the jack-rafters, leave the diagonal rule C set for the hip, as above, loosen the thumb-screw F, and move sliding square M from right to left two inches if the rafters are spaced at two feet, and the reading on the outer edge of the vertical arm of M, "12-0," is the length of the first jack-rafter. By moving the sliding square two inches farther the diagonal rule will indicate the length of the second jack-rafter, the length of the remaining jack-rafters to be found in the same manner.

I am aware that there are squares upon which may be calculated the lengths of various roof-timbers at given pitches; but

I claim—

In combination with a main square having both arms longitudinally slotted, a sliding square having its long arm slotted correspondingly to said main square and both its arms parallel to the corresponding ones of the main square, a longitudinally-slotted rule adapted to be laid diagonally across the said squares, a clamping-screw passed through a solid part of the long arm of one square and through the longitudinal slot of the long arm

of the other square and clamping-screws adapted to be passed through the slot in the said rule and through the slots in the main square, one of the said screws also passing
5 through the slot of the sliding square, for fastening said parts together adjustably substantially as set forth.

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

THOMAS L. WILSON.

Witnesses:

SIDNEY SMITH,
ROBERT SIDDLE.