

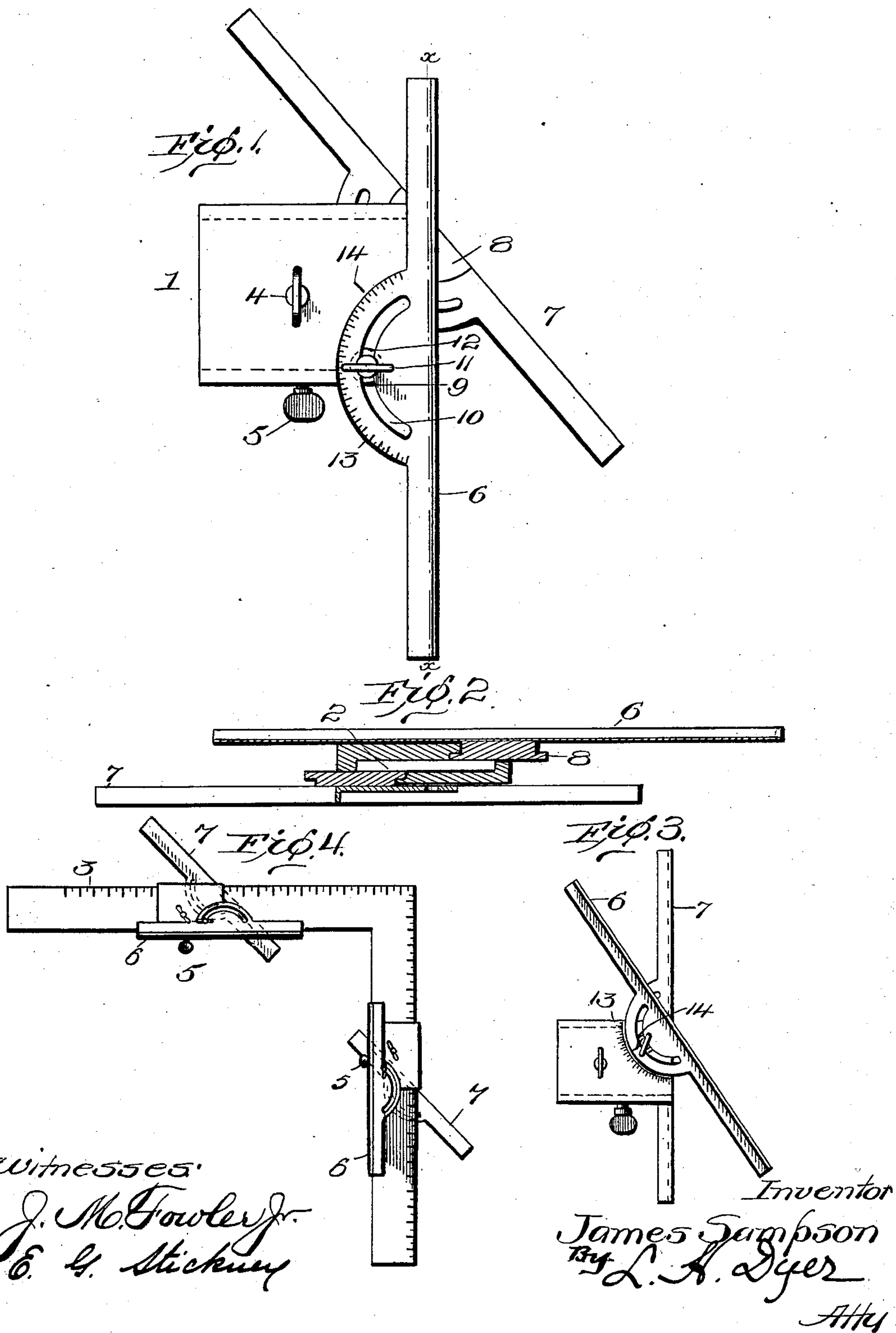
No. 715,610.

Patented Dec. 9, 1902.

J. SAMPSON.  
BEVEL ATTACHMENT FOR SQUARES.

(Application filed May 19, 1902.)

(No Model.)



# UNITED STATES PATENT OFFICE.

JAMES SAMPSON, OF DULUTH, MINNESOTA.

## BEVEL ATTACHMENT FOR SQUARES.

SPECIFICATION forming part of Letters Patent No. 715,610, dated December 9, 1902.

Application filed May 19, 1902. Serial No. 107,972. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES SAMPSON, a citizen of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Bevel Attachments for Squares, of which the following is a specification.

This invention relates to improvements in combination beveling-tools for the purpose of measuring angles of any degree.

The invention also relates to an improvement in tools to be used to accurately measure miters and bevels and is of use in drawing stair-stringers, so as to get all of the same size of rise and tread, and is also adapted to be used in measuring rafters for use, as in the roof of a building, where it is necessary that each rafter must be cut at exactly the same bevel or angle of inclination.

The invention may be employed in any use where miters and bevels must be made in addition to the two above illustrations.

The invention consists generally in the use of a carriage arranged to slide upon one limb of a square or upon a rule. The said carriage is provided with set-screws for holding it in position and with two bevel-arms pivoted to corners of the carriage. The arms have each a graduated segment and a set-screw for locking it in place at any angle. In use the tool may be used independently as a bevel without the use of the square, or the two may be adjusted upon the square and angles with sides of a definite length made. If desired, a single carriage may be attached to a rule, thus forming an adjustable head for a drafting-square.

In order to better understand the nature of the invention, attention is directed to the accompanying drawings, in which—

Figure 1 represents a side view of one form of bevel attachment; Fig. 2, an end view thereof; Fig. 3 represents a modified form drawn to a reduced scale; and Fig. 4 represents a steel square with two bevel attachments in place thereon.

In all the several views like parts are designated by the same numerals of reference.

The bevel attachments consist of a rectangular body portion or slide 1, having a slot 2, through which a limb of the square 3 passes.

The slide is secured in position upon the square by means of the set-screws 4 and 5, engaging with the side and edge of the square, respectively. The bevel-arms 6 and 7 are shown in Figs. 1 and 2 as mounted upon opposite corners of the slide 1. In the modification shown in Fig. 3 the arms are mounted upon opposite sides of the same corner of the slide. The preferred construction has the advantage that, owing to the separation of the points of pivoting, greater angles may be measured. The bevel-arms 6 and 7 are pivoted to the slide by means of the small gained segmental portions 8, preferably formed integrally therewith and adapted to engage with recesses cut within the corners of the slide. As an additional support to this the arms are each provided with a segmental portion 9 with a groove 10 cut therein, through which passes the stem of a set-screw 11, which by means of a washer 12 engages and retains the portion 9 immovably in position. The outer periphery of the segmental portion 9 may have a scale 13 thereon, as shown in Fig. 1, which will read from a fixed mark 14 made at a point drawn at an angle of forty-five degrees from the pivoting-point of the arm.

In Fig. 3 a modification is shown, wherein the scale is cut upon the slide 1 and is read from a fixed point upon the segment.

In use two of the slides are attached to the arms of the square 3, as shown in Fig. 4. To strike an angle for the purpose of cutting the bevel of a rafter or a stair-stringer, the slides are adjusted in proper relation upon the arms of the square, which will be indicated by the scales thereon. The arms may then be adjusted in proper relation or allowed to pivot loosely upon their centers, and thus when placed in position will automatically adjust the square to the desired angle without any further setting.

When used as a bevel, one of the slides can be removed from the square and the relative angle of the arms 6 and 7 adjusted as desired.

Having fully described and ascertained the nature of my said invention, what I claim, and desire to secure by Letters Patent, is—

1. In a bevel, the combination with the slide 1, of the bevel-arms 6 and 7 pivoted to opposite sides and opposite corners thereof, and



means for retaining said arms in position at a definite angle to the slide, substantially as described, and for the purposes set forth.

2. In a bevel, the combination with the slide  
5 1, of the bevel-arms 6 and 7 pivoted thereto by means of the gained segmental portions 8, each arm having a slotted section 9, and a locking-screw 11 for retaining said arms in position at a definite angle to the slide, sub-  
10 stantially as described, and for the purposes set forth.

3. In a bevel, the combination with the slides 1, 1, mounted upon opposite limbs of a square

3, of the bevel-arms 6 and 7, pivoted to oppo-  
site sides and opposite corners of the said 15  
slides, and means for retaining the said arms in position at a definite angle to the slide, substantially as described, and for the pur-  
poses set forth.

This specification signed and witnessed this 20  
8th day of May, 1902.

JAMES SAMPSON.

Witnesses:

ALBERT E. BOTSFORD,  
JAMES A. HANKS.