

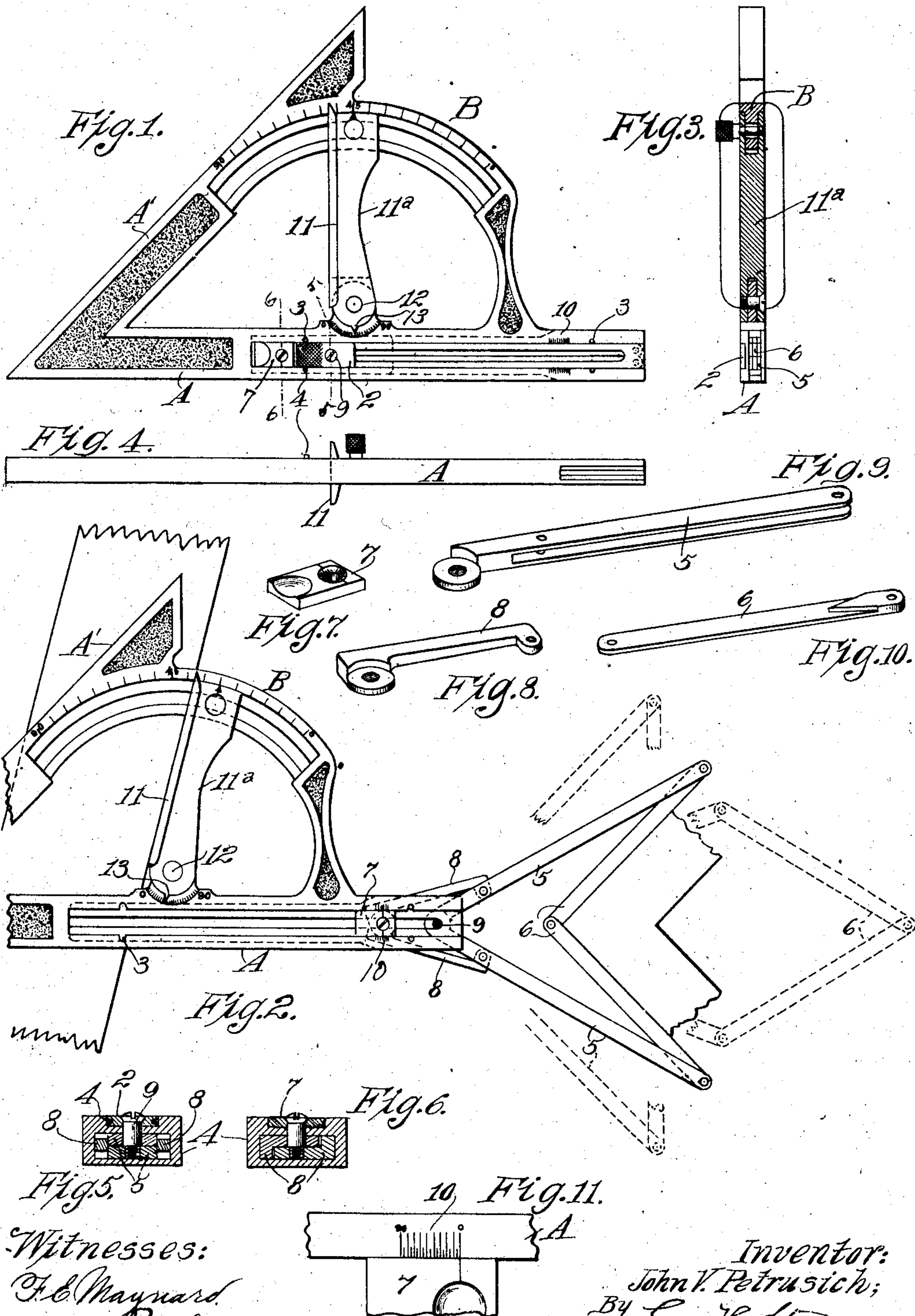
No. 834,638.

PATENTED OCT. 30, 1906.

J. V. PETRUSICH.  
ADJUSTABLE TOOL FOR CONSTRUCTING ANGLES.

APPLICATION FILED APR. 17, 1906.

2 SHEETS—SHEET 1.



Witnesses:  
F. C. Maynard  
C. H. Fowler

Inventor:  
John V. Petrusich;  
By Geo. H. Strong  
Att'y.

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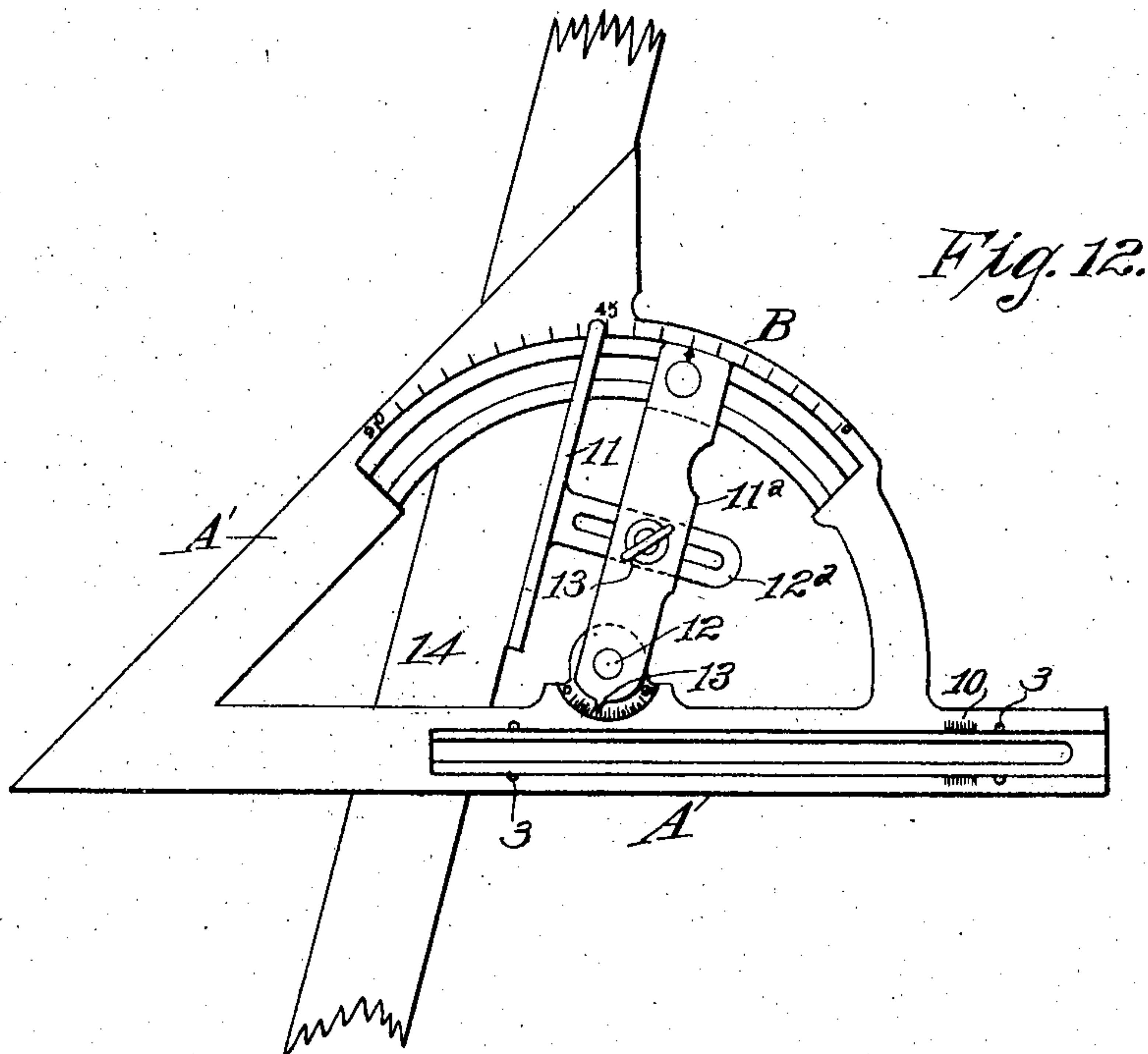


Fig. 12.

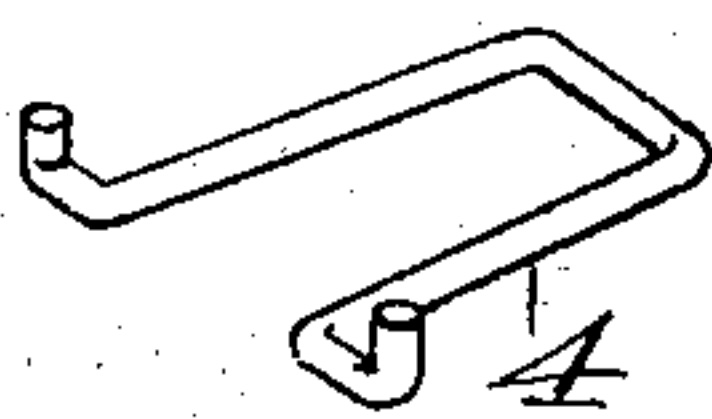


Fig. 13.

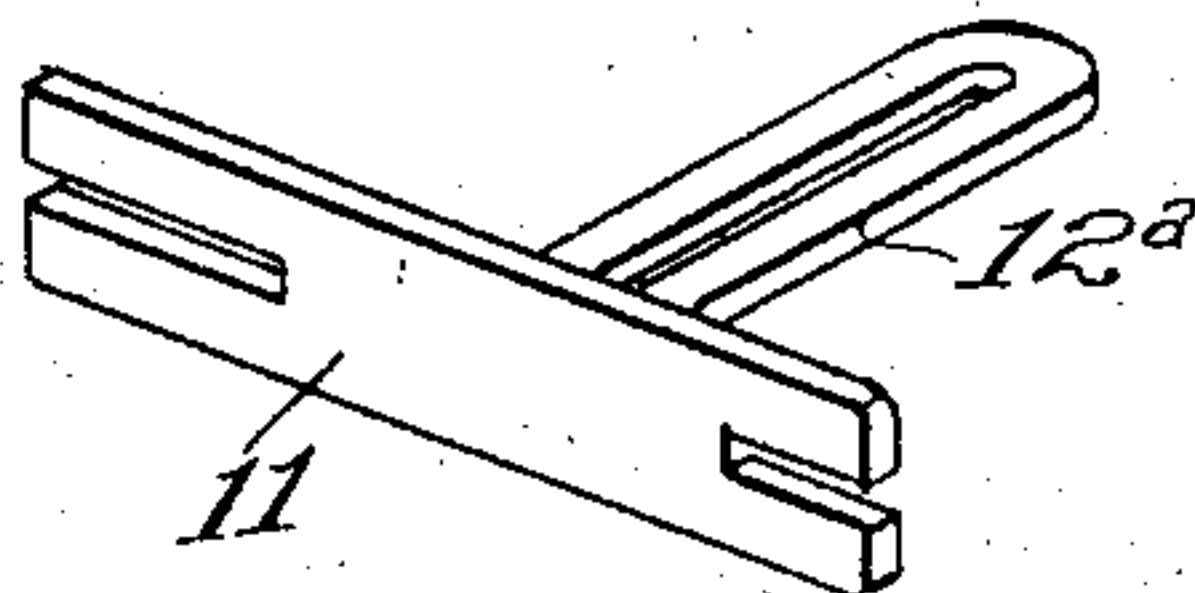


Fig. 14.

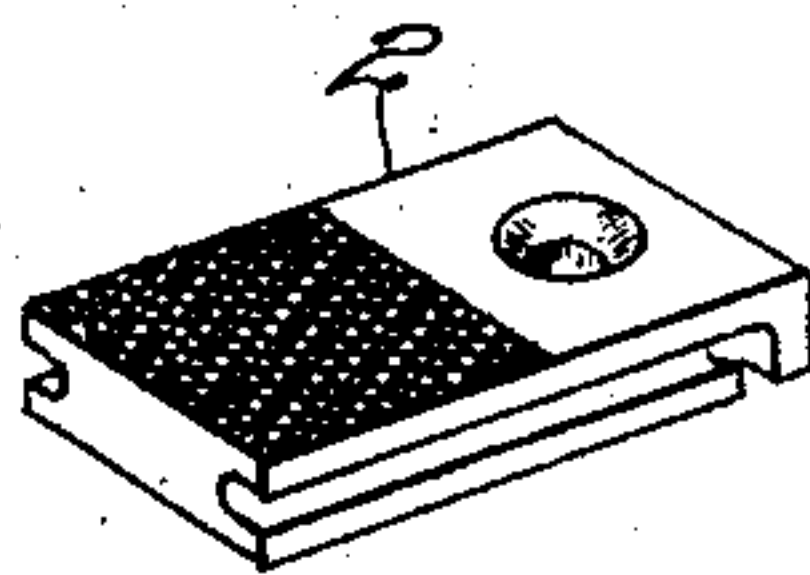


Fig. 15.

Witnesses:  
C. E. Hayward  
C. R. Fowler

Inventor:  
John V. Petrusich;  
By: Geo. H. Strong.  
Atty.



# UNITED STATES PATENT OFFICE.

JOHN V. PETRUSICH, OF SAN FRANCISCO, CALIFORNIA.

## ADJUSTABLE TOOL FOR CONSTRUCTING ANGLES.

No. 834,638.

Specification of Letters Patent.

Patented Oct. 30, 1906.

Application filed April 17, 1906. Serial No. 312,213.

*To all whom it may concern:*

Be it known that I, JOHN V. PETRUSICH, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Adjustable Tools for Constructing Angles, of which the following is a specification.

My invention relates to a tool or implement which is designed for ascertaining and laying out angles.

It consists in the combination of parts and in details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figures 1 and 2 are plan views showing, respectively, the closed and opened positions of the implement. Fig. 3 is a partial vertical section through Fig. 1. Fig. 4 is an edge view. Fig. 5 is a section on line 5 5, and Fig. 6 a section on line 6 6, of Fig. 1. Figs. 7 to 10, inclusive, are perspective views of parts. Fig. 11 is an enlarged view of the scale. Fig. 12 is a plan view showing a modification of the device. Figs. 13, 14, and 15 are detail views.

A A' is a base or support consisting of two bars united at one end at an acute angle and having a segmental slotted arch B, connecting the outer ends, as shown. The lower part A, as shown in Fig. 1, is grooved or channeled, and within this groove or channel the slide 2 is adapted to move. Upon each side of the groove or channel and near the inner and outer ends are notches 3, and 4 is an elastic wire spring carried by the slide 2, and its ends are adapted to engage with the notches 3 when the part 2 is withdrawn to the inner end and the device closed up and also when it has been moved to the outer end and the device extended for operation.

Pivoted to the plate 2 are arms 5, and between the outer ends of the arms 5 are the arms 6, which have one end pivoted to the outer ends of 5 and their meeting ends pivoted together, so that when extended these arms 6 may be folded between the arms 5 in the form of a V or they may be extended outward from the ends of the arms 5, as plainly shown in Fig. 2. When the slide 2 is withdrawn, these arms fold together and follow the slide into the groove or channel in the bar A and are thus concealed and protected. When the device is to be used, the slide 2 is moved out and locked by the engagement of the spring 4 with the notches 3

near the outer end of the bar A. The object of these arms 6 is to take any angle which it is desired to bisect or otherwise mark. Thus if the angle be, for instance, forty-five degrees the device is adjusted until the inner bars 6 include and fit the angle if it be an exterior angle. If it be an interior angle, the bars 6 are turned outwardly from the ends of the bars 5, as shown in dotted lines, Fig. 2, and then by spreading or contracting the bars 5 the bars 6 may be fitted to the angle, and when the angle has been ascertained by a scale to be hereinafter described the angle may be marked by the use of the leg A' of the frame as a rule or guide in conjunction with an arm movable over the curved and subdivided segment B, by which the ascertained angle is laid out upon the board or other part where it is to be used.

7 is a slide movable in the groove or channel in the bar A and behind the slide 2. This slide 7 is connected with the arms 5 by rods or bars 8, having the outer ends pivoted to the bars 5 near the center where these bars 5 are pivoted to the slide 2, as shown at 9. The inner ends of the bars or rods 8 are pivoted to the slide 7.

10 is a scale marked upon the edge of the bar A near the outer end and contiguous to the slide 7, which slide may have a mark or indicator carried by it.

The operation of the device for the purpose of ascertaining the angle would then be as follows: The slide 2 having been moved to the outer end of the bar A, and thus being in position to allow the arms 5 and 6 to be diverged and separated about the pivot-point 9, these arms will be separated, so that if it be an exterior angle the bar, will inclose and fit the angle. The diverging of these bars to fit the angle acts through the connecting-rods 8 to move the slide 7 backwardly, and its indicator, moving over the scale 10, will finally stop at a mark which indicates the angle. Supposing for convenience this angle to be forty-five degrees and it is desired to lay out the angle upon the board or other part, we first ascertain the angle by means of the segmental arc B, which is subdivided into degrees, and a radial arm 11, which is fulcrumed, as shown at 12, so that its outer end will move over the graduated arc B. The inner end may also have a pointer, as at 13, which may be made movable over a graduated arc at that point, as shown. The indicator-arm 11 is then moved over the arc B



until it registers the angle which has previously been ascertained by the arms 6. This angle having been ascertained, the frame A is laid upon the board or part to be marked, and the outer edge of the bar A' serves as a straight-edge by which the mark may be made, and this mark will stand at the angle corresponding with the one previously ascertained by the bar 6. Thus if the miter or other angle between two meeting boards is to be produced it will be effected in this manner. If it be found that the part to be marked is too narrow to allow it to be marked by the line A', I have shown the radial indicator-bar 11 to be movable. This indicator-bar is carried by a radius-rod 11<sup>a</sup>, Fig. 12, by means of a slotted tongue 12<sup>a</sup>, which is slidable through the bar 11<sup>a</sup> and may be held at any point by a thumb-screw, as at 13. By means of this thumb and screw and extending device the part 11 may be moved outward, and the bar 14, being laid against the outer edge of 11, will be moved outwardly so far that it will allow its outer edge to intersect a narrow strip when such strip is to have the ascertained angle marked upon it. If it is desired to obtain an interior angle, the arm 6 will be projected outwardly from the arms 5 so as to fit within the interior angle, and in the same manner, as previously described, the movement of the arms 5 to and from each other will move the slide 7 over the scale 10, and when the angle has been thus indicated it is marked, as previously described, by moving the radial arm and indicating-pointer 11 over the scale B, the movement in one direction indicating an exterior angle and in the other an interior angle.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A device for ascertaining angles, said device including an angular frame, a slide guided and movable upon one arm of the frame, said slide having pivoted arms adapted to be opened or closed about their pivot-point, and other arms having their meeting ends pivoted together, and their outer ends connected with the outer ends of the first-named arms.

2. An apparatus for ascertaining angles, said apparatus consisting of an angular frame, a slide guided and movable upon one arm of the frame, arms pivoted to said slide and other arms pivoted to the outer end of the first-named arms and having their meeting ends also pivoted, a second independently-

movable slide, rods connecting said slide with the arms which diverge from the first-named slide whereby the movement of said arms to or from each other will correspondingly move the second slide, and a scale upon which the movement of said slide is indicated, and the included angle of the arms registered.

3. In a device for ascertaining angles, a frame consisting of arms united at an angle, a guide-channel formed in one of said arms, a slide movable therein, and a latching device by which the slide is locked at the inner or outer end of its travel, arms pivoted to and capable of being diverged from said slide when the latter is at the outer end of its travel, other arms pivoted to the outer ends of the first-named arms, and having their meeting ends pivoted together, a second independently-movable slide, rods connecting the outer arms with said slide, said frame having a fixed scale, and means to indicate the movement of the slide with relation to the scale, and the angle included by the divergent arms.

4. In a device for indicating angles, a frame consisting of arms meeting at an angle, slides guided and movable upon one of said arms, arms pivoted and capable of adjustment with relation to the slides whereby the unknown angle is indicated, a segmental scale carried upon the frame, a pivoted radial indicator movable over said scale whereby the ascertained angle may be indicated upon the second scale, and the line of said angle marked along the edge of one of the frame-bars.

5. In an apparatus for ascertaining and marking angles, a frame composed of bars meeting at an acute angle, slides guided and movable upon one of said bars, arms pivoted to the outermost of said slides, connections between said bars and the innermost slide, and said guide-bar having a scale whereby the angle is indicated, a segmental scale having corresponding subdivisions, a pivoted indicator-arm movable over the segmental scale, and a straight-edge movable to or from the indicator-arm and parallel therewith.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN V. PETRUSICH.

Witnesses:

S. H. NOURSE,  
HENRY P. TRICOU.