R. ABARE.

SLIDE PROTRACTOR.

APPLICATION FILED APR. 18, 1921.

1,417,878.

Patented May 30, 1922.

Fig. 1.

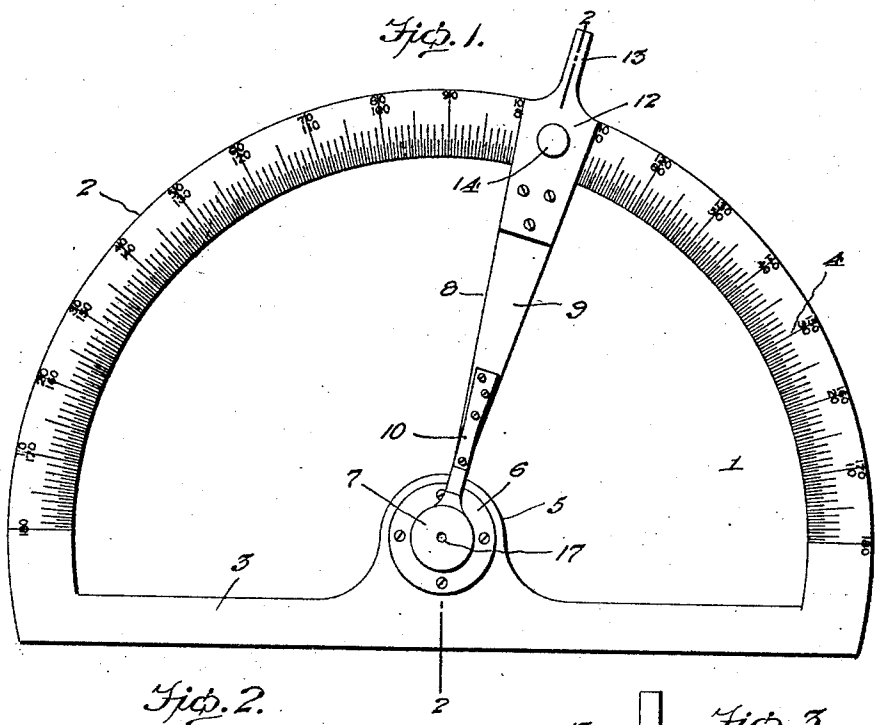


Fig. 2.

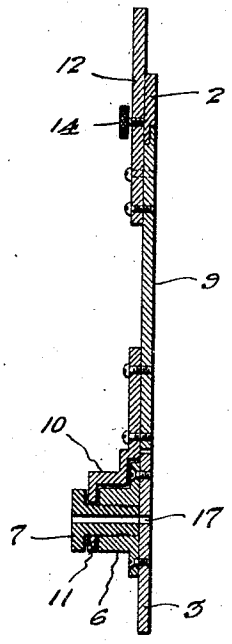


Fig. 3.

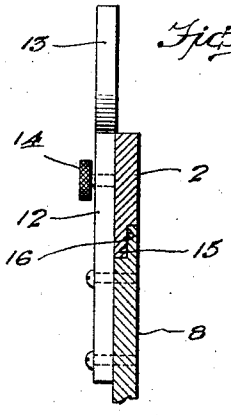
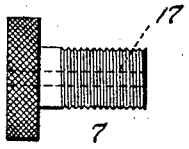


Fig. 4.



Roy Abare INVENTOR

BY Victor J. Evans ATTORNEY

Paul M. Hunt.

WITNESS:

UNITED STATES PATENT OFFICE.

ROY ABARE, OF CHAZY, NEW YORK.

SLIDE PROTRACTOR.

1,417,878. Specification of Letters Patent. Patented May 30, 1922.

Application filed April 18, 1921. Serial No. 462,165.

To all whom it may concern:

Be it known that I, ROY ABARE, a citizen of the United States, residing at Chazy, in the county of Clinton and State of New York, have invented new and useful Improvements in Slide Protractors, of which the following is a specification.

This invention relates to improvements in protractors, the general object of the invention being to provide means for facilitating the drawing of lines of angles by means of a pivoted ruler cooperating with a scale on the arc part of the device.

Another object of the invention is to provide a sight hole at the pivotal point of the ruler so that the device may be placed with the pivotal point at the center of a scale.

A still further object of the invention is to provide means for holding the ruler in adjusted position.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

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

Figure 1 is a plan view of the invention.

Figure 2 is a section on line 2—2 of Figure 1.

Figures 3 and 4 are detail views.

As shown in these views the frame 1 consists of the arc-shaped part 2 and the straight part 3, the arc-shaped part carrying the scale 4 and the straight part having the inwardly extending central enlargement 5 having an opening therein and to which the stepped socket member 6 is secured with its socket over the opening. The socket in said member is screw threaded to receive the threaded thumb bolt 7. The slide or ruler 8 consists of the central piece 9 fitting within the space within the frame, said piece being of tapered shape with its small end adjacent the enlargement 5; the piece 10 secured to the small end of piece 9 and having an opening 11 for receiving the thumb screw, and the piece 12 secured to the outer end of the piece 9 and overlapping the scale carrying part. This piece 12 is provided with a reduced extension 13 forming a handle and carries a thumb screw 14 for engaging the part 2 so that the slide may be clamped in adjusted position. The outer end of piece 9 is recessed, as at 15, and the inner edge of piece 2 is recessed, as at 16, these recessed portions overlapping each other as shown. Thus when the clamping screw 14 is screwed in the slide is effectually locked to the frame. Piece 10 is provided with offset portions, as shown, so that the opening will rest upon the top of socket 6 and the thumb bolt 7 is provided with a central opening 17 acting as a sight opening so that the device can be properly positioned. Attention is called to the fact that if the lines forming the edges of the piece 9 were extended they would converge at the center opening 17 which is the the axis of the said piece.

It will be seen that the parts are so arranged that the slide 8 can be moved beyond the scale so that a line can be drawn parallel to the outer edge of part 3.

By my invention lines of angles can be easily and quickly drawn by simply moving the slide 8 to the degree on the scale at which the angle is to be drawn in relation to another line. After the slide 8 has been adjusted it is secured in adjusted position by the thumb nut 14.

My device can be used with a T-square as the outer edge of part 3 can be placed against the T-square and the slide moved to secure the desired angle. By spacing the inner edge of the part 3 from the 180° line the slide can be moved into a position to rule a line parallel to the T-square and this also allows the use of the upper edge of the slide in ruling lines of a degree less than the width of the slide.

The sight opening in the thumb bolt 7 permits the device to be properly positioned over circles and arcs.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What I claim is:—

A device of the class described comprising a frame including an arc-shaped scale carrying part and a straight part connecting the ends of the arc-shaped part, said

straight part having an inwardly extending centrally arranged enlargement, a stepped socket member secured to said enlargement, a ruler having one end provided with an opening and shaped to engage the socket member, a bolt passing through said opening into the socket member for pivotally securing the ruler to the frame, said ruler and arc-shaped part having overlapping portions, the ruler having its other end passing over and extending beyond the arc-shaped part, a thumb bolt carried by said other end and engaging the arc-shaped part and a handle formed on said extending part.

In testimony whereof I affix my signature.

ROY ABARE.