

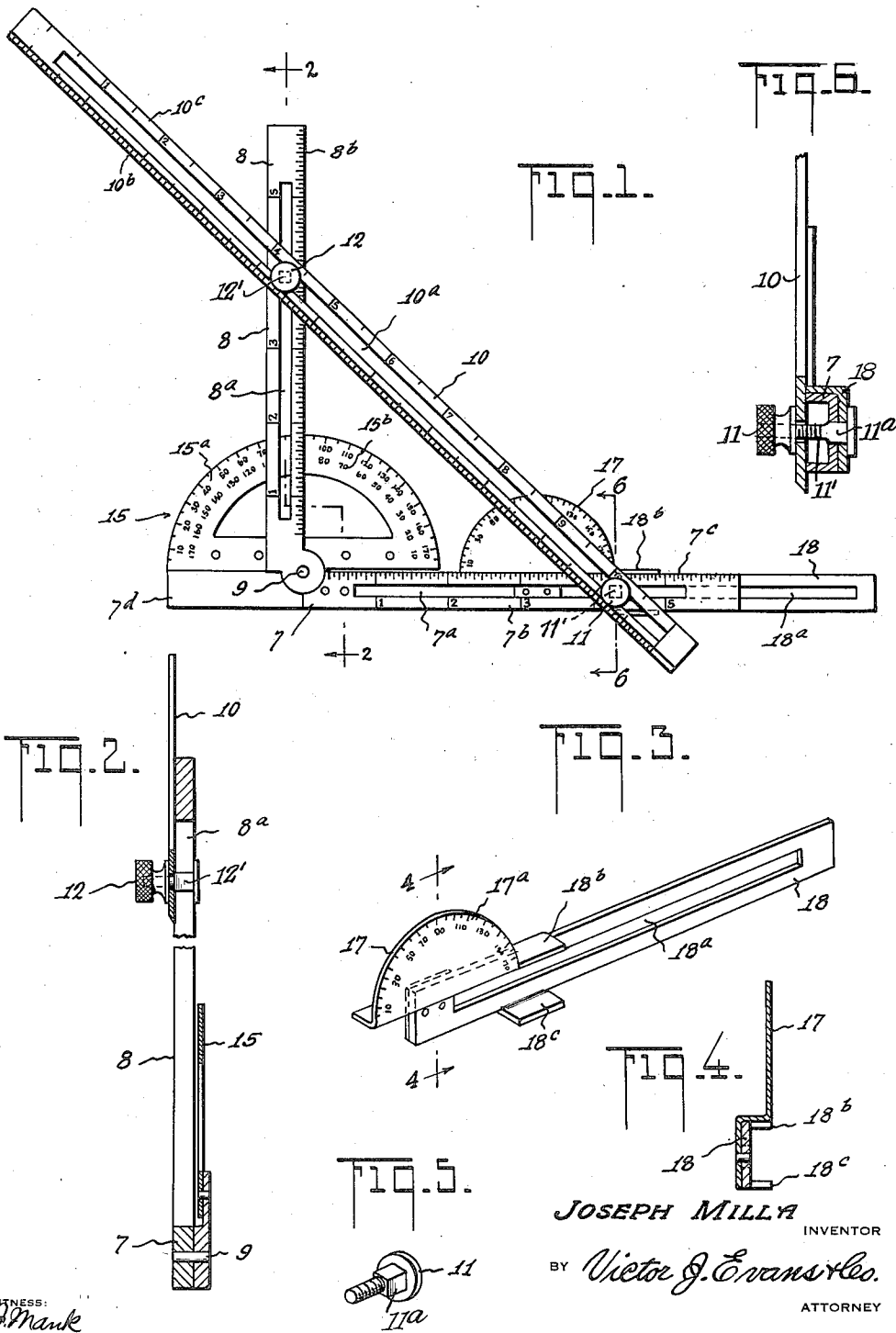
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PROTRACTOR

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WITNESS:  
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# UNITED STATES PATENT OFFICE

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## PROTRACTOR

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1 Claim. (Cl. 33—98)

This invention relates to measuring devices.

The invention will be fully and comprehensively understood from a consideration of the following detailed description when read in connection with the accompanying drawing which forms part of the application with the understanding, however, that the improvement is capable of extended application and is not confined to the exact showing of the drawing nor to the precise construction described and, therefore, such changes and modifications may be made therefrom as do not affect the spirit of the invention nor exceed the scope thereof as expressed in the appended claim.

In the drawing:

Fig. 1 is a plan view of the device or tool.

Fig. 2 is a section taken approximately on the broken line 2—2, looking in the direction of the arrows.

Fig. 3 is a perspective view of part of the device shown in Fig. 1.

Fig. 4 is a section taken approximately on the line 4—4 of Fig. 3; and

Fig. 5 is a perspective view of a thread employed in the device.

Fig. 6 is a view taken on line 6—6 of Fig. 1.

Referring to the drawing for a more detailed description thereof, the numerals 7 and 8 indicate two members pivotally connected at 9. The numeral 10 indicates a member positioned obliquely to the members 7 and 8 and adjustably secured thereto, being adapted to slide on the members 7 and 8 for adjustment. The members 7, 8 and 10 are respectively provided with longitudinal slots 7a, 8a and 10a to accommodate the movement of screws 11' and 12' which are employed to hold the members 7, 8 and 10 in a desired relative position, the mentioned screws being provided respectively with nuts 11 and 12. The screw 11' passes through the slots 10a and 7a while the screw 12 passes through the slots 10a and 8a.

The member 7 carries on its edges scales 7b and 7c, the former being on the outer edge and the latter on the inner edge. The scales 7b and 7c are both divided into inches but the inches have a different number of subdivisions. A protractor 15 is fixedly secured to the member 7 to indicate the angular relationship between the members 7 and 8. This protractor has degree scales 15a and 15b which run in opposite directions. The protractor partly rests on the member 7 and partly on an extension 7d of the member 7. The member 8, like the member 7, is provided with two different scales, these scales being on the inner and outer edges of the member 8 and respectively numbered 8b and 8c. The member

10 carries two different scales which are respectively labeled with the characters 10b and 10c, the edge joining the scale 10b being preferably beveled. The scales 8b, 8c, 10b and 10c are in inches but the scales of each pair are differently subdivided.

A protractor 17, carrying a degree scale 17a, is slidable on the member 7, being secured to a member 18 which is provided with a longitudinal slot 18a. The member 18 slides on the back of the member 7 and is provided with guides 18b and 18c which respectively contact with the top and bottom of the member 7. Protractor 17 is used in reading the angle of the member 10 and it is apparent that inasmuch as the latter member is set at different positions relative to the members 7 and 8, as necessary, the protractor 17 is movable independently of the member 10 so that an edge of the latter member may be set at the middle point of the straight edge of the protractor. The screw 11', provided with nut 11, passes thru the slots 18a, 7a and 10a to adjustably hold together the members 18, 7 and 10, and it has a square shank 11a which engages the edges of the slots 18a and 7a.

The device described provides for many relative positions between the various parts and it is useful to tradesmen, such as carpenters, for example, in measuring angles so that material may be properly cut.

What is claimed as new and useful is:

An instrument of the character described comprising a first elongated scaled member, a second elongated scaled member pivotally connected to the first mentioned scaled member, said members having longitudinal slots, a third elongated member in alignment with and adjustable longitudinally of said second elongated member and positioned back of the same and having a longitudinal slot and provided with guides engaging said second member, a protractor mounted on said third member, a second protractor secured to one of the pivotally connected members to indicate the angle between the latter members, an oblique elongated scaled member having a longitudinal slot, means for adjustably holding said oblique member to said first member and passing thru the longitudinal slots of said oblique and first members, and means for adjustably holding together said second, third and oblique members, the last mentioned means being a screw provided with a nut threadedly engaging the same, said screw passing thru the slots of said second, third and oblique members and having a squared shank which engages with the edges of the slots of the second and third members.

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