May 6, 1947. P. A. NELSON 2,420,090

STRAIGHT EDGE PROTRACTOR

Filed June 23, 1945

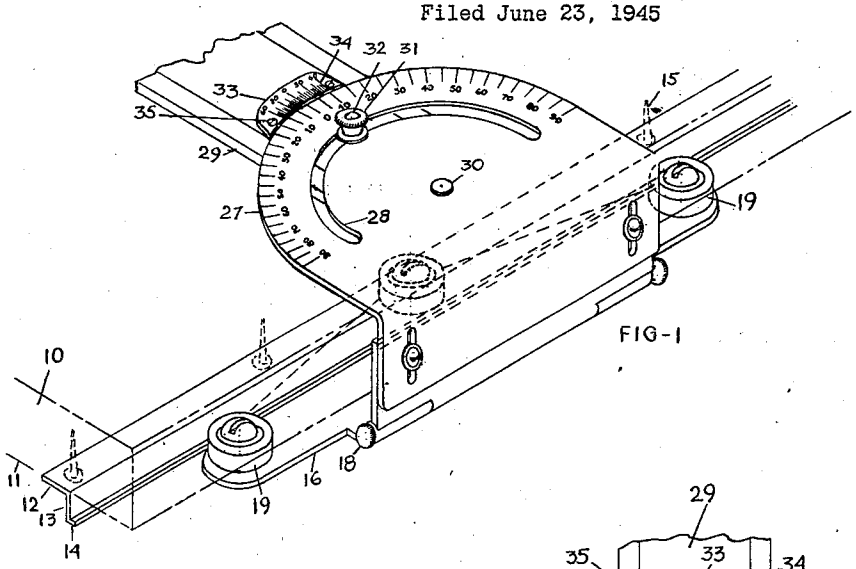

FIG-1

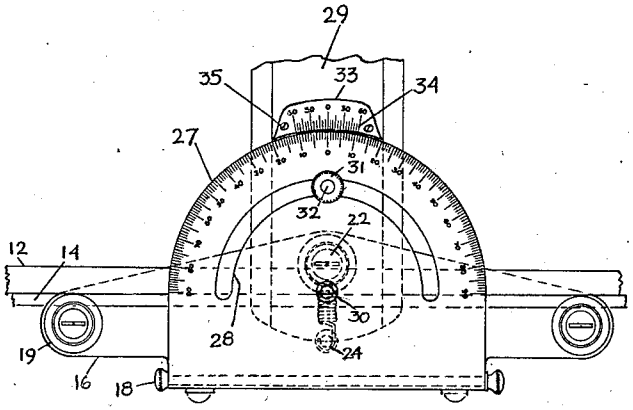

FIG.4

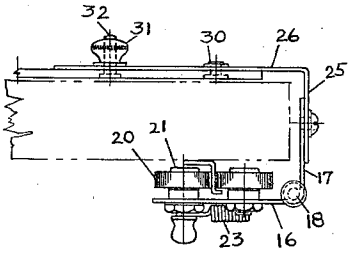

FIG.3

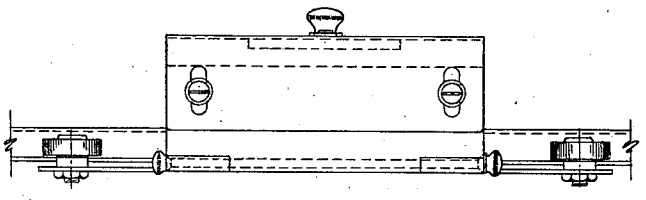

FIG.-2

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STRAIGHTEDGE PROTRACTOR

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1 Claim. (Cl. 33—76)

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This invention relates generally to drawing instruments and particularly to a straight edge protractor.

The main object of this invention is to provide a convenient form of drafting instrument whereby the making of drawings may be greatly facilitated, and in which the device may be attached to an ordinary drawing board without regard to the straightness of its edges.

The second object is to provide a straight edge in which the blade of the square may be set at any desired angle and held in that position as long as desired.

The third object is to make it possible to swing the blade away from the drawing in order to give better access to the board for the placement or removal of the drawing.

These and other objects are accomplished in the manner set forth in the following specification, as illustrated in the accompanying drawing, in which:

Fig. 1 is a perspective view of the device.

Fig. 2 is a front elevation of the device.

Fig. 3 is an end elevation of Fig. 2.

Fig. 4 is a plan of Fig. 2.

Similar numerals refer to similar parts throughout the several views.

Referring in detail to the drawing there is shown a board 10 under whose lower side 11 is secured a Z bar 12 from the lower end of whose vertical portion 13 is formed the horizontal outwardly turned flange 14. The bar 12 is securely fastened to the under side of the board 10 by means of the screws 15.

On the under side flange 14 is disposed a horizontal plate 16 which is hingedly joined to a plate 17 by means of a pin 18. Secured on the plate 16 and at opposite ends thereof are the rollers 19 which engage the portion 13 above the flange 14.

Also mounted on the plate 16 is a roller 20 whose bolt 21 is mounted in a slot 22 in the plate 16 in order that it may be urged by the spring 23 which is secured to the bolt 21 and to the rivet 24 in the plate 16 in order that the roller 20 may be urged toward the vertical portion 13. It is immaterial which of the rollers is made movable, it being merely important that they be relatively movable.

Secured to the plate 17 is the side 25 of the angle plate 26 which contains a calibrated semi-circular edge 27 and the semi-circular slot 28

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which is concentric with the edge 27. The straight edge 29 is pivoted on the rivet 30 and is clamped by means of the knurled nut 31 whose bolt 32 passes through the slot 28.

An indicating plate 33 provided with a vernier 34 is secured to the straight edge 29 by means of the rivets 35.

The operation of the device is as follows:

Assuming that the member 12 is securely fastened to the board 10 and that the rollers 19 and 20 engage opposite sides of the member 13 it is only necessary for the draftsman to swing the straight edge 19 to the position shown in Fig. 1 and set the square 29 at any desired angle under the control of the knurled nut 31. Obviously the rollers 19 and 20 are free to roll along the member 13 and guide the square 29 accurately along the surface of the board.

While I have thus illustrated and described my invention, it is not my intention to be limited to the precise form shown herein, but to cover all such forms and modifications thereof as fall fairly within the appended claim.

A straight edge of the class described characterized by having an elongated track of Z bar cross section adapted to be fastened to the edge of a drawing board, a carriage mounted on said track and having rollers for engaging opposite sides thereof, a side roller having a spring for urging same toward said track, an angular plate one side of which is normally vertical and hinged to said carriage and the other side of which is normally horizontal and extendable over the drawing board, said horizontal portion having a semi-circular graduated edge, a straight edge hinged to said horizontal portion at a point concentric with said graduated edge, and means for clamping said straight edge to said horizontal member.

PAUL A. NELSON.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

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1,031,665	Pocklington	July 2, 1912

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