J. D. McCABE.

PLOTTING BOARD.

APPLICATION FILED MAR. 5, 1918.

1,285,279. Patented Nov. 19, 1918.

Fig. 1,

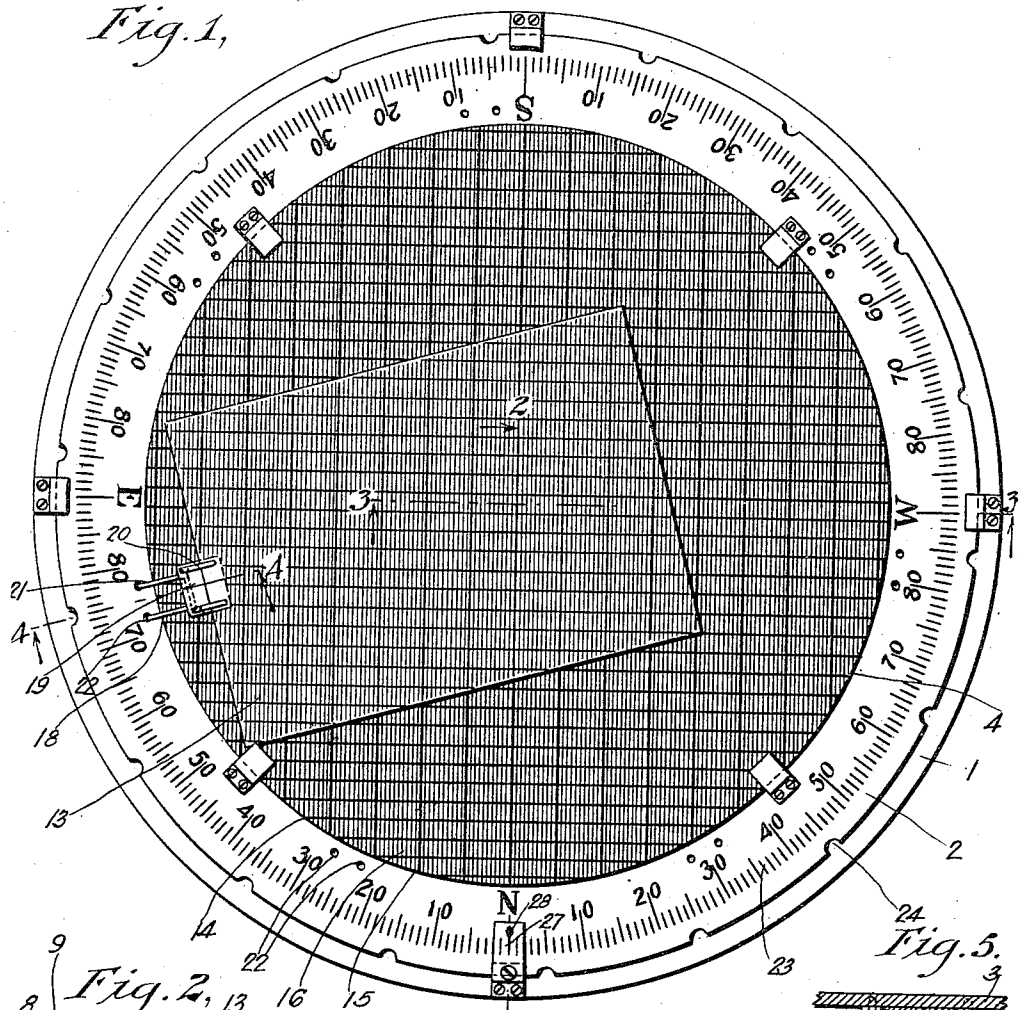


Fig. 2,

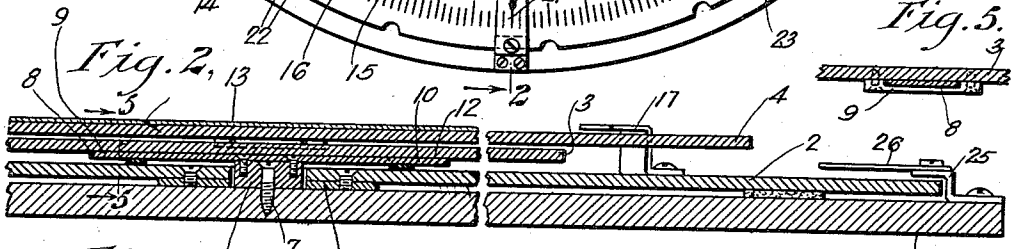


Fig. 5.

Fig. 3,

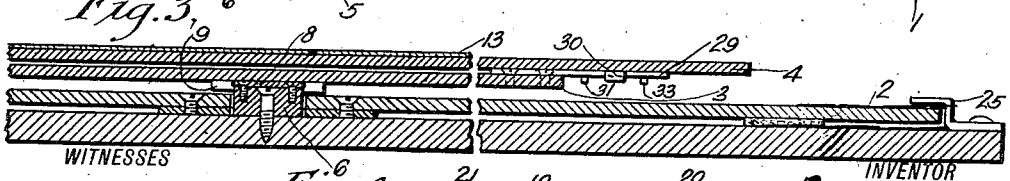
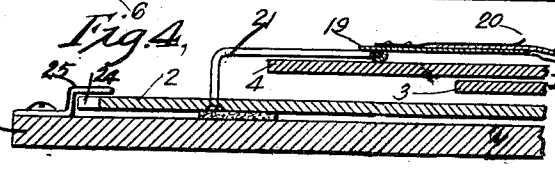


Fig. 4,



WITNESSES

Edw. Thorpe

A. L. Kitchin

INVENTOR

James D. McCabe

BY

Munn & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE.

JUNIUS D. McCABE, OF CORAOPOLIS, PENNSYLVANIA.

PLOTTING-BOARD.

1,285,279. Specification of Letters Patent. Patented Nov. 19, 1918.

Application filed March 5, 1918. Serial No. 220,593.

To all whom it may concern:

Be it known that I, JUNIUS D. McCABE, a citizen of the United States, and a resident of Coraopolis, in the county of Allegheny and State of Pennsylvania, have invented a new and Improved Plotting-Board, of which the following is a full, clear, and exact description.

This invention relates to a plotting device and has for an object the provision of an improved construction whereby deed descriptions may be properly plotted without resorting to anything except the use of a pencil and paper.

Another object in view is to provide a device which may be taken to the recorder's office and a given piece of land properly plotted on a piece of paper practically from the record whereby errors in transcribing will be eliminated.

A still further object in view is to provide an improved construction for laying out a piece of land from description wherein the drawing is done within the graduations of a protractor and thereby minimize the varying in calculations as well as in execution.

In the accompanying drawing:

Figure 1 is a top plan view of a plotting board disclosing an embodiment of the invention.

Fig. 2 is a section through Fig. 1 on line 2—2, the same being on an enlarged scale.

Fig. 3 is a section through Fig. 1 on line 3—3, the same being on an enlarged scale.

Fig. 4 is a detail fragmentary sectional view through Fig. 1 on line 4—4, the same being on an enlarged scale.

Fig. 5 is a detail fragmentary sectional view through Fig. 2 on line 5—5.

Referring to the accompanying drawing by numerals 1 indicates a base which may be made from wood or any other desired material on which disks 2, 3 and 4 are mounted. The protractor disk 2 is provided with a central aperture with a supporting bearing plate 5 rigidly secured thereto by screws or other suitable means as shown in Fig. 2, said plate snugly fitting the cylindrical block 6 which is secured to the base 1 in any suitable manner, as for instance by screws 7. A stationary plate 8 is rigidly secured by screws or other suitable means to the cylindrical member 6, said plate being comparatively narrow and slidingly fitting in the supporting guide 9 (Fig. 5) which guide is secured by screws or otherwise rigidly to the disk 3, whereby said disk is allowed a back and forth longitudinal movement. This movement is in a longitudinal direction and as disk 3 moves the disk 4 also may move. In addition to the longitudinal movement provided for disk 4 in this manner said disk 4 is allowed a latitudinal movement at right angles to said longitudinal movement. These movements both latitudinal and longitudinal are comparatively slight, but allow a proper adjustment of the disk 4 beneath the paper 13 which rests on the disk 4, said adjustment being provided in order that lines on the paper 13 may properly register with the directional lines 14 on disk 4. The longitudinal movement above described permits an adjustment for a major line to be brought under a given point on paper 13 for the purpose of scaling the required distance. As an example, calling the line under the point naught, (major lines being one inch apart) and reading to the right 250 on scale of 100 to the inch, you would count out five minor lines past the second major line for that distance. It will of course, be understood that a fractional distance would be proportioned between the minor lines. In order to cause this movement of disk 4 at right angles to the movement of disk 3 a tongue 29 is rigidly secured to the disk 3 as shown in Fig. 3 and slidingly fits the guides 30. Stops 31 and 32 are secured to the tongue 29 so as to limit the sliding movement of the guides 30 and the disk 4 to which they are rigidly secured. From this it will be seen that the disk 4 is substantially stationary though allowing a slight movement in a longitudinal and a latitudinal direction. The top disk 4 carrying directional lines 14 and also the major and minor lines 15 and 16 is held against an upward movement by a number of overhanging brackets 17 and acts as a table or supporting board for the paper 13 on which the drawing is to be made. This paper is held in a given position in respect to the protractor disk 2 by a maintaining clip structure 18. This clip structure is provided with a solid plate 19 having spring clips 20 thereon for gripping the paper 13 and a pair of spring members 21 formed with hook sections adapted to extend through any pair of apertures 22. Members 21 are resilient and normally are farther apart than apertures 22, so that in order that these members may be thrust through these apertures they must be somewhat compressed and thereby brought under tension so that they will ordinarily remain

in place while the disk 2 is rotated and the paper 13 moved therewith. In connection with disk 2 it will be seen that there is provided a scale 23, which is shown in Fig. 1 as divided into degrees, but, of course, it is understood that a finer division may be provided if desired including a vernier, without departing from the spirit of the invention. A number of indentations 24 are also provided for use in turning the disk when the device is in use. In order that the disk 2 shall remain in proper position overhanging brackets 25 are provided at different points, preferably at the four points of the compass, one of said brackets carrying a transparent sheet 26, said transparent sheet having on it a black line 27 by which the angle or bearing is set. By this construction and arrangement the paper 13 is revolved with the protractor disk 2 while the plate 4 remains stationary and thereby making it possible to have the bearings always to read to the right and scaling the distance to the right which is very convenient in plotting a given piece of ground. It is, of course, understood that the paper 13 is somewhat transparent, and if desired may be tracing cloth or paper of any kind which will allow the lines on the disk 4 to be seen therethrough.

In using the device an ordinary rule may be used to draw the lines, but whether a rule is used, or whether the lines are drawn free hand they are drawn along the direction of the direction lines 14. The lines if desired may be omitted and only the intersecting parts set off and numbered consecutively so that later connecting lines may be drawn and indicate the proper outline of the piece of ground. After a formal description has been plotted and it is desired to plot an adjacent farm whose meridian is varied, say for example, the first description may be a line whose bearing and distance is N. 30° E. 100 rods and the second description adjoining bordering on the same line is N. 27° E. 100 rods, the protractor is set at N. 27° E. then the paper 13 is changed in the clip or holder 19 until the line N. 30° E. 100 rods coincides with one of the direction lines 14 whereupon all is ready for plotting the second description, in this way the variation has been eliminated.

In arranging the device for use the tracing cloth or paper 13 is placed in the holder 19 and the holder is then placed in any pair of apertures 22 whereby the paper is then held in proper position in respect to the graduations 23 of the protractor disk 2.

What I claim is:

1. A plotting board of the character described comprising a substantially stationary paper supporting disk having latitudinal lines thereon, a protractor disk having graduations thereon and movable with respect to the supporting disk, and means for removably connecting a sheet of paper to said protractor disk so that the paper will rest on the first mentioned disk, but will be movable with the protractor disk.

2. A plotting board of the character described comprising a rotatable protractor disk having graduations thereon adjacent the periphery, a stationary supporting platform arranged within the graduations on the protractor disk, and means connected with the protractor disk for connecting a piece of paper thereto in such a manner as to rest on said platform, and to rotate with the disk.

3. A plotting board comprising a base, a protractor disk rotatably mounted on said base, a supporting disk mounted on said base and provided with connecting means whereby it may move slightly in one direction, a drawing board disk or platform mounted on said second mentioned disk to move in a direction at right angles thereto, and means for connecting a sheet of paper with said protractor disk so that the same will rest on said platform.

4. A plotting board comprising a supporting base, a journal member rigidly secured to said base, a protractor disk mounted on said base and pivotally mounted on said journal member, said disk being formed with graduations adjacent the periphery, means for preventing said disk from leaving said base, a second disk mounted on said journal member so as to move a limited distance in two directions, a drawing platform or disk arranged on top of said second mentioned disk, means for connecting said drawing platform or disk to said second mentioned disk so that it may be moved back and forth at right angles to the movement of said second mentioned disk, said platform or disk being provided with a plurality of lines extending at right angles to each other, and means connected with said protractor disk for holding a piece of paper on said platform while causing the papers to move with the protractor disk.

5. A plotting board comprising a rotatable protractor disk having graduations near the periphery, a substantially stationary drawing board or platform arranged within said graduations and superposed on the protractor disk, said drawing board having longitudinal and latitudinal lines thereon, and a clip connected with said protractor and extending toward said drawing board.

JUNIUS D. McCABE.

Witnesses:
H. P. Dawson,
W. T. Armstrong.