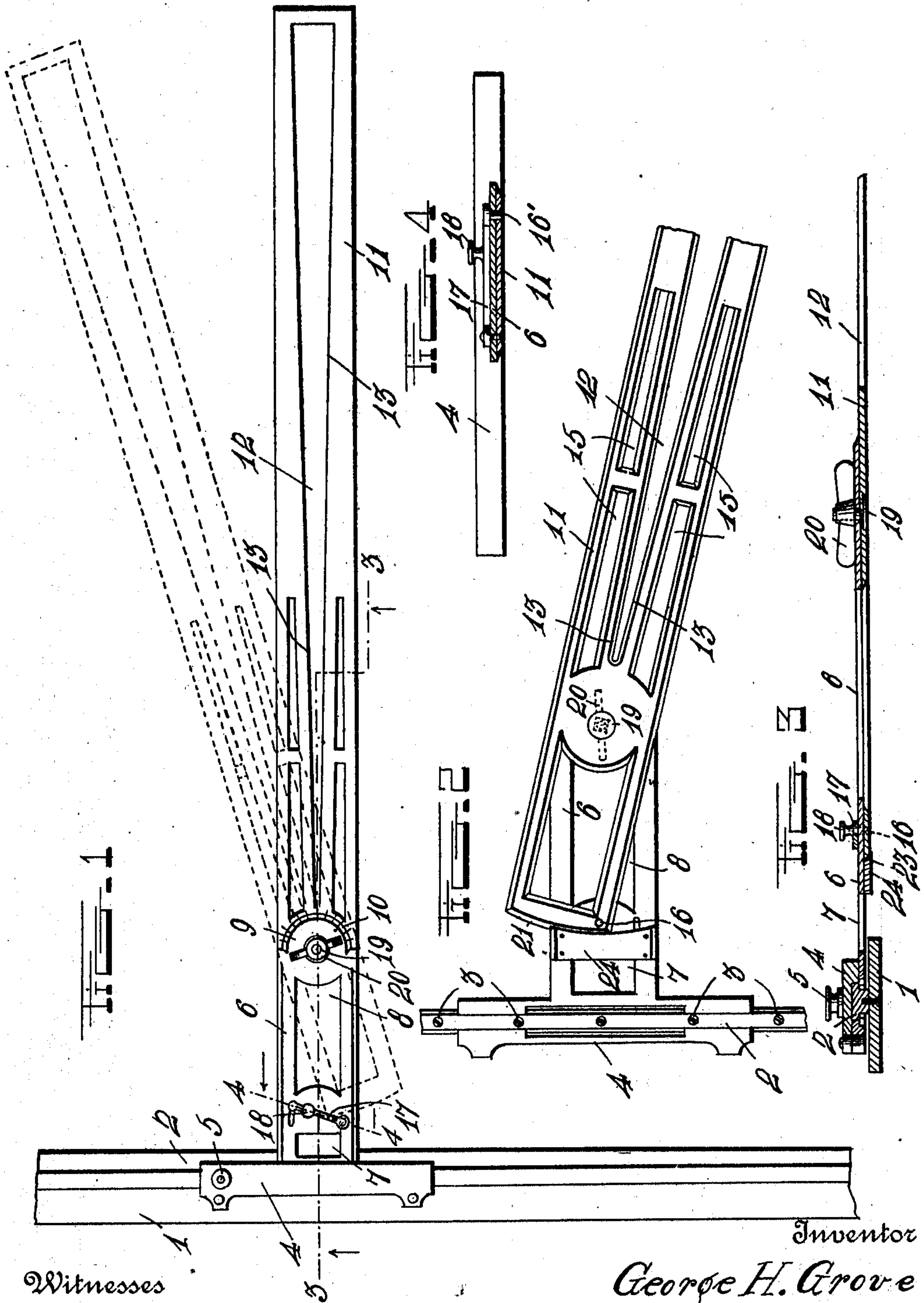


PLOTTER.

970,918.

Patented Sept. 20, 1910.



Witnesses

W. R. Hardy.
Clerk.

Inventor

George H. Grove

by

A. B. Wilson & Co

Attorneys

UNITED STATES PATENT OFFICE.

GEORGE H. GROVE, OF HARRISBURG, PENNSYLVANIA.

PLOTTER.

970,918.

Specification of Letters Patent. Patented Sept. 20, 1910.

Application filed January 10, 1910. Serial No. 537,293.

To all whom it may concern:

Be it known that I, GEORGE H. GROVE, a citizen of the United States, residing at Harrisburg, in the county of Dauphin and State of Pennsylvania, have invented certain new and useful Improvements in Plotters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in plotters.

The primary object of this invention is to provide a plotter by means of which perspective drawings may be projected from geometrical views more quickly and with a greater degree of accuracy than by any other instruments of like character now in vogue.

A second object of the invention is to provide a plotter which may be used as a T-square.

In the accompanying drawings, Figure 1 is a top plan view of a plotter embodying my improvements, the dotted lines indicating the position of the inner end of the marking ruler when swung at an angle to the perpendicular. Fig. 2 is a bottom plan view of a portion of the instrument on an enlarged scale. Fig. 3 is a longitudinal section taken on the line 3—3 of Fig. 1, and Fig. 4 is a transverse section taken on the line 4—4.

Referring to the drawings for a more particular description of the invention, which drawings are for illustrative purposes only and are therefore not drawn to scale, the horizontal ruler 1 is preferably mounted upon the drawing board or table in the manner shown in my Patent, Number 927,526. This, of course, however, is not essential to the operation of my plotter. A track bar 2 is attached to the face of the horizontal ruler 1 by the screws 3, or other equivalent means, and upon this track bar is mounted to slide longitudinally the adjusting slide bar 4. The bottom face of the slide bar is suitably recessed out to receive the track bar 2 and may be provided with a thumb screw 5, whereby the slide bar may be held at any desired adjustment. Projecting from the bottom and inner edge of the slide bar is a bearing extension 6, which is preferably cut or recessed out as at 7 and 8, for lightness and ornamentation. The outer end of the bearing extension is formed

with a semi-circular portion 9, the edge of which is preferably beveled and graduated as at 10, to provide for the adjustment of the marking ruler 11, at the desired angle.

The marking ruler is formed from a single flat strip of metal or other like material which is cut out as at 12, providing the marking edges 13, which diverge from their inner ends toward the outer end of the ruler. The ruler may be further cut out as at 15, for the purpose of lightness and ornamentation, if desired. The inner end of the marking ruler projects somewhat inwardly beyond the semi-circular portion 9 of the bearing extension and is provided near one of its inner corners, with an aperture 16, provided for the reception of the pin or extension 16' of the locking bar 17, which is pivoted upon the face of the bearing extension and is provided with a finger-piece 18, whereby the pin or extension of the locking bar may be engaged with or disengaged from the aperture 16 of the marking ruler. When the locking bar is thus engaged with said aperture of the marking ruler, the latter is held perpendicular with relation to the horizontal ruler 1, and the instrument may be used in the capacity of a T-square. The marking ruler is pivoted to the bearing extension of the slide bar by the pivot screw 19 passing through said ruler and extension and the wing nut 20 screwing on the threaded end of said screw against the face of the semi-circular portion of said bearing extension. By means of the wing screw just referred to, the marking ruler may be held at any angular adjustment during the operation of projecting the plotter from a geometrical view, which operation is greatly facilitated by the diverging marking edges of the ruler. The inner end of the marking ruler is beveled inwardly as at 21, is slightly convex, and slides against the correspondingly beveled edge of the guide recess 23, formed by the cross bar 24.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention, as defined in the appended claims.

What is claimed as new is:—

1. An instrument of the class described, comprising a horizontal ruler, a track bar thereon, a slide bar on the track bar, a bearing extension extending from the slide bar, a marking ruler pivoted intermediate its ends upon the bearing extension provided with a pair of inside marking edges which diverge from the inner ends outwardly pivoted to the extension of the slide bar and locking means comprising a bar pivoted upon the bearing extension and provided with means for holding the marking ruler in a perpendicular position with relation to the horizontal ruler.

2. An instrument of the class described, comprising a horizontal ruler, a track bar thereon, a slide bar mounted on the track

bar, a bearing extension extending from the track bar, a marking ruler pivoted to the bearing extension and provided with a beveled convex inner end, a cross bar extending across the bottom face of the bearing extension and having a recessed inner edge to receive the inner end of the marking ruler, means for locking the marking ruler in alinement with the bearing extension and means for holding the ruler at different angular adjustments.

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

GEORGE H. GROVE.

Witnesses:

MARY HAY,

FRED. C. MILLER.