

(No Model.)

C. D. COWGILL.
PLOTTER FOR TINNERS' USE.

No. 315,388.

Patented Apr. 7, 1885.

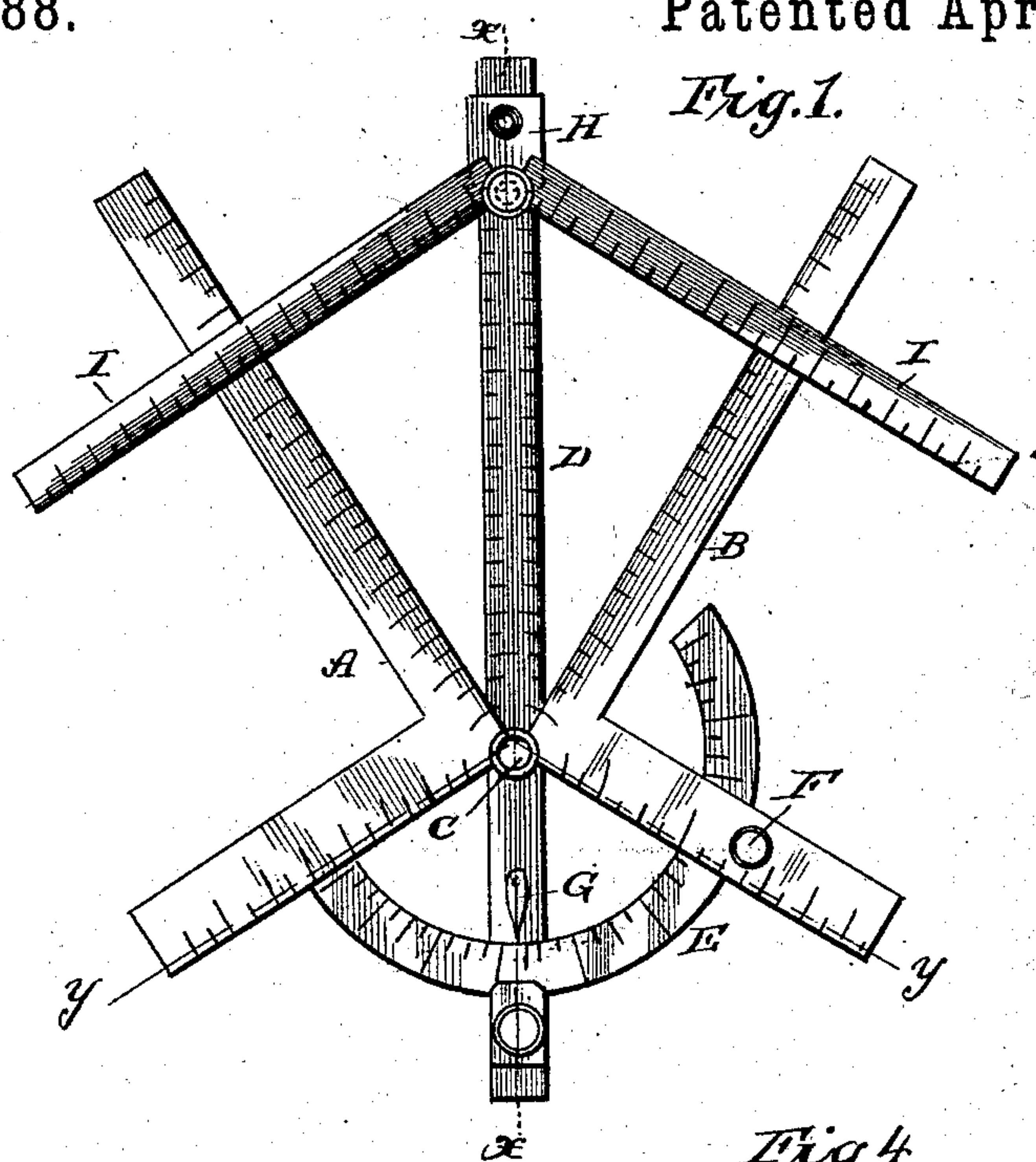


Fig. 1.

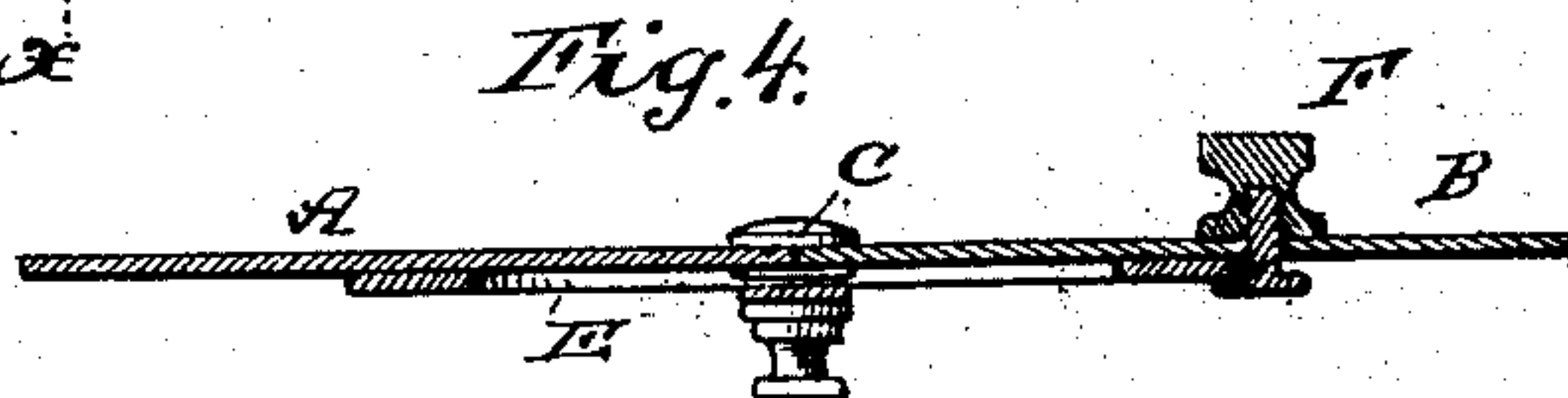
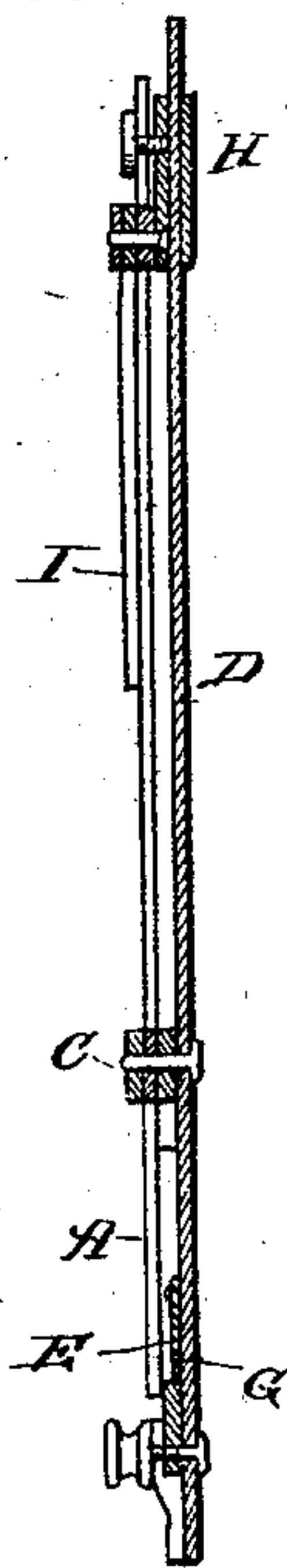


Fig. 4.

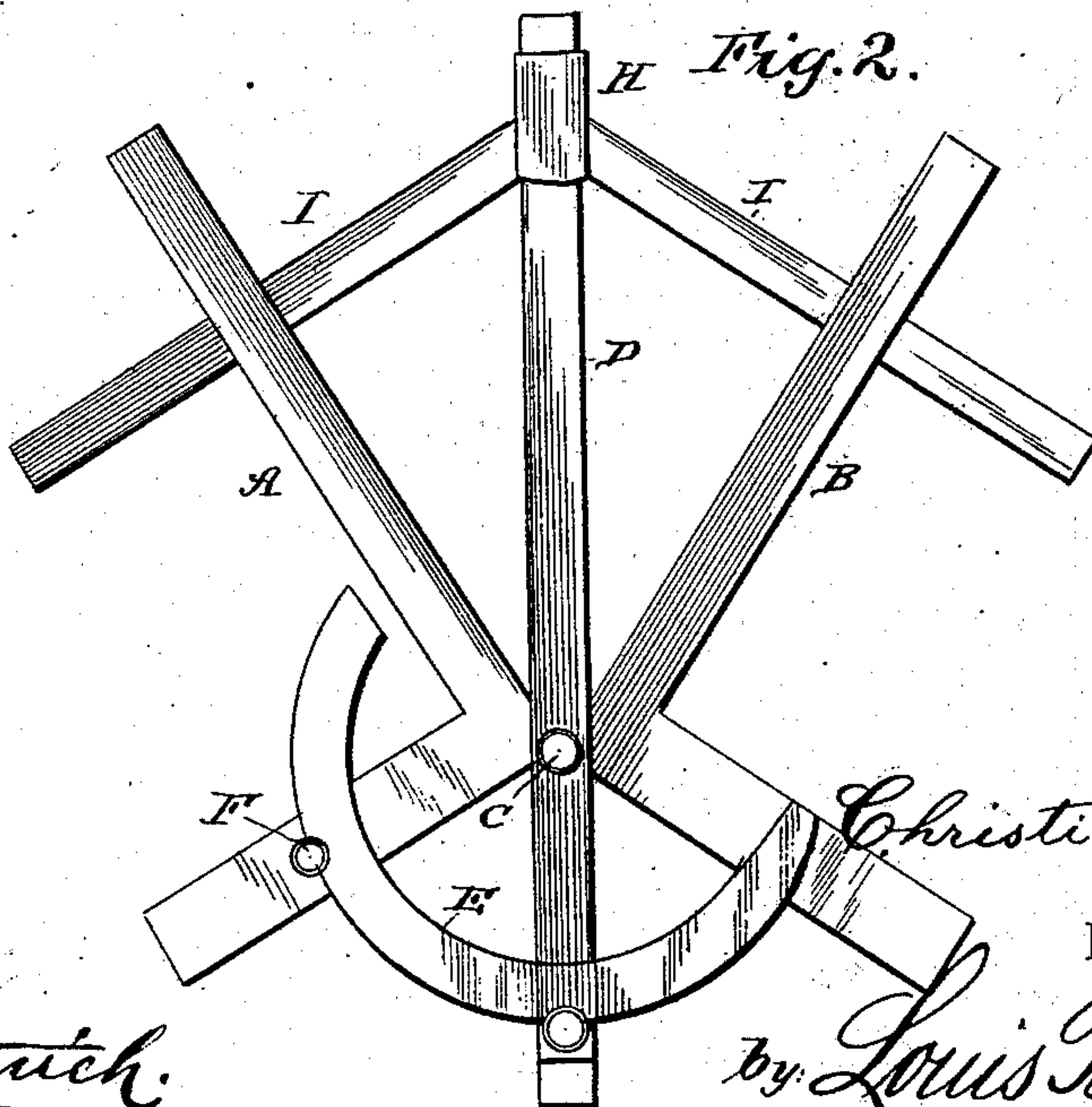


Fig. 2.

WITNESSES:

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UNITED STATES PATENT OFFICE.

CHRISTIAN D. COWGILL, OF TERRE HAUTE, INDIANA.

PLOTTER FOR TINNERS' USE.

SPECIFICATION forming part of Letters Patent No. 315,388, dated April 7, 1885.

Application filed December 10, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN D. COWGILL, a citizen of the United States, and a resident of Terre Haute, in the county of Vigo and State of Indiana, have invented certain new and useful Improvements in Plotters; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to
10 which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a top or plan view of the device complete and in readiness for operation. Fig. 2 is a bottom view of the same. Fig. 3 is a longitudinal vertical sectional view taken on the line $x x$ in Fig. 1, and Fig. 4 is a transverse sectional view taken on the line $y y$ in
20 Fig. 1.

The same letters refer to the same parts in all the figures.

This invention relates to plotters for the use of tinnners and other mechanics; and it has for
25 its object to provide a device of this class which shall possess superior advantages in point of simplicity, durability, and general efficiency.

With these ends in view the invention consists in the improved construction and arrangement of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, A and B designate two right angles or try-squares, connected at their corners or angles by a hinge-joint, C. Pivoted upon the latter is also a movable arm, D, the center of which coincides with the inner edges of the upper arms
40 of the squares A and B.

Secured to the lower or short arm of the square A is a segment-arm, E, concentric with the pivotal point at which the squares A and B are connected, and adapted to be connected
45 adjustably with the lower or short arm of the square B by means of a binding-screw, F, attached to the latter. The segmental arm E is laid out with the degrees of a circle, and the arm D is provided with a hand or pointer, G, registering with such scale. The arm D and

the arms of the squares A and B are to be laid out with measures of any desired denomination.

Fitted upon the arm D of the device is a sliding sleeve, H, provided with a pair of pivoted arms, I I, suitably graded, and adapted
55 to be engaged with the upper or long arms of the squares A and B, as shown in Fig. 1 of the drawings, for purposes which will readily suggest themselves to mechanics skilled in
60 the use of this class of devices.

It will be seen that by adjusting the short arm of the square B upon the segment any angle may be described by the short arms of the squares, and the supplement to this angle is
65 formed by the long arms of the squares, so that the angle between the short arms may be read directly upon the segment, while the angle between the long arms may be read by subtracting the angle between the short arms
70 from one hundred and eighty degrees. The angle between the long arm of square A and the movable arm D is the complement to the angle between the short end of the said movable arm and the short arm of the square. 75

Triangles in which one angle and two sides are given may be constructed by measuring the angle between the long arm of square A and the movable arm D, thereupon measuring
80 off the sides upon the said arms, and sliding the pivoted arm and its sleeve until the ends of the said arm are at the ends of the given sides when the triangle is found, it following that where the instrument is not sufficiently large
85 to make a full-sized triangle a proportionate pattern may be made, from which the full-sized triangle may be made.

Regular polygons may be constructed by constructing the triangles forming the polygon, and all shapes of irregular triangles and quadrangles may be constructed without any calculations or formulæ when the necessary elements are known.

Having thus described my invention, I claim and desire to secure by Letters Patent of the
95 United States—

1. In a plotter, a pair of try-squares connected pivotally at their outer angles, substantially as and for the purpose herein set forth.

2. In a plotter, the combination, with a pair 100

of try-squares connected pivotally at their outer angles, of a central arm mounted upon the same pivot, substantially as and for the purpose herein set forth.

5 3. The combination, with a pair of try-squares connected pivotally at their outer angles, and one of which is provided with a segmental arm, of an arm pivoted upon the common center, and having a pointer or indicator
10 registering with the said segmental arm, substantially as and for the purpose herein set forth.

4. The combination, with a pair of try-squares connected pivotally at their outer angles, of a straight arm pivoted upon the common center, and a slide mounted upon the latter, and having a pair of pivoted arms, substantially as and for the purpose herein shown and specified.

5. In a plotter, the combination of a pair of 20 try-squares connected pivotally at their outer corners, one of said squares being provided with a segmental arm, and the other of said squares being provided with a binding-screw for connecting it to the said segmental arm, a 25 straight arm pivoted upon the common center, and a slide mounted upon the said straight arm, and provided with pivoted arms adapted to register with the long arms of the try-squares, substantially as and for the purpose herein 30 shown and specified.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

CHRISTIAN D. COWGILL.

Witnesses:

BASKIN E. RHOADS,
ELMER F. WILLIAMS.