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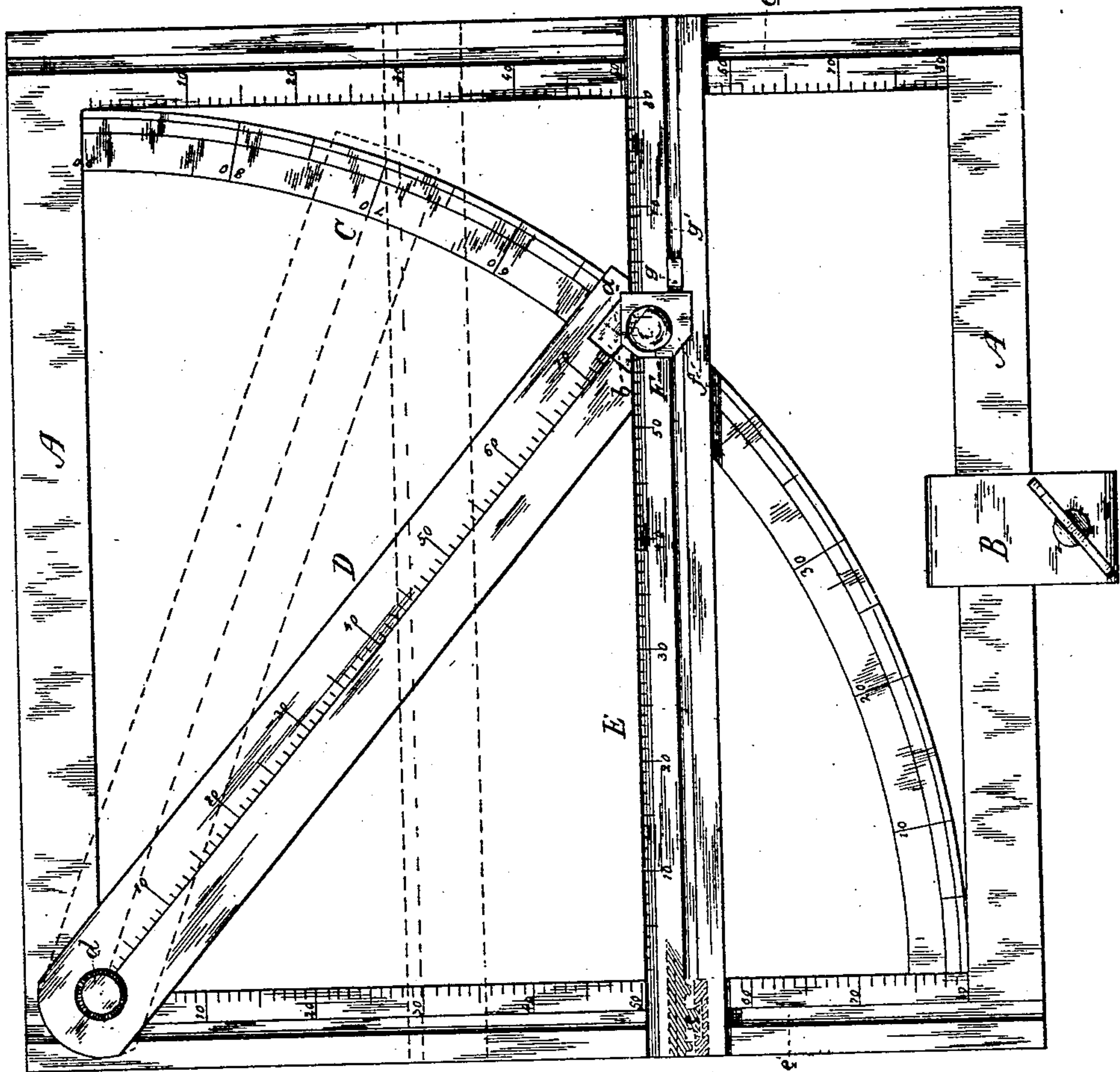
W. D. PATTERSON.

MECHANICAL TRAVERSE TABLE.

No. 318,578.

Patented May 26, 1885.

Fig. 1



Witnesses,
Geo. H. Strong
J. H. House.

Inventor,
W. D. Patterson
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Dewey & Co.
attorneys

(No Model.)

2 Sheets—Sheet 2.

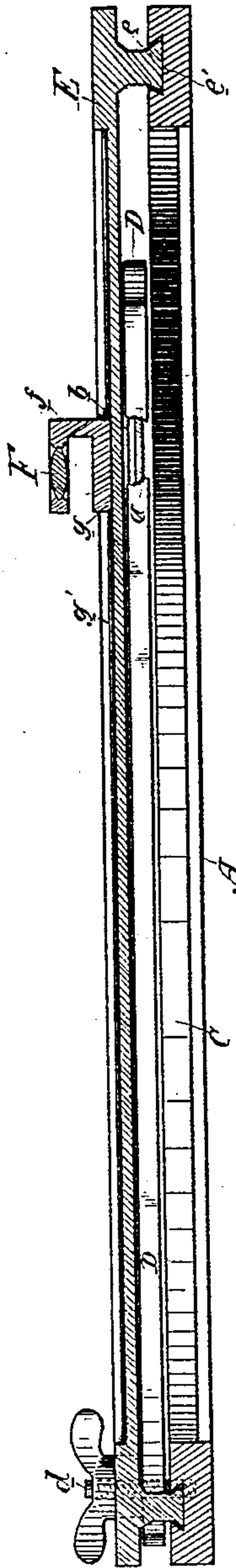
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Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM D. PATTERSON, OF SAVONAS FERRY, BRITISH COLUMBIA,
CANADA.

MECHANICAL TRAVERSE-TABLE.

SPECIFICATION forming part of Letters Patent No. 318,578, dated May 26, 1885.

Application filed August 26, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM D. PATTERSON, of Savonas Ferry, British Columbia, Canada, have invented an Improvement in Mechanical Traverse-Tables; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a new and useful implement for simplifying the checking of traverse-surveys and facilitating the taking out of latitudes and departures corresponding to certain distances, and vice versa. This instrument I call a "mechanical traverse-table," from the nature of its operation and the result it effects.

My invention consists in an arc subtending an angle of ninety degrees and properly graduated or laid off in degrees and fractions thereof, a pivoted swinging arm forming the radius of said arc and properly graduated or laid off in chains and fractions thereof, a line forming the side radius of the arm and laid off in chains and fractions, showing the latitude, and in a slide moving over the radial arm truly at right angles with the side radius of the arc, and laid off in chains and fractions, showing the longitude.

The general construction of these parts and their mechanical arrangement, including the means for setting the radial arm, the means for guiding the slide, the movable or adjustable reading-glass thereon, and the exterior frame of the instrument, are also features of my invention, all of which I shall hereinafter fully describe by reference to the accompanying drawings, in which—

Figure 1 is a plan view of my mechanical traverse-table. Fig. 2 is a sectional elevation of my table.

The main objects of my device are to do away with the tedious book operation and to facilitate the work, which can by the use of the operation be shortened very considerably.

A is a rectangular frame, composed of side and end strips, and having a clamp, B, at its bottom, by which it can readily be secured to the edge of a table.

C is an arc, preferably a part of the frame, and subtending an angle of ninety degrees.

D is an arm forming a radius of said arc.

At one end it is pivoted to the corner of frame A by a thumb-screw, *d*, which also serves to clamp it when adjusted. Its other end plays over the face of the arc, and has an aperture, *a*, made in it, over which extends, longitudinally, a fine wire, *b*, and graduated piece of glass, to enable the arm to be set accurately over the proper division on the arc.

E is a slide-bar having under its ends studs *e*, which fit and slide in grooves *e'* made in the sides of the frame. This slide is set at a true right angle with the sides of the frame. The edge of the slide is beveled on top, as shown.

F is a reading-glass, set by a frame, *f*, on the slide and adapted to be moved back and forth thereon by means of a stud or guide, *g*, moving in a groove, *g'*, on the slide.

The arc C is divided into degrees and fractions thereof. The radial arm D is divided on a central longitudinal line into chains and fractions. The sides of frame A are likewise divided into chains and fractions, and the slide E is also thus divided.

Upon the slide E, I may have suitable verniers for indicating accurately the graduations of the scales, likewise upon the arm and frame. The divisions on the arc represent the angle or bearing of the course, and those on the radial arm the distance of the course in chains. The divisions on the sides of the frame represent the chains in latitude, and those on the slide the chains or distances of courses run to the east or west of north or south.

The use of the instrument is as follows: The course and its angle with the meridian being given, the radial arm D is set on the arc at the proper angle, and the slide is then moved at true right angles with the side radius over the arm until its edge intersects the number of chains on the arm, which indicate the given course.

The latitude and departure may then be read off in chains as follows: The latitude is indicated by the mark upon the sides of the frame, where the edge of the slide touches, and the departure is indicated by the line on the slide at the point of intersection of its edge with the chains, indicating the course on the arm. The drawing in Fig. 1 illustrates the following example: The course reads N 50° W 76 chains.

The latitude or northing is 50 chains, approximately, and the departure or westing 58 chains, approximately.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A mechanical traverse-table consisting of the rectangular frame A, having its side or sides graduated, as described, and provided with longitudinal grooves e' , the arc C within it and graduated, as described, the swinging radial graduated arm D, playing over said arc, said arm having at one end a sight-aperture and at the other a set-screw to fix it where adjusted, and the graduated slide-bar E, having studs e , fitting grooves e' in the sides of the

frame, all arranged and operating substantially as and for the purpose herein described.

2. A mechanical traverse-table consisting of the frame A, having graduated sides, the graduated arc C, the pivoted swinging graduated radial arm D, and the graduated slide-bar E, traversing the frame at right angles, and having the adjustable reading-glass F upon it, substantially as herein described.

In witness whereof I have hereunto set my hand.

WM. D. PATTERSON.

Witnesses:

C. M. HUFF,
GEO. DODD.