

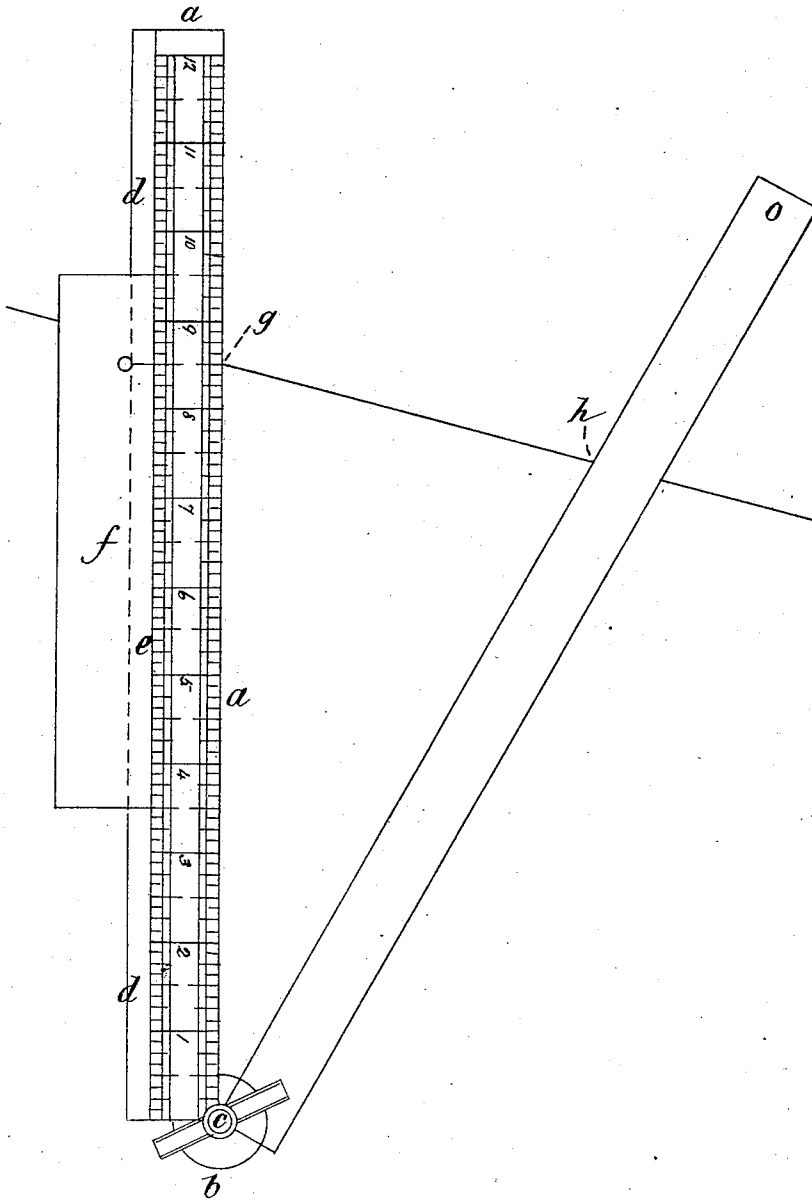
(No Model.)

P. S. MARKS.

DRAFTSMAN'S DIVIDING INSTRUMENT.

No. 310,450.

Patented Jan. 6, 1885.



Witnesses.

George W. Rea

Robert Everett.

Inventor.

Phoebe S. Marks.

By James L. Norris.

Atty.

UNITED STATES PATENT OFFICE.

PHOEBE SARAH MARKS, OF 13 I CORNWALL RESIDENCES, REGENTS PARK,
ST. MARYLEBONE, COUNTY OF MIDDLESEX, ENGLAND.

DRAFTSMAN'S DIVIDING-INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 310,450, dated January 6, 1885.

Application filed May 3, 1884. (No model.) Patented in England March 25, 1884, No. 5,443.

To all whom it may concern:

Be it known that I, PHOEBE SARAH MARKS, a subject of the Queen of Great Britain, residing at 13 I Cornwall Residences, Regents Park, in the parish of St. Marylebone, in the county of Middlesex, England, spinster, have invented certain new and useful Improvements in Mathematical Dividing-Instruments, (for which I have obtained a patent in Great Britain, No. 5,443, bearing date March 25, 1884,) of which the following is a specification.

It is often desired to divide a given line or space into a certain number of equal divisions requiring calculation for the size of the spaces and delicate and exact manipulation of a graduated rule to then lay off the divisions or spaces.

The object of my invention is to furnish a simple and effective device for accomplishing this result requiring no calculation, yet easy of manipulation and reliable in operation.

To this end it consists in the devices more particularly hereinafter described and claimed, which are also illustrated in the drawing, which shows a top view of the device embodying the invention.

f is a base-piece, which, when set for the required divisions, remains stationary. Attached to it by an undercut tongue and groove, $d e$, is the graduated or dividing limb a , f and a being permitted by the undercut groove and tongue to move longitudinally relatively to each other, but being prevented thereby from lateral separation. Any series of graduations or any desired numbers of series may be marked upon a in any of the well-known methods.

Pivoted to a by the hinge b is a limb, O , which in use is the marking or ruling limb, the hinge permitting their motion to or from each other as radii of a circle whose center is the hinge-pivot. In order to retain them at any assigned or desired angle, a thumb-screw, c , may be used; or the hinge may be made so friction-tight as not to be readily disturbed, and to be movable only on the application of

force to the limbs a and O . If desired, this limb O may also be graduated.

Upon the base f an initial or zero point is marked, as shown. If desired, it may also carry division or graduation marks of any desired character in addition to this initial or zero mark. It should also be provided upon its under side with pins or teeth projecting therefrom very slightly, in order to hold it firmly upon the material to be spaced off.

The operation of the device is as follows: Suppose it be desired to lay off the space $g h$ into seventeen equal divisions, a and f are slid until the zero or initial mark on f coincides with the division for seventeen on a . As in this drawing the numbered divisions are somewhat large, this point would be at $8\frac{1}{2}$ on a . The limb a is then placed so that the mark for $8\frac{1}{2}$ on a coincides with the initial mark on f . The limb a is then placed so that the mark for $8\frac{1}{2}$ also coincides with the point g . The limbs O and a are now separated until the inner edge of O coincides with the point h . f is now held firmly upon the material and a is moved therein until the next graduation, 8 , coincides with the zero or initial mark on a , when a mark or line is made upon the inner edge of O , which has moved with a . This is repeated with each one of the seventeen graduations, the result being that the space $g h$ is divided without calculation or skilled work into seventeen equal spaces.

The peculiar construction and relation of the parts enable this to be done with great nicety and in a speedy manner. It is obvious it may be used in other manners, though the method of operation set forth is a simple and efficient one.

Having thus described my invention, what I claim is—

A dividing and ruling instrument consisting of the combination of a base-piece, f , adapted to be fixedly held upon the material to be divided or marked, and provided with a zero or indicating point, a graduated limb, a , secured thereto by a tongue and groove, permitting longitudinal movement of the two

relatively to each other, and a limb or ruler, O, pivotally attached to the limb *a* and adapted to be moved therewith as the latter is slid in the fixed base-piece *f*, whereby the
5 limb or ruler O may be moved suitable distances to divide a limb or space into equal divisions by the conjoint action of the graduated limb, fixed base-piece, and its zero or indicating point, substantially as described.

In testimony whereof I have hereto set my hand this 3d day of April, 1884.

PHOEBE SARAH MARKS.

Witnesses:

GEO. C. DOWNING,
8 *Quality Ct., London.*

JOHN DEAN,
17 *Gracchurch Street, London.*