I. KINNEY.

Curve Scribers.

No. 146,189. Patented Jan. 6, 1874.

Fig. 1.

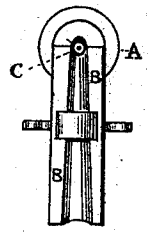
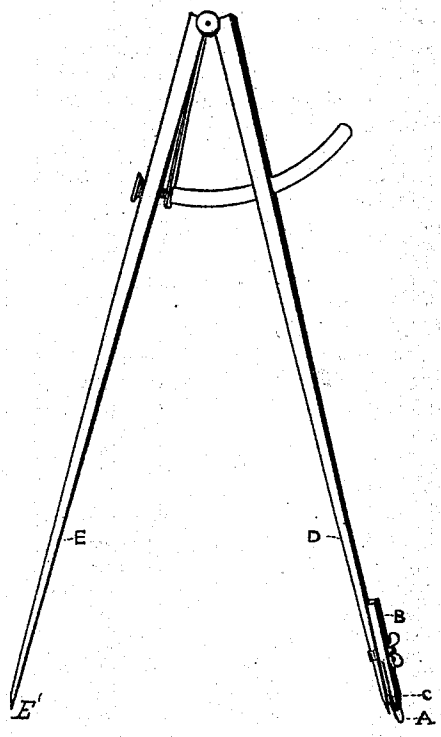


Fig. 2.



WITNESSES.

John B. Smyth.
Henry Reech.

INVENTOR.

Israel Kinney.

AM. PHOTO-LITHOGRAPHIC Co. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

ISRAEL KINNEY, OF LONDON, CANADA.

IMPROVEMENT IN CURVE-SCRIBERS.

Specification forming part of Letters Patent No. **146,189**, dated January 6, 1874; application filed October 14, 1873.

To all whom it may concern:

Be it known that I, ISRAEL KINNEY, of the city of London, in the county of Middlesex, Province of Ontario, Canada, have invented an Instrument for Designing and Cutting Scrolls, of which the following is a specification:

My invention is a new and useful article of manufacture for marking or cutting scrolls and curved lines more accurately and expeditiously than has heretofore been done by the use of the compasses or other instrument; and consists in causing a point, while revolving round a center, to gradually expand or contract by means of a disk or roller attached thereto, and having the axis at an angle more or less acute to the said center, round which it is intended to make the scroll or curved line.

Figure 1 in accompanying drawings is a view of an instrument embodying my invention. Fig. 2 is another view of the same attached to the limb of a pair of compasses.

A disk or roller, of metal or other suitable material, A, is attached to a stay, B, by an axle, C. This stay is fixed to one of the limbs, D, of a pair of compasses, and adjusted so that the axis of the disk is presented at an angle, more or less acute, to the point of the other limb, E′, or center, round which the scroll or curved line is desired to be made. The limb D is allowed to work freely, and on turning the compasses round, while a slight pressure is used, the periphery of the disk A will necessarily follow the direction of the axis, and, if stationary, will follow the direction of its edge and cause the limb D to expand or contract; and the degree of this expansion or contraction will depend upon the angle at which the periphery of the disk is set to the center, round which it moves.

The sharp edge of this disk will, in general, be found to leave a sufficient mark on the surfaces of wood, metal, or leather on which it is used; or, on sufficient pressure being applied to it, it can be made to cut quite through thin substances for the purpose of making patterns, &c. When it is used on paper, a pencil or pen point attached to the same limb of the compasses will accurately follow the disk and mark the curve or scroll it describes.

When the instrument is used for large or heavy work, or for cutting a grooved scroll into substances, it may be attached to one end of a sliding bar or tram.

I claim as my invention—

The disk or roller A, supported in the adjustable holder B, in combination with the leg D of a pair of compasses or their equivalent, constructed to operate as hereinbefore shown and described.

London, October 6, 1873.

ISRAEL KINNEY.

Witnesses:

JOHN B. SMYTH,

HENRY BEECH.