

(No Model.)

A. T. LUNDQVIST.
Ellipsograph.

No. 235,543.

Patented Dec. 14, 1880.

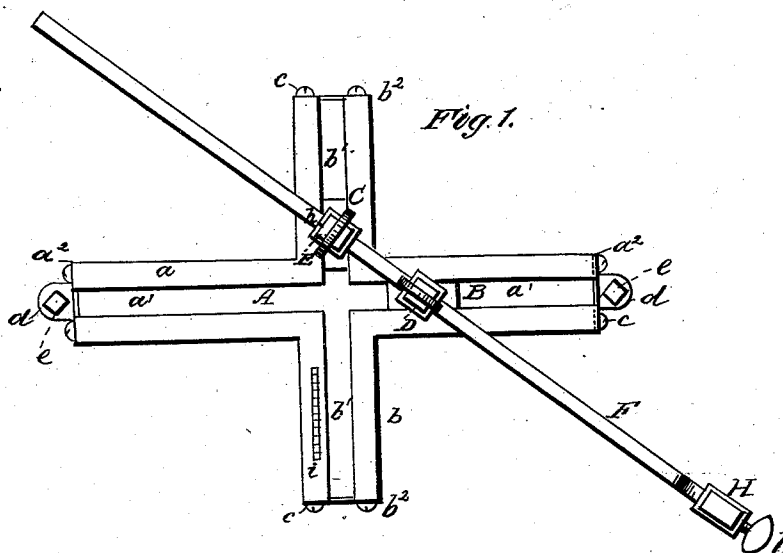
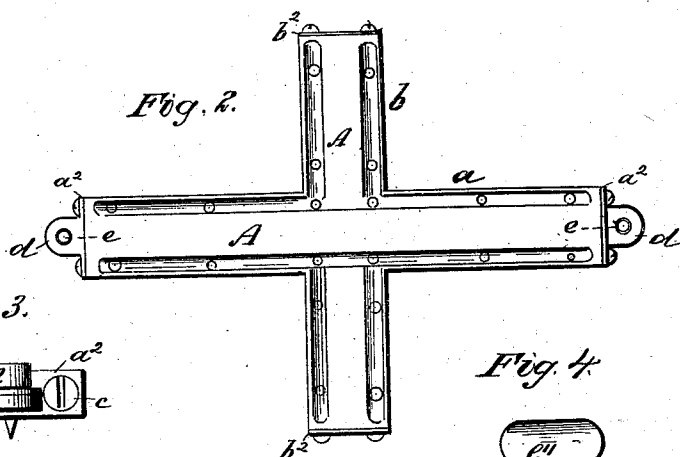


Fig. 3.

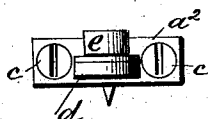


Fig. 4.

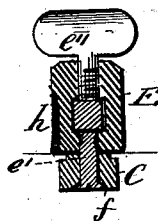


Fig. 5.

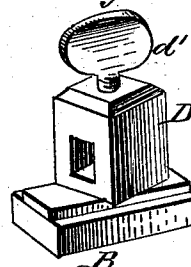
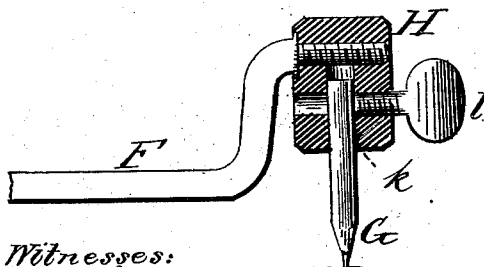


Fig. 6.



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UNITED STATES PATENT OFFICE.

ALEXIUS T. LUNDQVIST, OF BROOKLYN, NEW YORK.

ELLIPSOGRAPH.

SPECIFICATION forming part of Letters Patent No. 235,543, dated December 14, 1880.

Application filed July 24, 1880. (No model.)

To all whom it may concern:

Be it known that I, ALEXIUS T. LUNDQVIST, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Ellipsographs; 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 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 plan or top view. Fig. 2 is a plan of the under side of the slotted cross-base or trammel-plate. Fig. 3 is an end view of the same. Fig. 4 is a vertical section through one of the sliding blocks, with its swiveled head and set-screw. Fig. 5 is a perspective view of the same; and Fig. 6 is a side elevation, partly in section, of the goose-neck rod, with its head for holding the cutting or marking point.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to instruments for marking or cutting out ovals or ellipses, so-called "ellipsographs" or "trammels;" and it consists in the construction and combination of parts, as hereinafter described, and particularly pointed out in the claim.

In the annexed drawings, A represents the cross-plate or trammel-plate, which may be cast in one or more pieces, in the shape of a cross, preferably with one long arm, *a*, and a short arm, *b*, intersecting each other at right angles. These arms are grooved to form ways *a'* *b'* for the sliding blocks B C, and each one is provided with an end or stop plate, (denoted respectively by *a² a² b² b²*), secured in place by screws *c*. The two end plates of the long arm of the cross *a² a²* are provided with projecting screw-threaded ears *d*, through which work the pointed screws *e*, each one of which is provided with a square head, by turning which

(with a small key or wrench) the point of the screw may be "set" to project a suitable distance below the base-plate.

The sliding blocks B C carry swiveled heads D E, the taps *e'* of which are inserted through countersunk apertures *f* in their respective blocks, so as to move easily in either direction. The heads D E are perforated transversely to their taps for the insertion of the compass-bar F, which may be adjusted in respect of the two heads D E by means of set-screws *d'* *e''*. That one of the two heads E which slides in the groove of the short arm *b* has a mark, *h*, on one side, by means of which it may be adjusted to a scale, *i*, which is marked off on one of the short arms, for the purpose of determining the relative lengths of the short and the long axis of the ellipse.

If desired, another bar may be coupled to bar F when it is desired to draw, mark out, or cut ovals of large size, in which case the marking-bar F is brought outermost, as that carries the pencil or marking or cutting point G.

By reference to Fig. 6 of the sheet of drawings it will be seen that the head H of bar F is made with a bore or recess, *k*, to receive the pencil, marker, or cutter G, which is held in place within the bore by the set-screw *l*, so that its point may readily be adjusted with reference to the surface to be marked or cut.

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

The combination, with the slotted trammel-plate A of an ellipsograph, of the stop-plates *a² a²*, having screw-threaded ears *d* and pointed set-screws *e*, as set forth.

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

ALEXIUS THEODOR LUNDQVIST. [L. s.]

Witnesses:

C. J. LOBYAM,
E. D. JENNINGS.