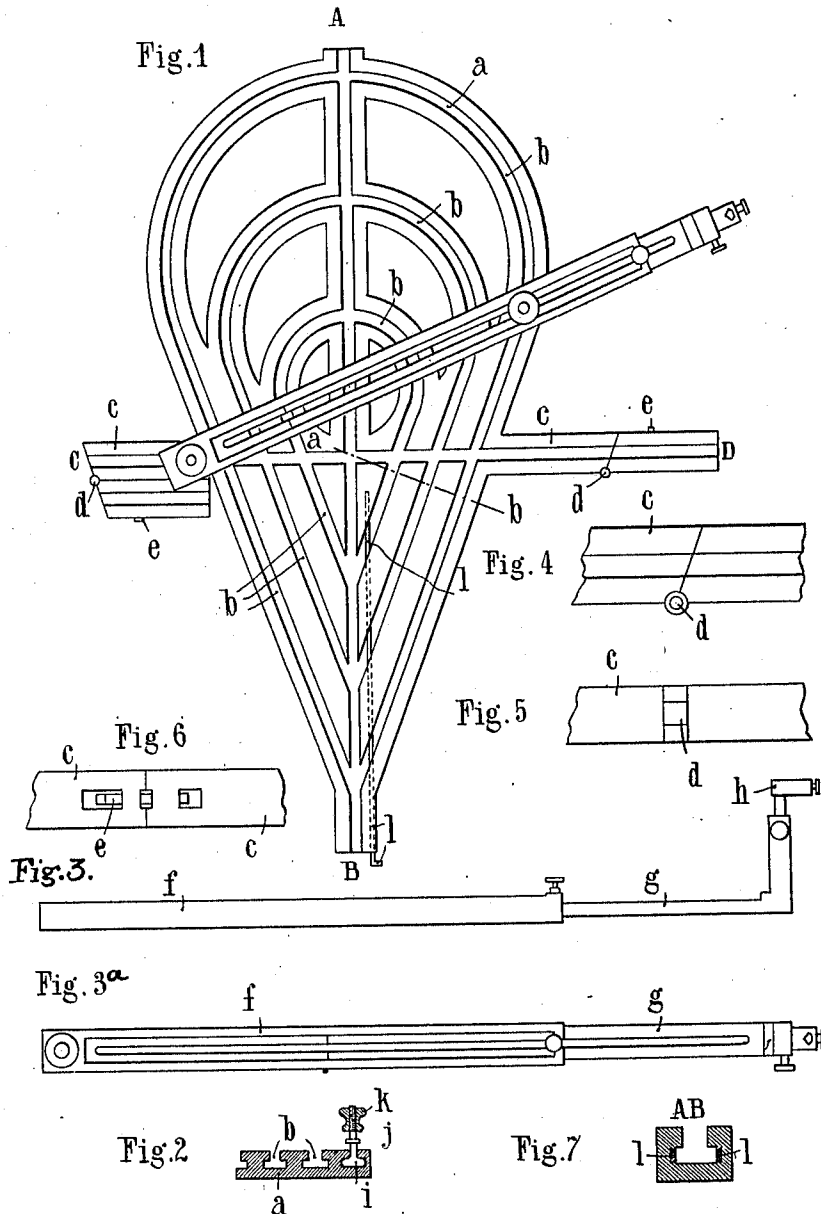


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 CURVE SCRIBER.  
 APPLICATION FILED JUNE 21, 1909.

1,004,157.

Patented Sept. 26, 1911.



witnesses  
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# UNITED STATES PATENT OFFICE.

LODOVICO CARLO FRANCESCO FERRI, OF PARIS, FRANCE.

## CURVE-SCRIBER.

1,004,157.

Specification of Letters Patent.

Patented Sept. 26, 1911.

Application filed June 21, 1909. Serial No. 503,396.

*To all whom it may concern:*

Be it known that I, LODOVICO CARLO FRANCESCO FERRI, a subject of Italy, residing at 27 Rue de Tolbiac, Paris, France, have invented a new Curve-Scriber.

Figure 1 is a plan view of my compass. Fig. 2 is a sectional view on line *a-b* of Fig. 1. Fig. 3 is a side elevation of the movable rule and Fig. 3<sup>a</sup> is a plan view thereof. Fig. 4 is an enlarged plan view of the jointed projection and Fig. 5 is a side view thereof. Fig. 6 is a top view of this jointed portion, showing the locking bolt. Fig. 7 is an enlarged section through one of the grooved portions of the plate with the guide slides in position.

The compass for tracing an oval, an ellipse, or a circle forming the subject-matter of this invention consists substantially of:

1. A wooden or metal plate or frame *a*, in which any number of grooves *b* are formed, the section of which is shown in Fig. 2. These grooves are formed by an arc of a circle the center of which is situated on the axis *A B* and by the tangent to the circle starting from a point situated beyond the common tangent *C D* at a distance from it equal to the diameter of the circle reduced by  $\frac{1}{10}$ th. The axes *A B* and *C D* likewise serve as grooves. The grooved projecting parts *c* are jointed in the middle by means of a hinge (Figs. 4 and 5) and may be folded as indicated on the left in Fig. 1 to afford a passage for a pencil or drawing-pen while the tracing is being effected, or to facilitate the introduction of the apparatus into the compass-box. A bolt *e* clearly shown in Fig. 6 enables the groove to be set straight and made rigid when this is necessary.

2. A rule *f* (Fig. 3) made of wood or of metal and which can be lengthened or shortened at will for the purpose of tracing curves of various sizes. This rule is composed of two pieces the one *f* carrying a detachable slide being hollow. Lengthwise in the bottom a groove is formed which allows of the displacement of a second slide *g*. This part fits into the former and carries at its end a head *h* with a lengthening bar intended for receiving the pencil holder or the drawing-pen of an ordinary compass. This arrangement enables pencils or draw-

ing pens of variable sizes to be used. The slides are each formed by a flat head *i* which fits in the grooves *b* and moves therein. A screw rod *j* is fixed in the middle of this head and receives the rule to which it is fixed by a nut *k* (Fig. 2).

The compass illustrated in the drawing has three grooves. Each groove serves for tracing an oval of any determined size comprised between two limits. In order to trace the oval: the slide at the end of the rule being placed in the groove *C D* the other slide is adjusted at a distance equal to the diameter of the circle of the groove which it is desired to employ. The pencil or the drawing-pen being in position, all that is necessary for forming the curve is to turn the rule.

The ellipse is formed by the moving of the slides in the grooves *A B* and *C D*. In order to prevent the slide *i* from engaging in the oblique grooves, two thin plates *l* are placed along the groove *A B* and force the slide to follow that groove. Fig. 1 shows one of these plates in position. Fig. 7 illustrates these plates in section and their positions. By fixing the slide at the end of the rule at the place where the grooves *A B* and *C D* intersect each other, the circumference of a circle may likewise be traced.

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

1. In a compass for tracing ovals, ellipses or circles, a plate provided with a series of grooves, each formed by an arc of a circle terminating in straight lines which meet in a line passing through the centers from which said arcs are struck, and also with grooves crossing each other and the curved grooves; a projection at each side of the plate in line with one of the grooves last named, the extremities of said projections being hinged and capable of being folded against the projections; a removable rule adapted to be secured at one end to the plate and a movable headed rod adjustably secured to said rule and adapted to travel in any one of the grooves; an extension piece slidably adjustable in said rule and a marker adjustably secured in said extension piece.
2. In a compass for describing ovals, el-

lipses or circles, a plate formed with a plurality of curved grooves terminating in straight grooves and also having intersecting grooves; folding extensions at both sides  
5 of the plate; an adjustable rule pivotally secured to said plate; a sliding member on said rule; an adjustable pencil carrying head secured to said sliding member and plates

adapted to close the grooves in the plate when desired.

In testimony whereof I affix my signature  
10 in presence of two witnesses.

LODOVICO CARLO FRANCESCO FERRI.

Witnesses:

DEAN B. MASON,  
SECTOR MATRAY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,  
Washington, D. C."