(No Model.)

T. G. R. CHRISTIAN.

DRAFTSMAN'S TOOL.

No. 314,316. Patented Mar. 24, 1885.

Fig. 2.

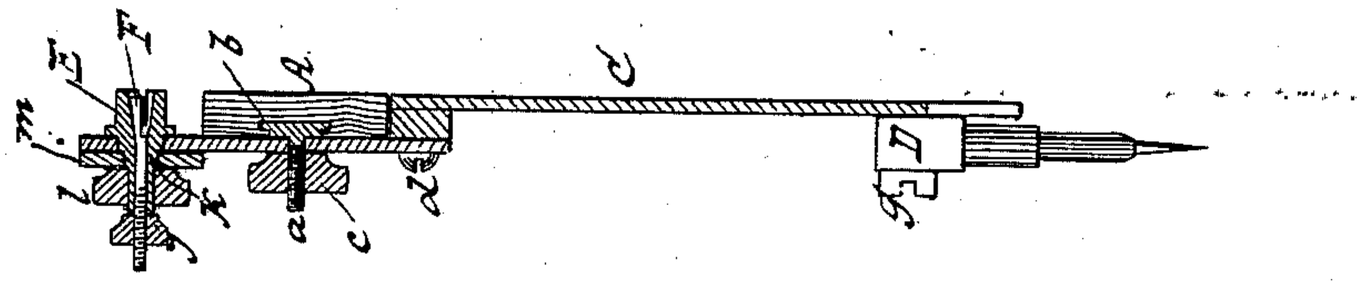

Fig. 3

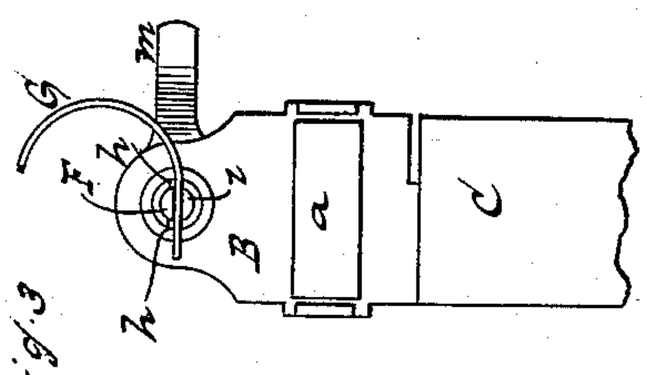

Fig. 1.

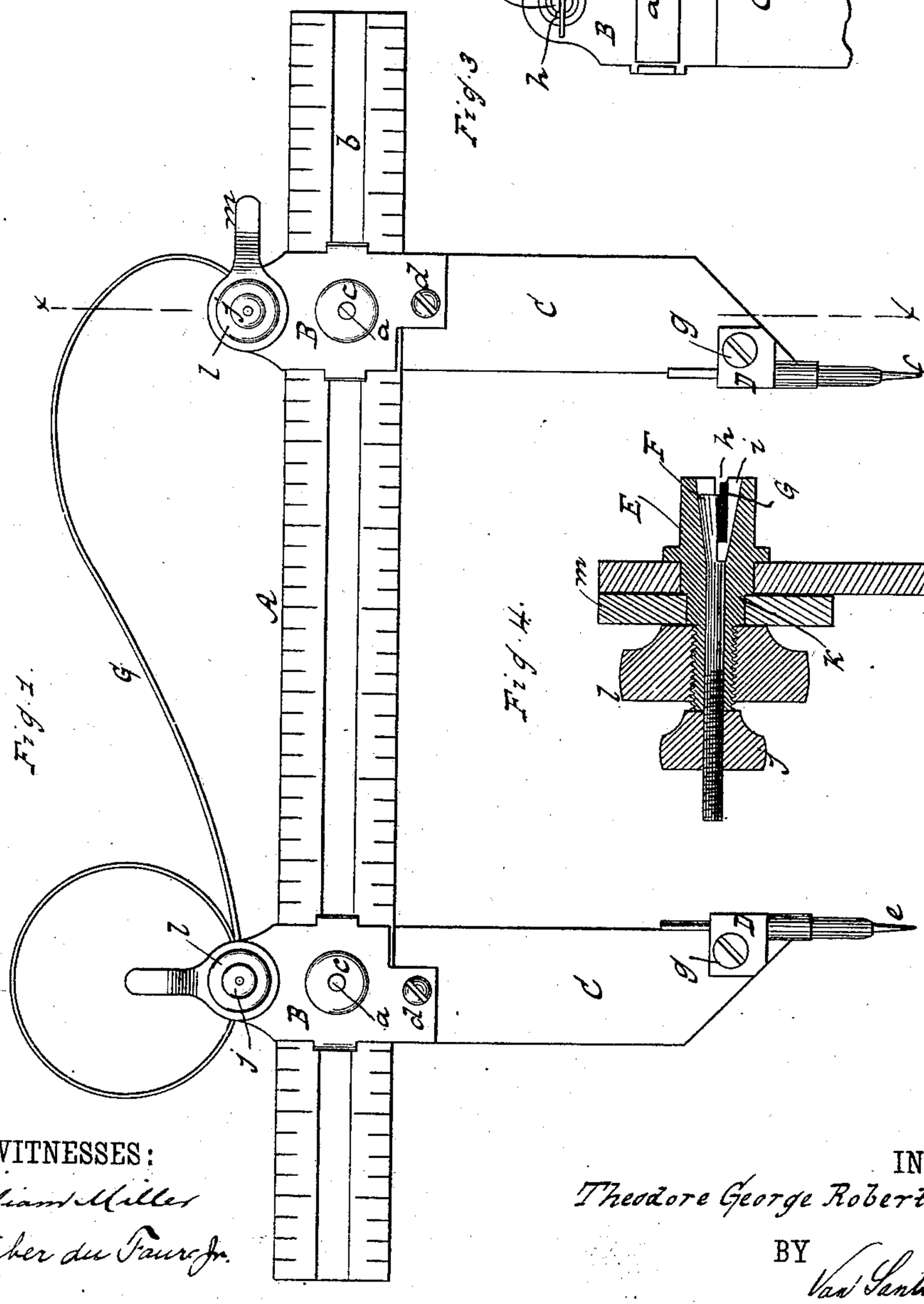

Fig. 4.

WITNESSES:

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DRAFTSMAN'S TOOL.

SPECIFICATION forming part of Letters Patent No. 314,316, dated March 24, 1885.

Application filed July 31, 1884. (No model.)

To all whom it may concern:

Be it known that I, THEODORE GEORGE ROBERT CHRISTIAN, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Draftsmen's Tools, of which the following is a specification.

This invention relates to a tool which is composed of a rod having a scale marked on its face, two slides extending at right angles from the slide, and sockets attached to the slides—one for the reception of a needle-point and the other for the reception of a pen or pencil. With the slides is combined a flexible strip of steel or other suitable material, which is secured in spindles fitted into the slides, and adapted to be turned therein, so that by turning these spindles the flexible strip can be made to form curves of a great variety of form to assist the draftsman in drawing curviform lines.

This invention is illustrated in the accompanying drawings, in which Figure 1 represents a face view. Fig. 2 is a transverse vertical section in the plane *x x*, Fig. 1. Fig. 3 is a rear view of one of the slides. Fig. 4 is an enlarged sectional view of one of the spindles for retaining the flexible strip.

Similar letters indicate corresponding parts.

In the drawings, the letter A designates a rod, which may be made of wood or any other suitable material, and which is marked on its face with a scale of inches or centimeters and fractions thereof, or with any other scale. With this rod are combined two slides, B B, which are provided with set-screws *a a*, so that they can be fastened on the rod in the desired position. In the example shown in the drawings the rod A is provided with a T-shaped groove, *b*, and the set-screws *a a* are made with T-shaped heads, which fit the groove *b*, and with nuts *c*, so that by screwing up the nuts the slides are fastened in position. In this case the slides can be made of flat plates, which is of advantage, as will be presently explained.

From the lower ends of the slides extend legs C C, which are fastened by means of set-screws *d d*, and the rear faces of which are flush with the rear surface of the rod A, so that when the rod is placed upon a sheet of paper the legs will also rest thereon.

To each of the legs is fastened a socket, D, one of which is intended to receive a needle-point, *e*, and the other a pen or pencil, *f*, said sockets being so adjusted that the needle-point and the pencil, when secured in the sockets, are exactly in line with the inner edges of the slides, so that when the slides are adjusted on the rod A the distance between the needle-point and the pencil corresponds exactly with the distance between the slides. If the slides are adjusted at a distance of five inches from each other, the needle-point and the pencil are in position to draw a circle of ten inches diameter.

The sockets D D are fastened to the legs by screws *g g*, so that they can be readily removed if the needle-point and the pencil are not required.

The inner as well as the outer edges of the legs C C can be used to draw parallel lines, the distance of which can be gaged by moving the slides on the scale.

In the top of each of the slides B B is fitted a spindle, E, which is bored out to receive the clamping screw-wedge F. (Best seen in Fig. 4.) The inner end of the spindles is provided with a transverse slot, *h*, and with a tapering socket, *i*, in which works the wedge-shaped end of the clamping screw-wedge F. The shank of this wedge extends out through the front end of the spindle, and is provided with a nut, *j*. When this nut is partly unscrewed, the clamping-wedge can be pushed in, so that the end of the flexible strip G can be introduced into the slot *h* of the spindle E, and, by tightening up the nut *j*, the end of the strip is clamped between the flat surface of the wedge and the edge of the slot.

The spindle E is provided with a square part, *k*, and with a clamping-nut, *l*. On the square *k* is fitted a lever, *m*. When the nut *l* is released, the spindle can be turned round by means of the lever *m*.

In order to adjust the flexible strip G for different curves, its ends are secured in the spindles E of the slides B B, and by turning the spindles and adjusting the slides on the rod A the strip is brought to assume different curves, and it can readily be adjusted to any desired curve, so that when it is fastened in this position, by securing the slides on the rod and the spindles in the slides, the draftsman is enabled to draw the required curve by placing the tool upon a sheet of paper and following

the contours of the flexible strip with a pen or pencil.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, substantially as herein-before described, of the graduated rod, the two slides movable on the rod, and a flexible strip adjustably connected with the two slides for drawing curves, substantially as described.

2. The combination, substantially as herein before described, of the rod having a scale marked on it, two slides fitted on the rod, legs secured to the slides in a plane with the rear surface of the rod, and the sockets attached to said legs—one for the reception of the needle-point and the other for the reception of a pen or pencil.

3. The combination, substantially as herein-before described, of the rod, the slides fitted on the rod, the spindles fitted into the slides and adapted to be turned therein, and the flexible strip of steel or other suitable material secured in the spindles.

4. The combination, substantially as herein-before described, of the rod, the slides fitted on the rod, the spindles fitted into the slides and adapted to be turned therein, the flexible strip of steel or other suitable material, and the clamping-wedges for securing the flexible strip in the spindles.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

THEODORE GEORGE R. CHRISTIAN. [L. S.]

Witnesses:
W. HAUFF,
E. F. KASTENHUBER.