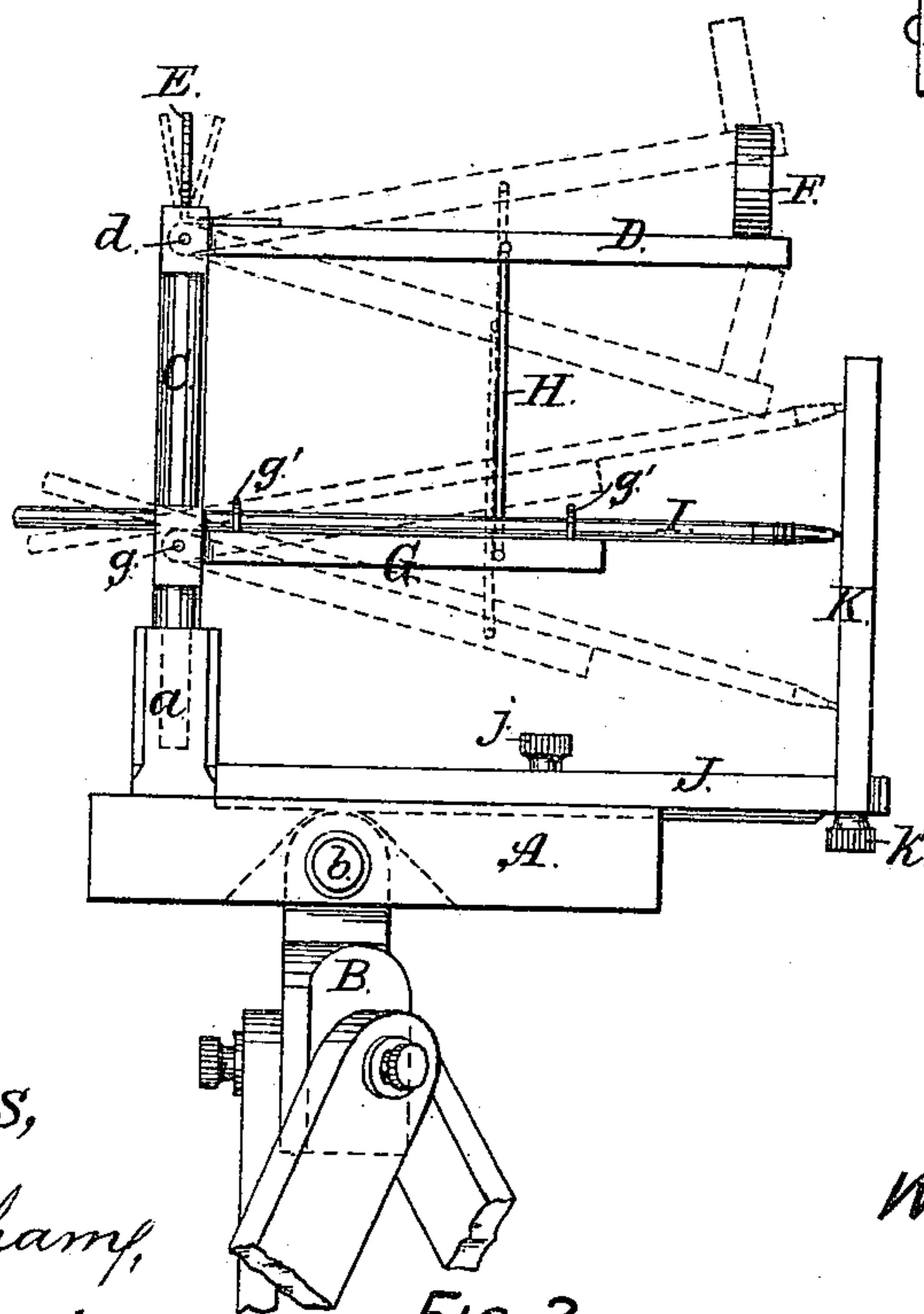
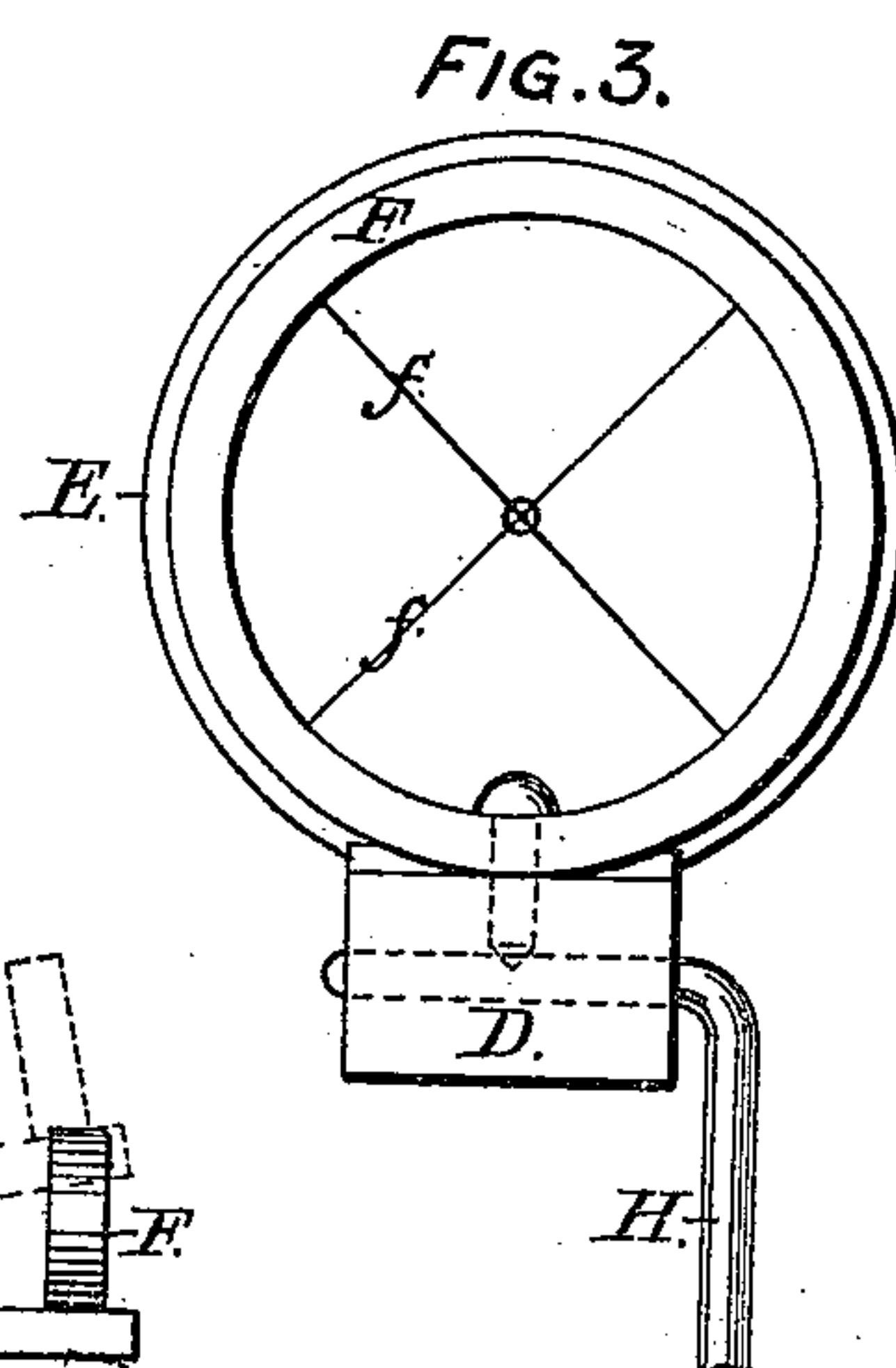
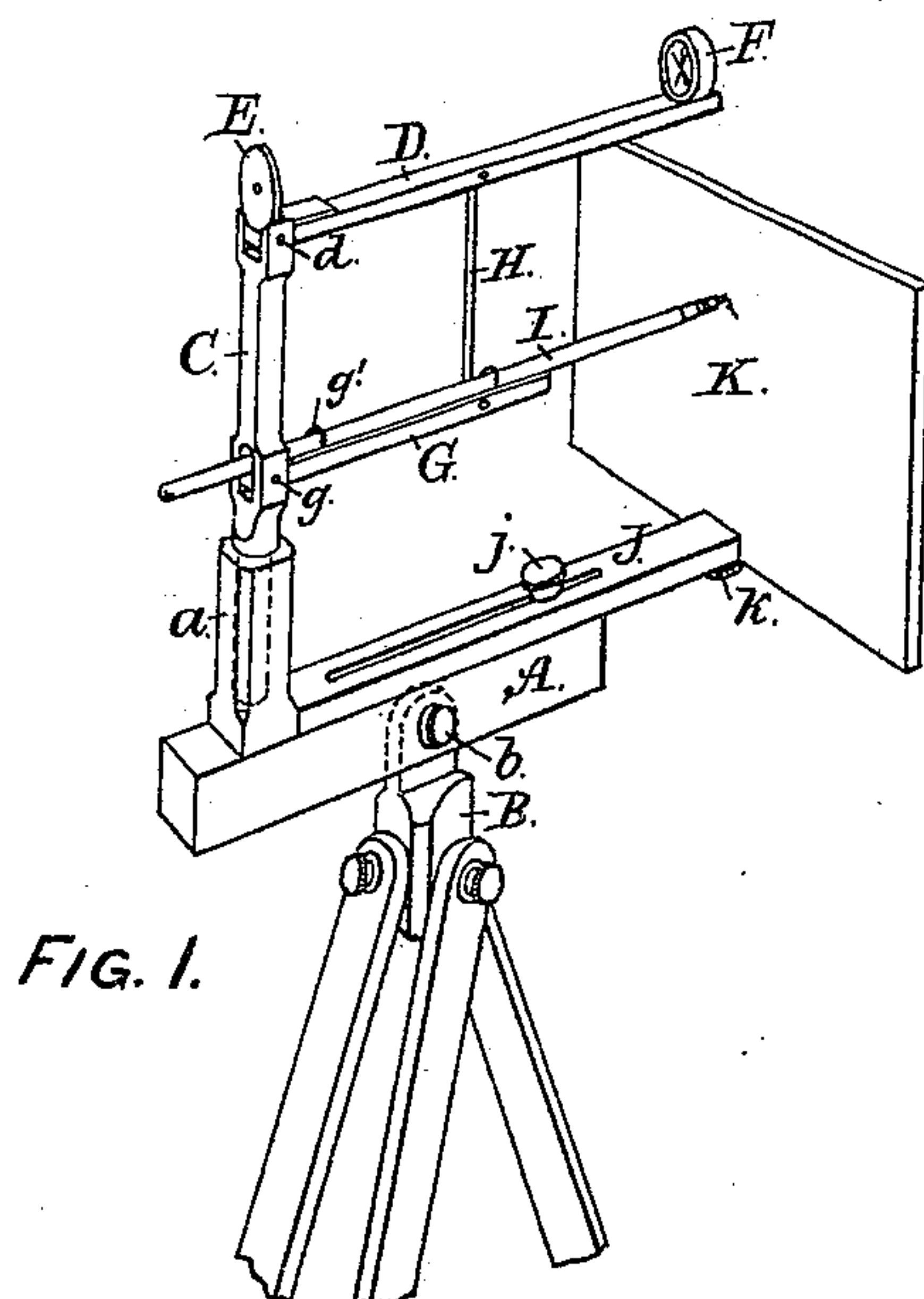


(No Model.)

W. B. EMERY.
PERSPECTOGRAPH.

No. 248,725.

Patented Oct. 25, 1881.



Witnesses,
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UNITED STATES PATENT OFFICE.

WILLIAM B. EMERY, OF ALBANY, NEW YORK.

PERSPECTOGRAPH.

SPECIFICATION forming part of Letters Patent No. 248,725, dated October 25, 1881.

Application filed February 9, 1881. (No model.)

To all-whom it may concern:

Be it known that I, WILLIAM B. EMERY, of the city and county of Albany, and State of New York, have invented certain new and useful Improvements in Perspectographs, of which the following is a specification.

My invention relates to apparatus for drawing perspective views from natural and artificial objects; and the object of my improvements is to provide a simple, cheap, and reliable device for mechanically transferring to a plane the perspective lines of objects without recourse to the usual complex manipulations required for linear perspective. This object I attain by means of the mechanism illustrated in the accompanying drawings, which forms a part of this specification, and in which—

Figure 1 is a perspective view of my apparatus; Fig. 2, a side elevation of the same, and Fig. 3 an end view of the collimating portion of the apparatus.

As represented in the drawings, A indicates the base-piece of the apparatus, attached to the head B of a standard (preferably made in the form of a tripod with adjustable legs) for supporting the device while in use. Said base-piece is pivoted to the head B by the clamp-screw *b*, in such manner that it (the base-piece) can be adjusted at any required angle.

The movable standard C is provided at its lower end with a pintle, (shown by dotted lines in Figs. 1 and 2,) which enters a socket, *a*, erected for the purpose near the back end of the base-piece, and serves as vertical axis for the standard C and its attached parts.

A vertically-vibrating arm, D, is pivotally connected by the pin *d* to the upper end of the standard C, and is provided with an eye-piece, E, fixed transversely to the arm D over its pivotal center, and in a perpendicular position to said arm. Said eye-piece is composed of a disk of metal or other suitable material, having through its center a small sight-hole. At the outer end of the arm D is secured a short open cylinder, F, provided with two fine wires, *f*, which cross each other at right angles at the center line of said cylinder.

A lower vibrating arm, G, is pivoted by the pin *g* to the standard C, so as to range in line with the arm D. Both arms, D and G, are connected together by the rod H in such man-

ner that they will, in all changes of position, maintain a perfect parallelism between them. The arm G is provided with a marker or pencil, I, which is adapted to slide in the loops *g'*, or other suitable appliance, to enable the marker to shift inwardly or outwardly, as required by the varying positions of the arm G.

A slide, J, secured by the binding-screw *j*, is adjustably fixed to the base-piece A, and is provided with the drawing-board K. Said drawing-board is arranged at right angles across the center line of the base-piece A and in a perpendicular position thereto, and it is secured to the slide J by the thumb-screw *k*, so as to be readily detached.

Paper or other material upon which the drawing is to be made is first secured to drawing-board K, and an advantageous point of sight in respect to the object to be drawn should be secured for the position of the apparatus.

The mode of operating the device is as follows: The outer point of the marker I should be steadily held by the operator in perfect contact with the face of the paper on the drawing-board K, so as to produce clean, distinct, and unwavering lines or marks on the paper. The eye of the operator must be constantly applied to the sight-hole in the eye-piece E, and the line of collimation formed by the sight-hole and cross-wires *f* should, through all changes of motion of the arm D, accurately follow along the outline of the object from which the drawing is made. The vertical axis of the standard C and the horizontal pivot *d* permit the outer end of the arm D to move in any required direction while following the outline, and any movement of the arm D, however complex in its nature such movement may be, will be simultaneously made by the arm G, and may be traced by means of the marker I on the paper fixed to the drawing-board.

By means of the slide J, the drawing-board K can be adjusted in relation to the axial center of the standard C, so as to increase or diminish the scale of the drawing.

By means of the screws *b*, *j*, and *k*, pins *d* and *g*, and the rod H, the several parts of the apparatus can be separated to pack away in a small compass to render the whole conveniently portable while traveling.

I claim as my invention—

1. A perspectograph composed of the following parts: a vertically-vibrating arm provided with collimating attachments, consisting of an eye-piece and cross-wires secured to opposite ends of and moving with said arm, as herein set forth, and an arm provided with a telescopically-sliding marker, as described, both of said arms being pivotally connected to each other and to a central standard, to vibrate together vertically, and to swing laterally around the vertical axis of the central standard, the whole being arranged, as described, so that the perspective lines of an observed object may be mechanically transcribed thereby upon a plane surface, as herein specified.

2. In a perspectograph, the combination, with a central standard, C, having its axis arranged in or near a vertical position, of the

vertically-vibrating arms D and G, pivoted to the standard C, as herein described, and connected together by the rod H, to produce a simultaneous and corresponding movement of said arms, the arm D being provided with an eye-piece, E, and cross-wires *f*, and the arm G, adapted to receive a telescopically-sliding marker I, as herein specified.

3. The base-piece A, standard C, and vibrating arm D; provided with collimating attachments, as herein described, and connected by the rod H to the arm G, adapted to contain a sliding marker, in combination with a drawing-board, K, arranged in relation to the axis of the standard C as herein specified.

WM. B. EMERY.

Witnesses:

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JOHN BURNS.