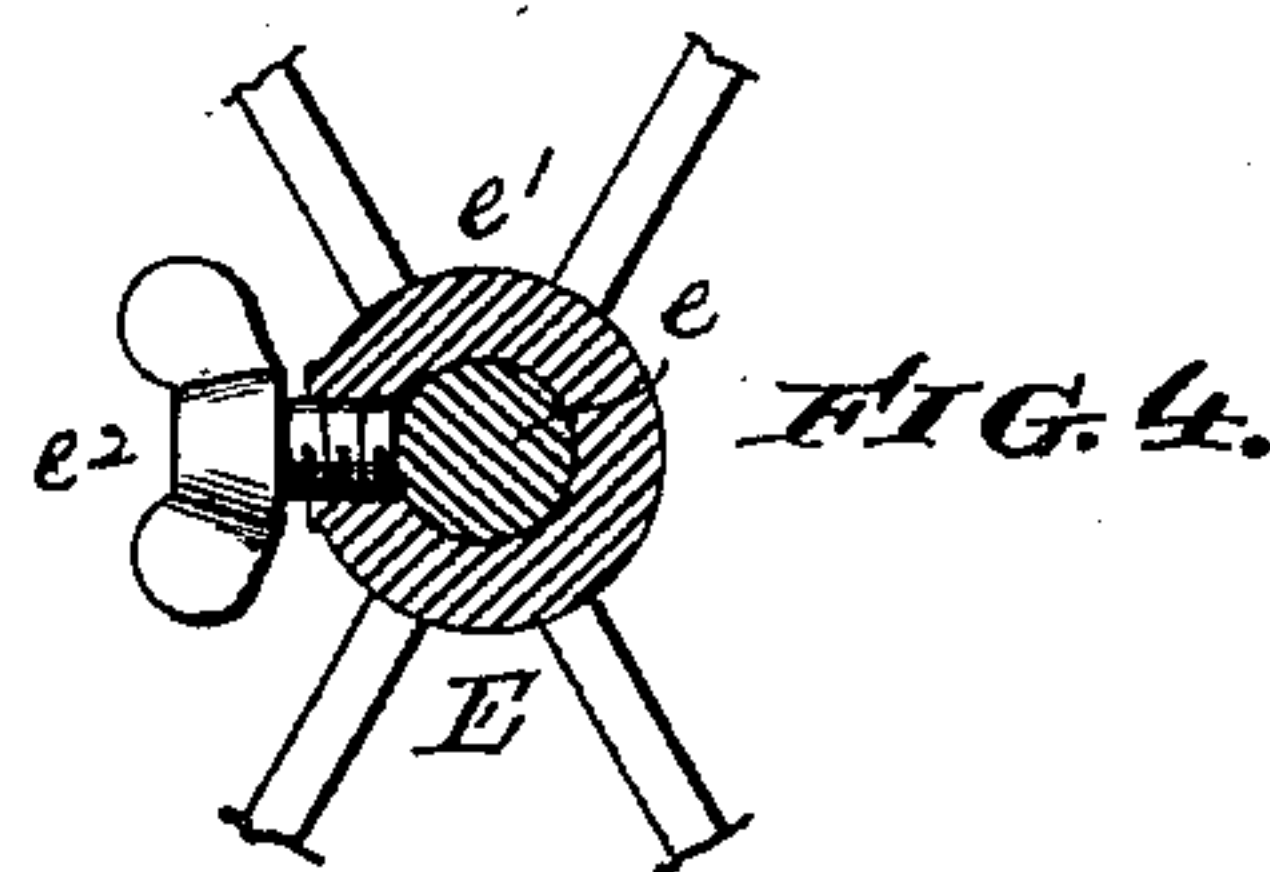
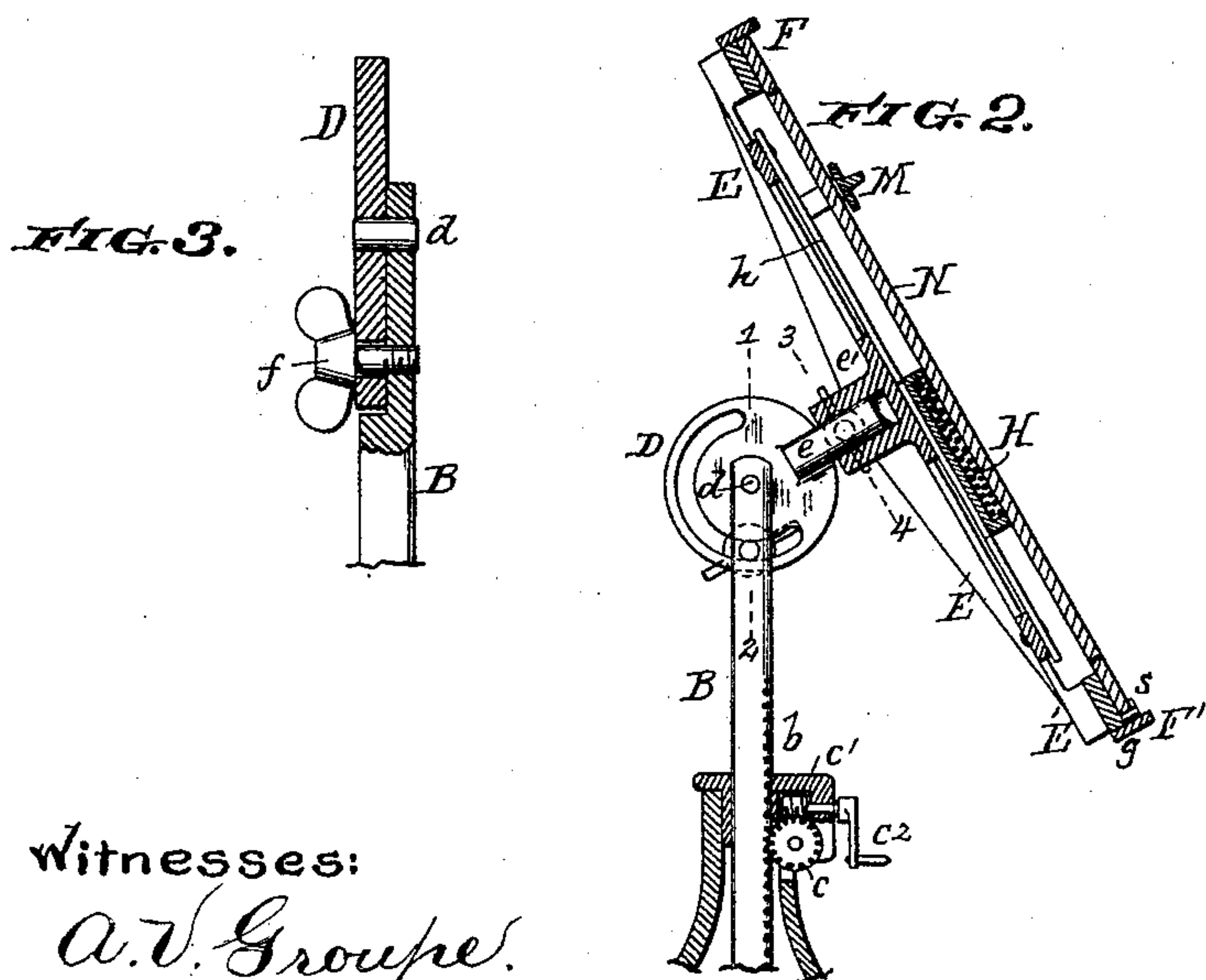
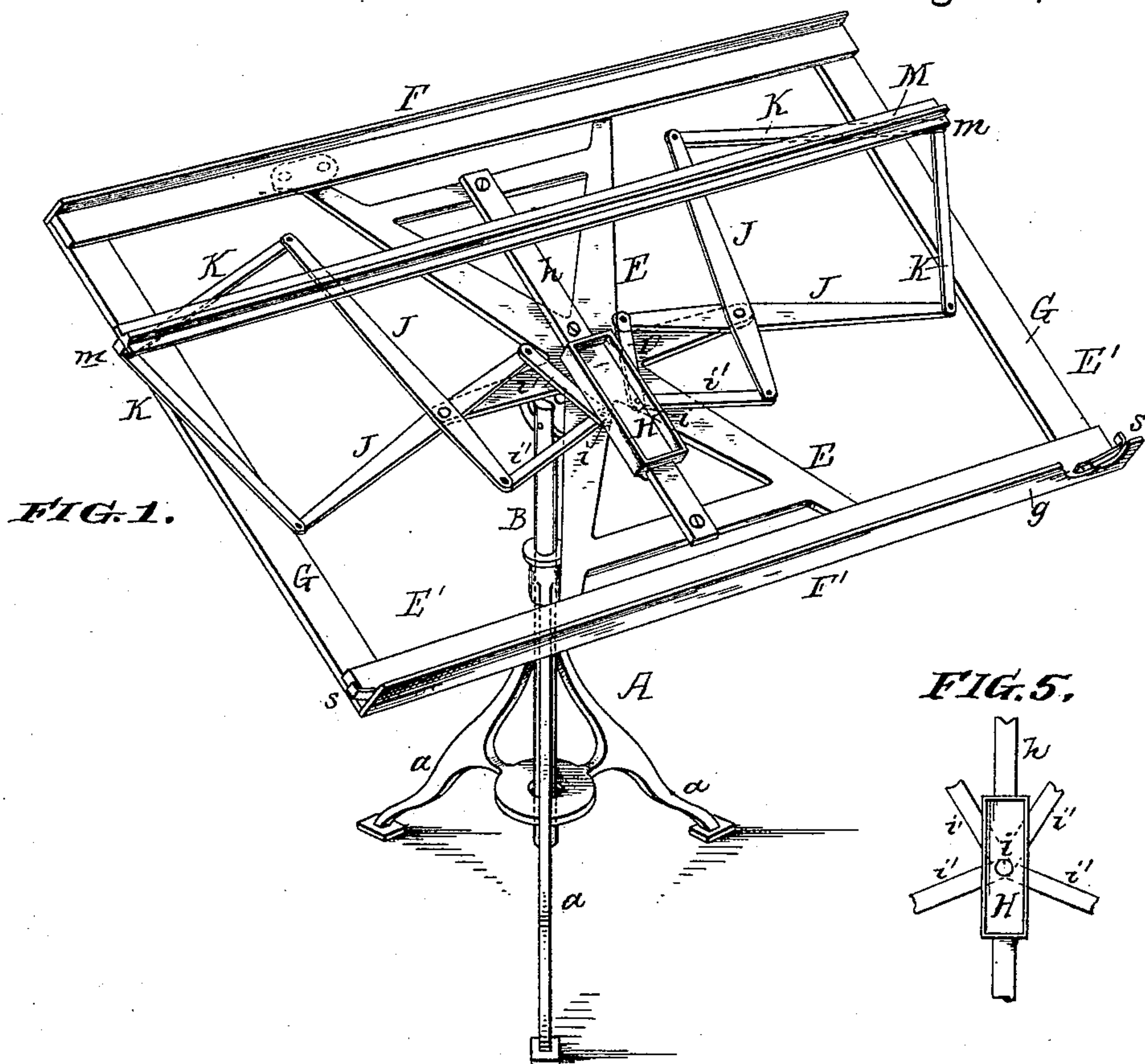


(No Model.)

J. T. WARDEN.
DRAWING BOARD.

No. 434,690.

Patented Aug. 19, 1890.



Witnesses:

A. V. Groupe.
Hamilton D. Turner.

Inventor:

John T. Warden
by his Attorneys
Howson & Howson

UNITED STATES PATENT OFFICE.

JOHN T. WARDEN, OF PHILADELPHIA, PENNSYLVANIA.

DRAWING-BOARD.

SPECIFICATION forming part of Letters Patent No. 434,690, dated August 19, 1890.

Application filed March 21, 1890. Serial No. 344,760. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. WARDEN, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Drawing-Boards, of which the following is a specification.

The object of my invention is to construct an improved drawing-board support and movable straight-edge which can be moved over the face of the drawing-board. This object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved drawing-board support. Fig. 2 is a transverse section. Fig. 3 is a section on the line 1 2, Fig. 2. Fig. 4 is a section on the line 3 4, Fig. 2; and Fig. 5 is a view of a modification.

A is the stand, in the present instance having three legs *a a a*. Adapted to slide in this stand is a vertical post B, having teeth cut in one side, forming a rack *b*, and mounted on the stand A is a pinion *c*, which gears with the rack *b*, and which also meshes with a worm *c'* on a shaft having its bearing in the stand. This shaft is provided with an operating-handle *c''*.

Pivoted to the upper end of the post is a disk D, having a pin *e*, adapted to a socket *e'* in the spider E. This pin is adjustably secured to the socket by means of a set-screw *e''*, Fig. 4. The disk D has a segmental slot through which passes a set-screw *f*. This set-screw is threaded into the post B. Thus the drawing-board support can be adjusted to any position required.

The support proper E' is in the form of a quadrangular frame having longitudinal parallel bars F F' and vertical bars G G, tying the two together. This frame-work is secured to the spider E, as clearly shown in Fig. 1.

Adapted to a guide-bar *h* on the spider is a weight-box H, having pivot-pins *i* at each side to which are pivoted the links *i'*, which in turn are pivoted to the short arms of levers J J, pivoted at *n n* to the spider or other convenient part of the frame. The long arms

of said levers are preferably pivoted to links K, which are connected together, and to the straight-edge M at *m m*. The straight-edge passes over the surface of the board, and by moving the straight-edge at one end or the other the opposite end will move in the same proportion. The box H, I preferably make hollow for the reception of shot or similar weights, so as to perfectly balance the straight-edge.

On the frame E' rests the drawing-board N, it resting against the flange *g* on the lower bar F'. The upper bar F is also flanged, by preference. Spring-catches *s s*, preferably at each side of the frame E', hold the board in position on the frame.

I prefer to make the board the same size as the frame; but any-sized board can be fitted to this support, and the straight-edge can operate as well on a small board as a large one.

In some instances the pivot-pins *i i* on the weight H may be dispensed with and a single pin *i* used, as shown in Fig. 5, all the links *i'* being pivoted to this pin.

When it is not wished to balance the straight-edge, the levers may extend only to the pivots *n n*, the box H and links *i' i'* being dispensed with.

I claim as my invention—

1. The combination of the drawing-board support, a board therefor, with a straight-edge and two sets of levers pivoted at fixed points, links connecting the levers to the straight-edge, and links connecting the two sets of levers, substantially as set forth.

2. The combination of the drawing-board, support therefor, a straight-edge, two sets of levers pivoted to said support, a weight to which the levers are linked, with links connecting the levers to the straight-edge, substantially as described.

3. The combination, in a drawing-board support, of the base, the worm mounted thereon, a vertical rack-bar carrying the frame, with a gear-wheel meshing with the rack and with the worm, whereby the frame is raised and lowered, substantially as described.

4. The combination of the quadrangular

frame E', the spider E, having arms, levers
pivoted to said arms, links securing the short
arms of said levers to a weight, with links se-
curing the long arms of said levers to a
5 straight-edge which is adapted to travel over
the face of the drawing-board mounted on
the frame, substantially as described.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

JOHN T. WARDEN.

Witnesses:

H. F. REARDON,
HENRY HOWSON.