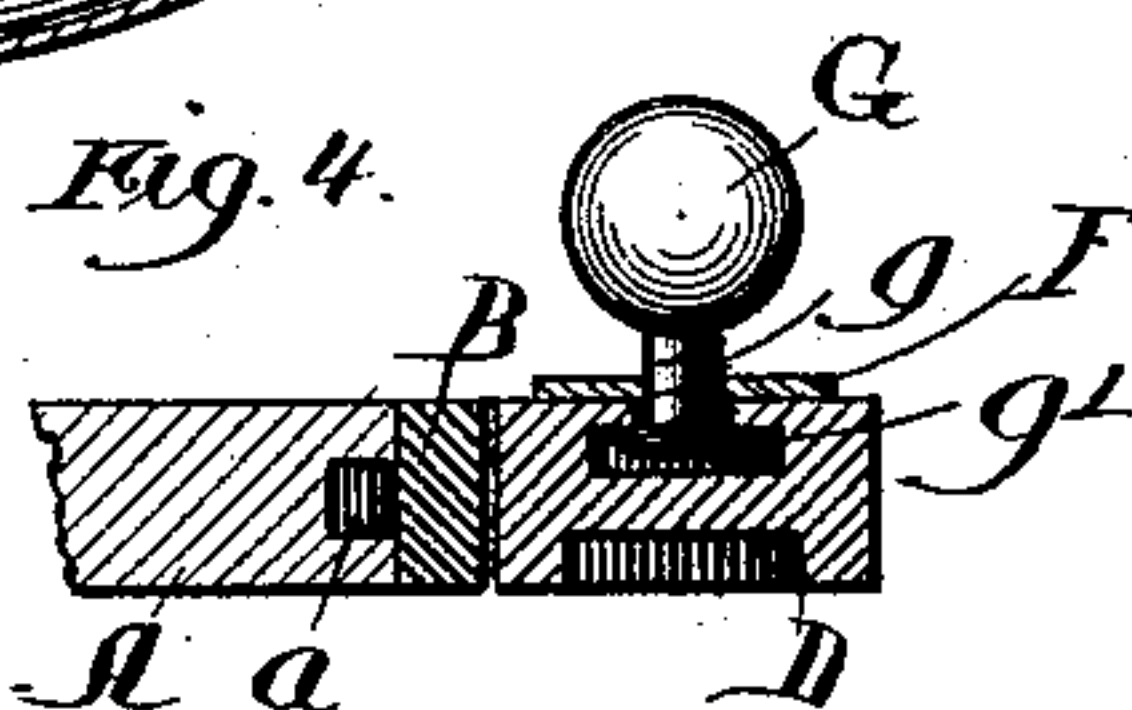
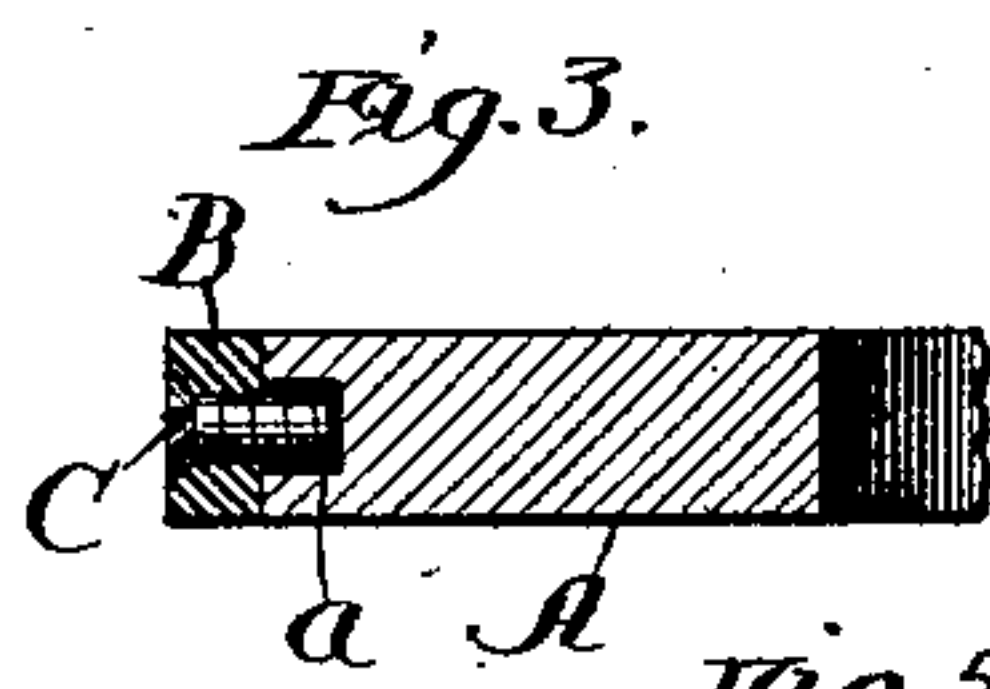
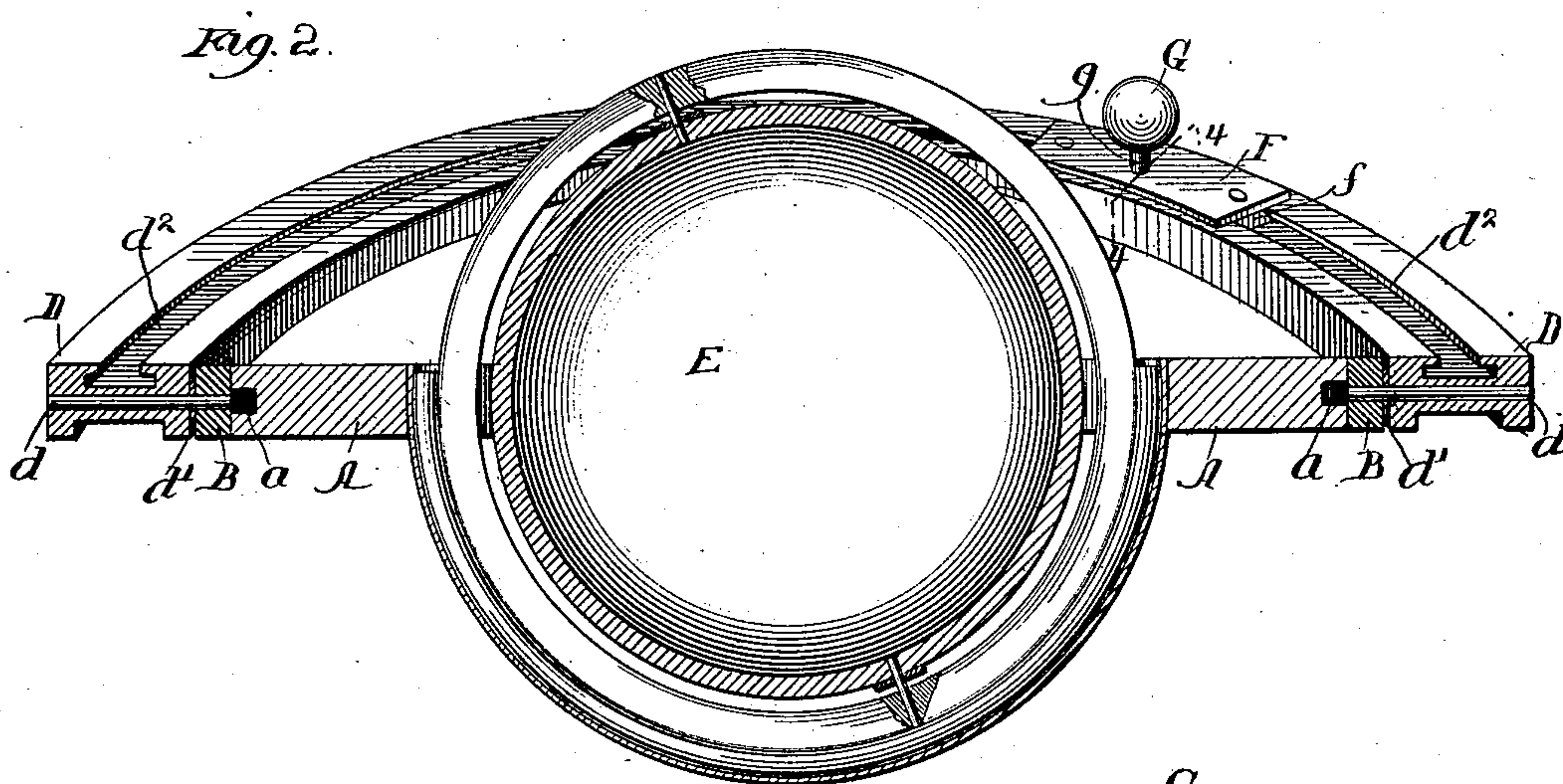
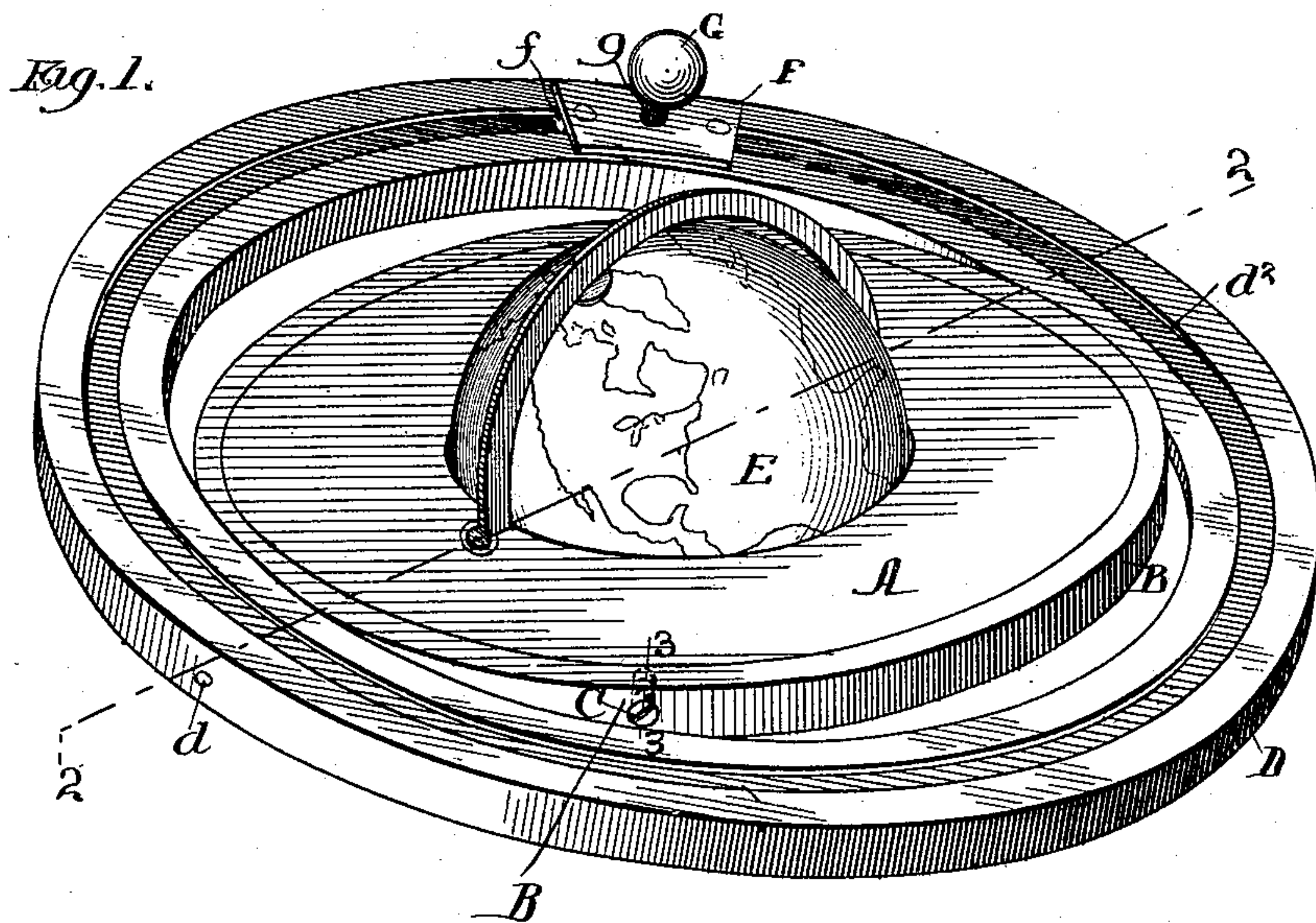


(No Model.)

J. K. RASSWEILER.
TELLURIAN.

No. 477,846.

Patented June 28, 1892.



Witnesses:

Charles C. Morrey.
C. P. Smith.

Fig. 5.



Inventor:

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Atty's.

UNITED STATES PATENT OFFICE.

JOHN K. RASSWEILER, OF WHEATON, ILLINOIS.

TELLURIAN.

SPECIFICATION forming part of Letters Patent No. 477,846, dated June 28, 1892.

Application filed July 13, 1891. Serial No. 399,291. (No model.)

To all whom it may concern:

Be it known that I, JOHN K. RASSWEILER, a citizen of the United States of America, residing at Wheaton, in the county of Du Page and State of Illinois, have invented certain new and useful Improvements in Tellurians, of which the following is a specification.

My invention relates to an apparatus designed for the purpose of enabling the motions and relative positions of the heavenly bodies to be graphically represented to the eye. It is in the nature of an improvement upon a prior invention for which Letters Patent No. 448,075 were issued to me on March 10, 1891.

The object of the present invention is to enable the orbits of the moons and planets to be more easily and satisfactorily operated, and also to furnish improved means for mounting these bodies themselves in their orbits in such a way that they may be shown in any desired position and readily shifted from one place to another.

Referring to the drawings for an illustration of my invention in its preferred form, Figure 1 is a perspective of a device representing the earth and moon. Fig. 2 is a vertical section in line 2 2 of Fig. 1. Fig. 3 is a section in line 3 3 of Fig. 1. Fig. 4 is a section in line 4 4 of Fig. 2, and Fig. 5 is a detail perspective.

In the figures my improvements are shown as applied simply to the moon and to its orbit. It is of course my purpose to apply them also to the orbits of the different planets; but in so doing they will not be materially changed, and hence their illustration in connection with one of the orbits will be sufficient for all.

The earth, which is lettered E, is preferably mounted in a flat board or plate A, so as to be half above and half below the surface of the same to enable said surface to represent the ecliptic. The devices for mounting the earth are substantially the same as those described in my prior patent above referred to, and said patent also illustrates means for uniting and supporting the different portions of the ecliptic plane A, which must be used when the planets, as well as the moon, are shown in place.

This invention is directed particularly to the means employed for mounting the different orbits in the ecliptic plane and for mounting the moon and planets in their orbits. The edge of the board A is provided with a peripheral groove *a* and is encircled by a band or ring B. The latter is secured to the board or plate A by means of three or more screws C, arranged about the ring and fitting in the groove *a*, not tight enough, however, to prevent them from readily sliding in said groove. The moon's orbit, or the graphic representation thereof D, is then pivoted to the ring B by means of pivots *d*. This enables the orbit to be oscillated upon two pivots with perfect freedom and the pivots themselves to be moved around as desired by sliding the ring B around with them.

As it is desirable to have the orbit remain in any position when once placed there, I provide friction-washers *d'* about the pivots *d*, said washers being preferably made in the shape shown in Fig. 5, the same being a short spiral.

To mount the moon in its orbit so that it can be easily shifted about and secured in place, I provide in the latter an undercut groove *d*² and mount therein a sliding block F, held in the groove by tongues *f* and threaded to receive a spindle *g*, upon which a globe G, representing the moon, is mounted. The spindle *g* preferably has a head *g'* within the undercut portion of the groove *d*² to prevent it from being entirely unscrewed from the block. The block itself, with its tongues *f*, slides freely in the groove *d*², so that the moon may be shoved around into any desired position. Then by screwing the head of the spindle tightly against the walls of the groove the block may be clamped to prevent it from being accidentally displaced.

It is obvious that there are numerous modifications of my invention which might be employed without departing from the principles thereof. Thus instead of using the screws C the ring B might have a continuous flange upon its inner surface or a number of lugs formed integral therewith. Again, it is not absolutely necessary to mount the ring so that it shall slide about the board B, as the

effect would be substantially the same if it were to slide within the ring D and be pivoted to the board A.

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

1. The combination, with the plane A and the ring D, of the ring B, interposed between the two and slidably secured to one and pivoted to the other, substantially as described.
- 10 2. The combination, with the board A, having a peripheral groove a , of an encircling ring B, having three or more inward projections adapted to slide in said groove, and a ring D, pivoted to the ring B, substantially as described.
- 15 3. The combination, with the board A, having the peripheral groove a , of the ring B, three or more screws C, threaded to the same and adapted to slide in said groove, and the

ring D, pivoted to the ring B, substantially as described.

4. The combination, with the ring D, having the undercut groove d^2 , of the sliding block F, mounted in said groove, and a globe G, mounted upon a spindle g , threaded to said block, substantially as described.

5. The combination, with the ring D, having the undercut groove d^2 , of the block F, slidably mounted in said groove, and a globe G, mounted upon a spindle g , threaded to said block, and having a head g' within the undercut portion of the groove, substantially as described.

JOHN K. RASSWEILER.

Witnesses:

C. P. SMITH,

CHARLES O. SHERVEY.