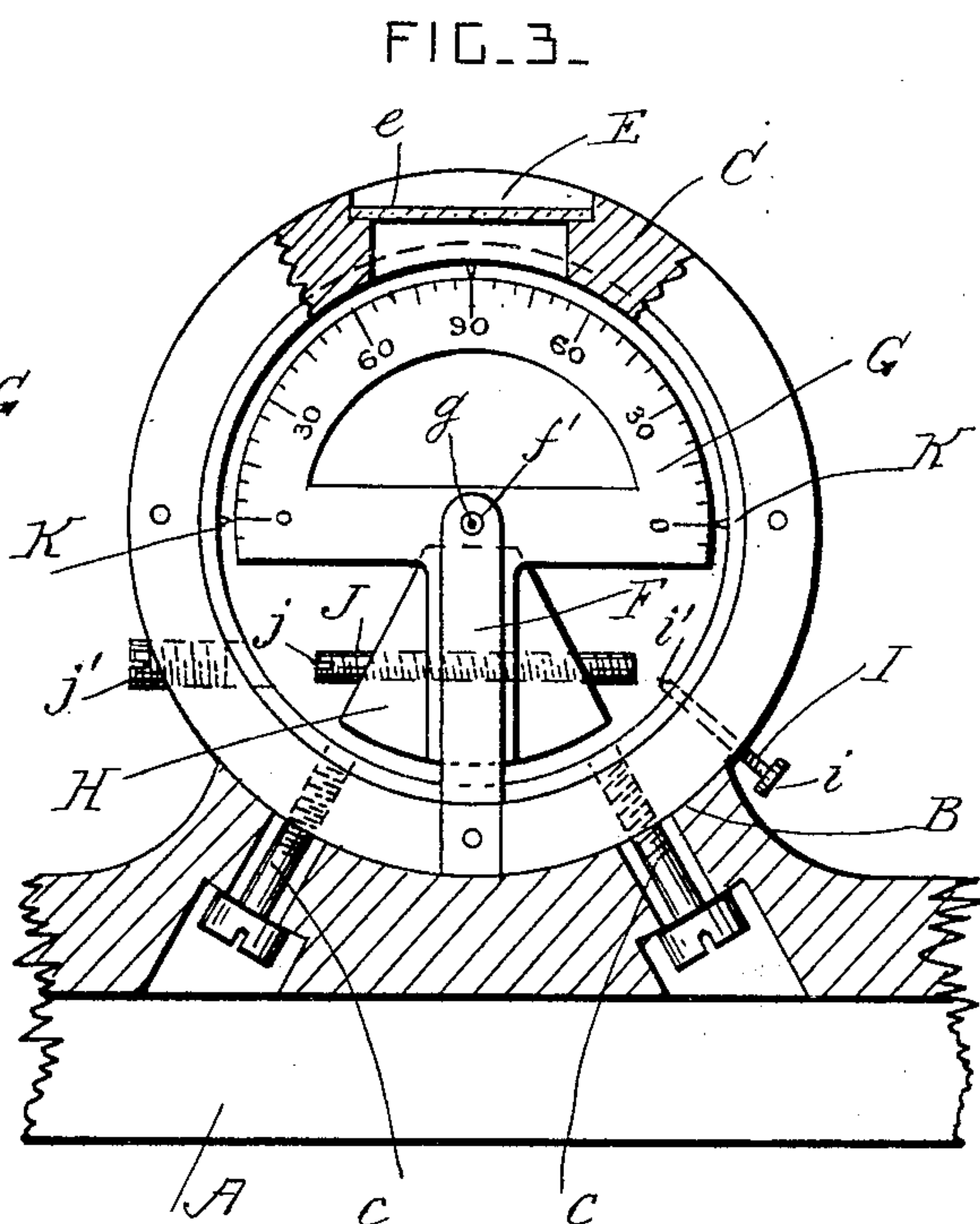
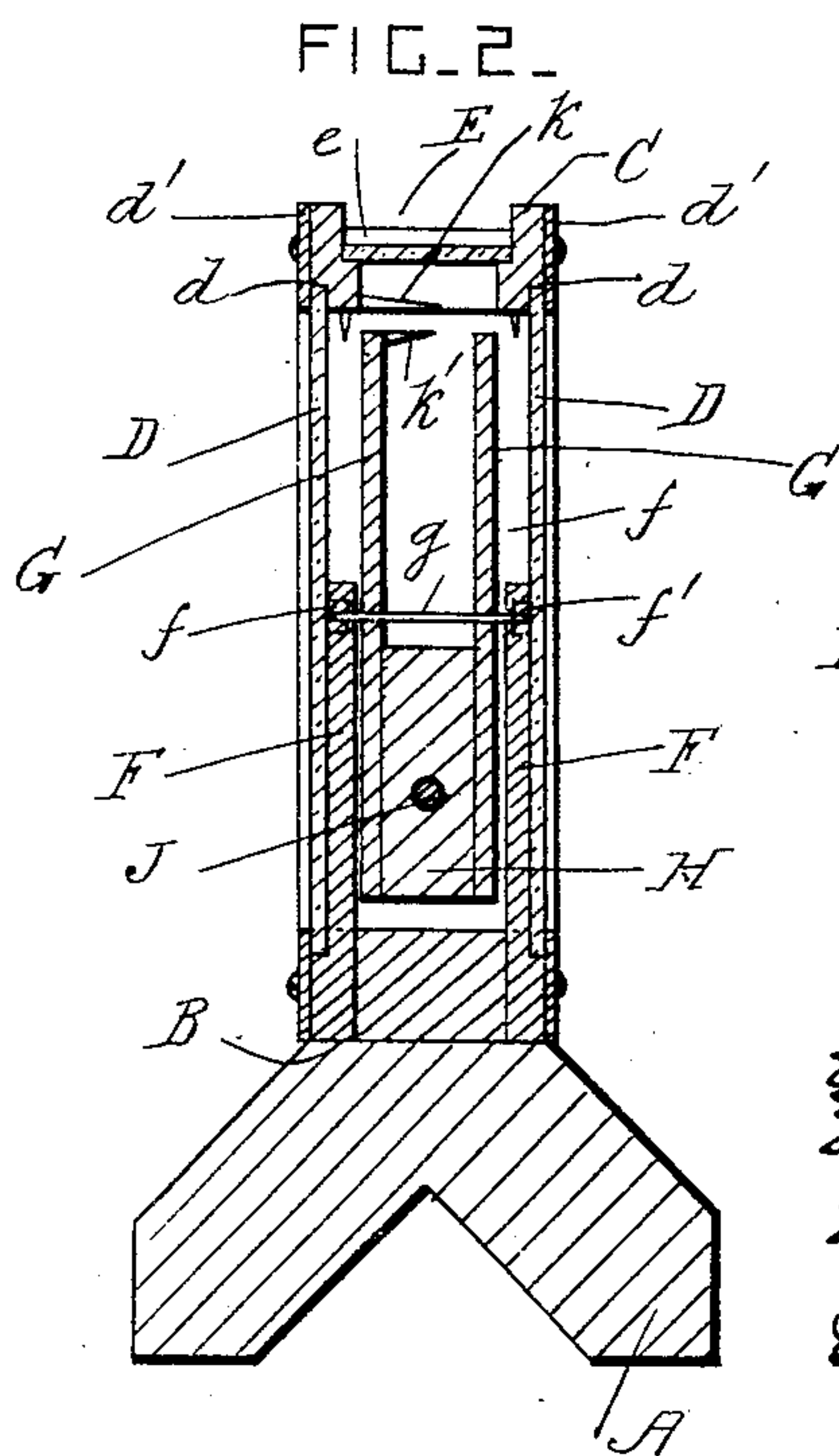
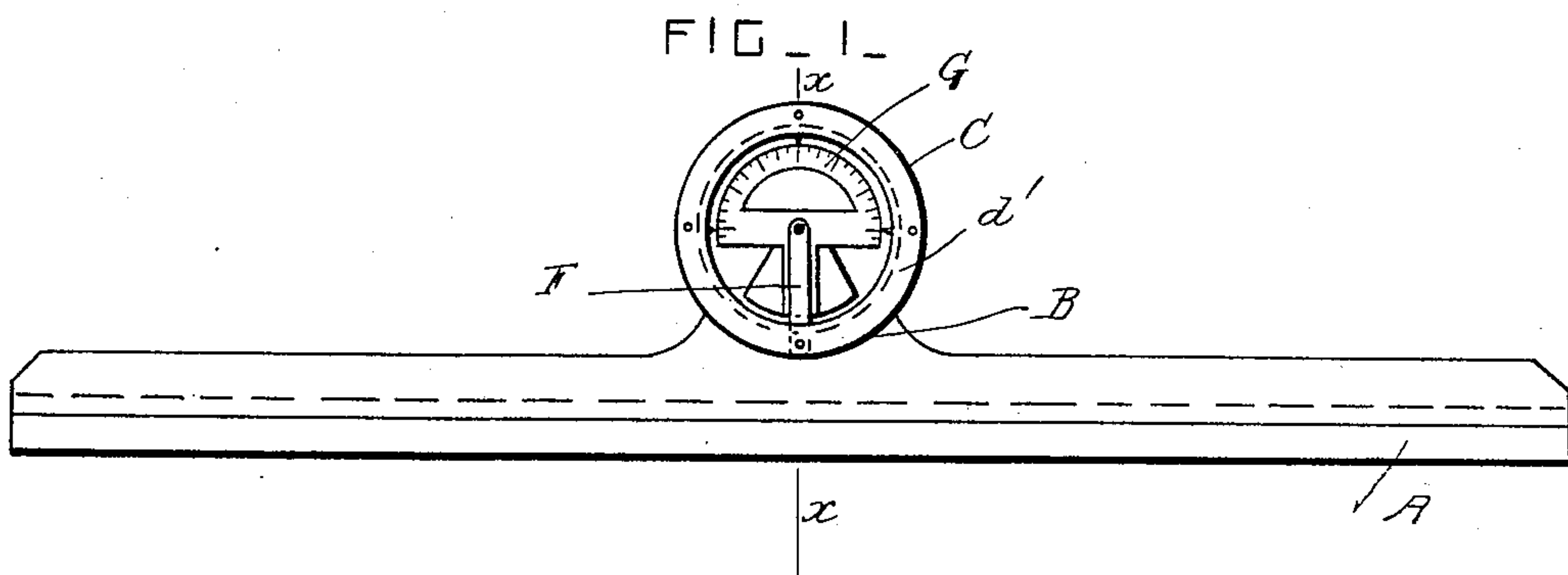


No. 803,287.

PATENTED OCT. 31, 1905.

J. HODGSON.
LEVEL.

APPLICATION FILED JUNE 26, 1905.



WITNESSES:

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JOHN HODGSON, OF THORNTON, WASHINGTON.

LEVEL.

No. 803,287.

Specification of Letters Patent.

Patented Oct. 31, 1905.

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To all whom it may concern:

Be it known that I, JOHN HODGSON, a citizen of the United States, residing at Thornton, in the county of Whitman and State of Washington, have invented certain new and useful Improvements in Levels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to levels for use in building machinery, buildings, roads, and for other purposes; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a front view of the level. Fig. 2 is a cross-section through the level, taken on the line *xx* in Fig. 1 and drawn to a larger scale. Fig. 3 is a detail side view, partly in section, of the weight-casing.

A is a straight-edge of any approved form, that shown in the drawings being provided with a V-shaped groove in its under side. A socket B is formed on the back of the straight-edge at about the middle of its length. This socket is formed upon a curve which is circular. C is a circular casing which rests in the said socket and which is secured to the straight-edge by two screws *c*. The casing C has grooves *d* at its edges, and D represents two disks of glass which are secured in these grooves by means of rings *d'* or in any other approved manner.

E is a sight-hole formed in the top and middle part of the casing C, and *e* is a plate of glass secured in the said sight-hole in any approved manner.

F represents two pillars, the lower ends of which are secured in grooves in the lower part of the casing C close against the glass disks and in the chamber *f*, formed between the said disks inside the casing. These pillars have jeweled bearings *f'* arranged on the axis of the casing.

G represents two graduated plates which are secured upon a shaft *g*, which is pivoted in the said jeweled bearings. H is a weight which is secured to the said plates G and which

swings back and forth between the two pillars and sustains the plates G in the upper part of the chamber *f*.

I is a screw which is provided with a head *i* and a point *i'*. This screw engages with the side of the casing, and when its point is screwed up against the weight it holds the plates G stationary inside the chamber *f*. This is desirable when the level is being shipped from place to place, as it preserves the movable parts of the device from injury.

J is an adjusting-screw which engages with the weight and which is arranged in a normally horizontal position with its ends projecting from the weight. One of its ends is provided with a notch *j*, so that the screw can be revolved by means of a screw-driver inserted through a hole in the side of the casing. A plug *j'* is provided for closing the said hole in the casing.

K represents the side view points, which project from the casing and which are used in connection with the graduations of the plates. Viewpoints *k k'* are also provided on the casing and on one of the graduated plates, respectively, and the relative position of these viewpoints is seen through the glass plate *e* at the top of the casing.

The holes in the straight-edge for the fastening-screws *c* to pass through are made large enough to enable the casing to be set and adjusted in its socket before the screws *c* are screwed up to hold the casing in the desired position.

What I claim is—

1. In a level, the combination, with a straight-edge having an arc-shaped socket on its upper side, of a casing having a curved lower portion which is adjustable in the said socket, means for securing the casing in the socket, a graduated plate pivoted inside the said casing and provided with an operating-weight, and a pointer carried by the said casing adjacent to the said plate.

2. In a level, the combination, with a straight-edge, and a casing secured to it; of a graduated plate pivoted inside the said casing and provided with an operating-weight, an adjusting-screw passing through the said

weight below the axis of the casing, and a pointer carried by the said casing adjacent to the said plate.

3. In a level, the combination, with a
5 straight-edge, and a casing secured to it; of a graduated plate pivoted inside the said casing and provided with an operating-weight, and a fastening-screw engaging with the side of

the casing and provided with an end portion which engages the said weight. 10

In testimony whereof I have affixed my signature in the presence of two witnesses.

JOHN HODGSON.

Witnesses:

JOHN D. REED,

FRED. R. WARNOOK.