

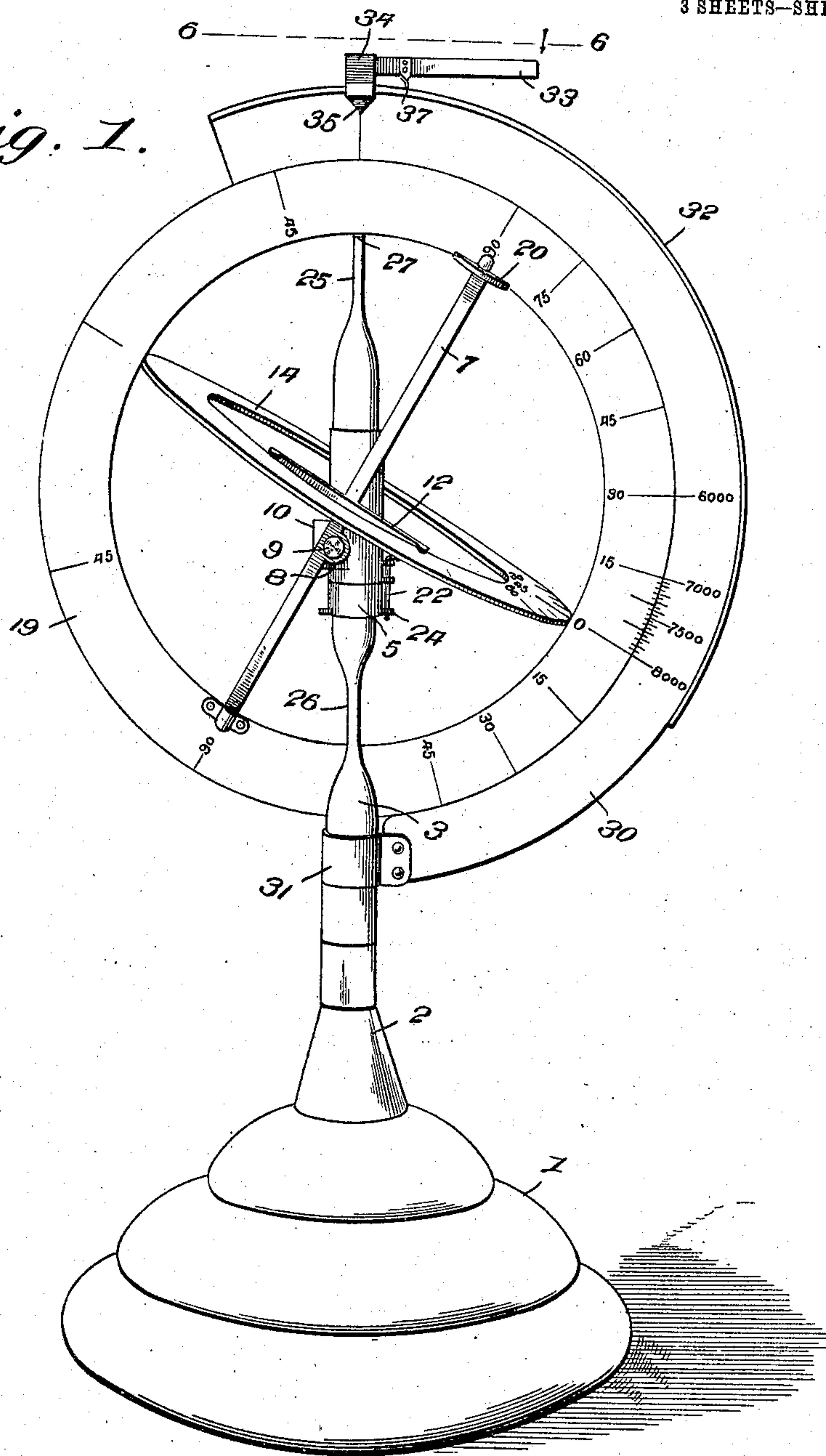
No. 848,019.

PATENTED MAR. 26, 1907.

S. F. ENOS.
GEOGRAPHICAL LOCATOR.
APPLICATION FILED JUNE 22, 1906.

3 SHEETS—SHEET 1.

Fig. 1.



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Witnesses

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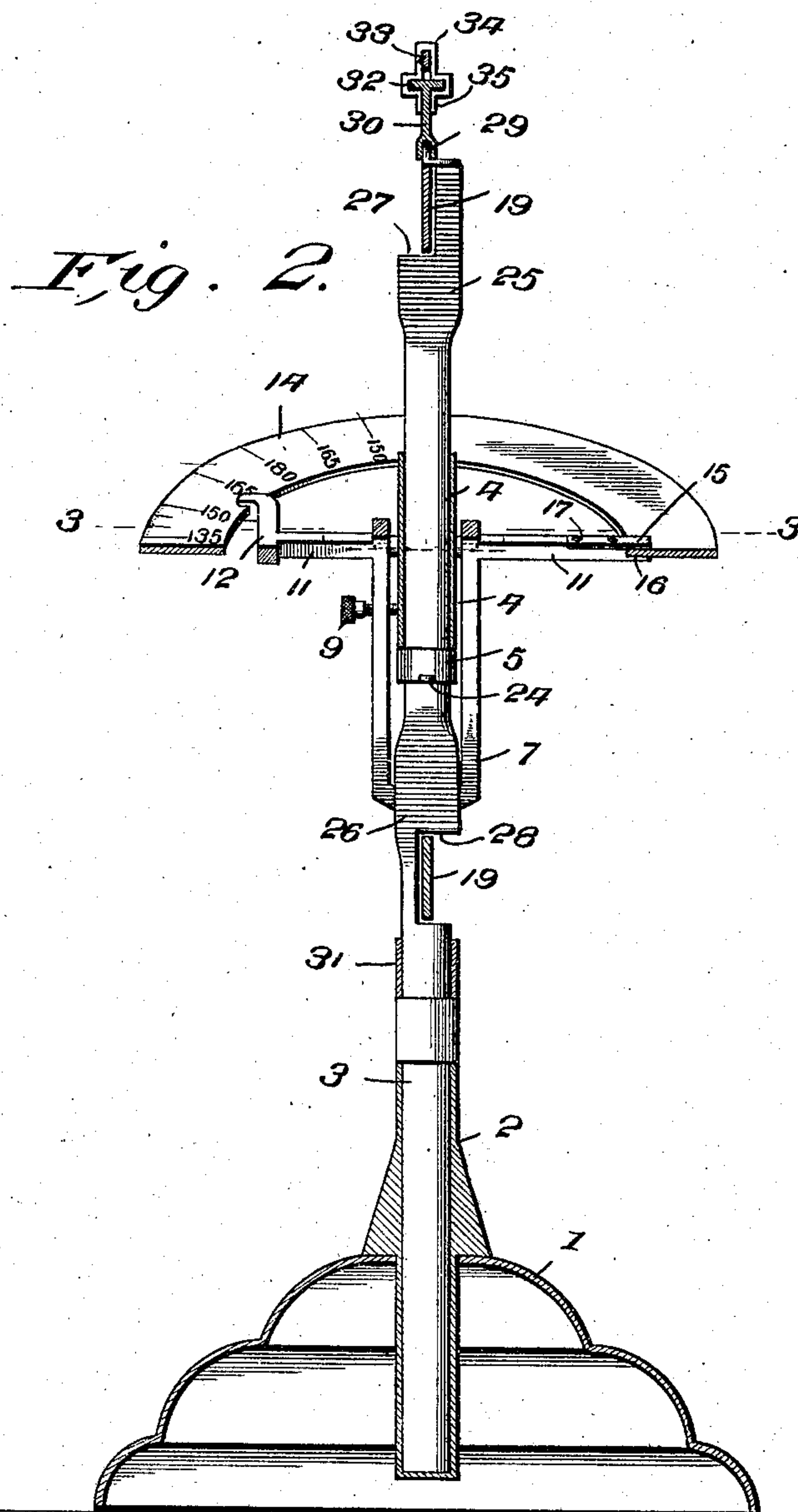
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

Fig. 3.

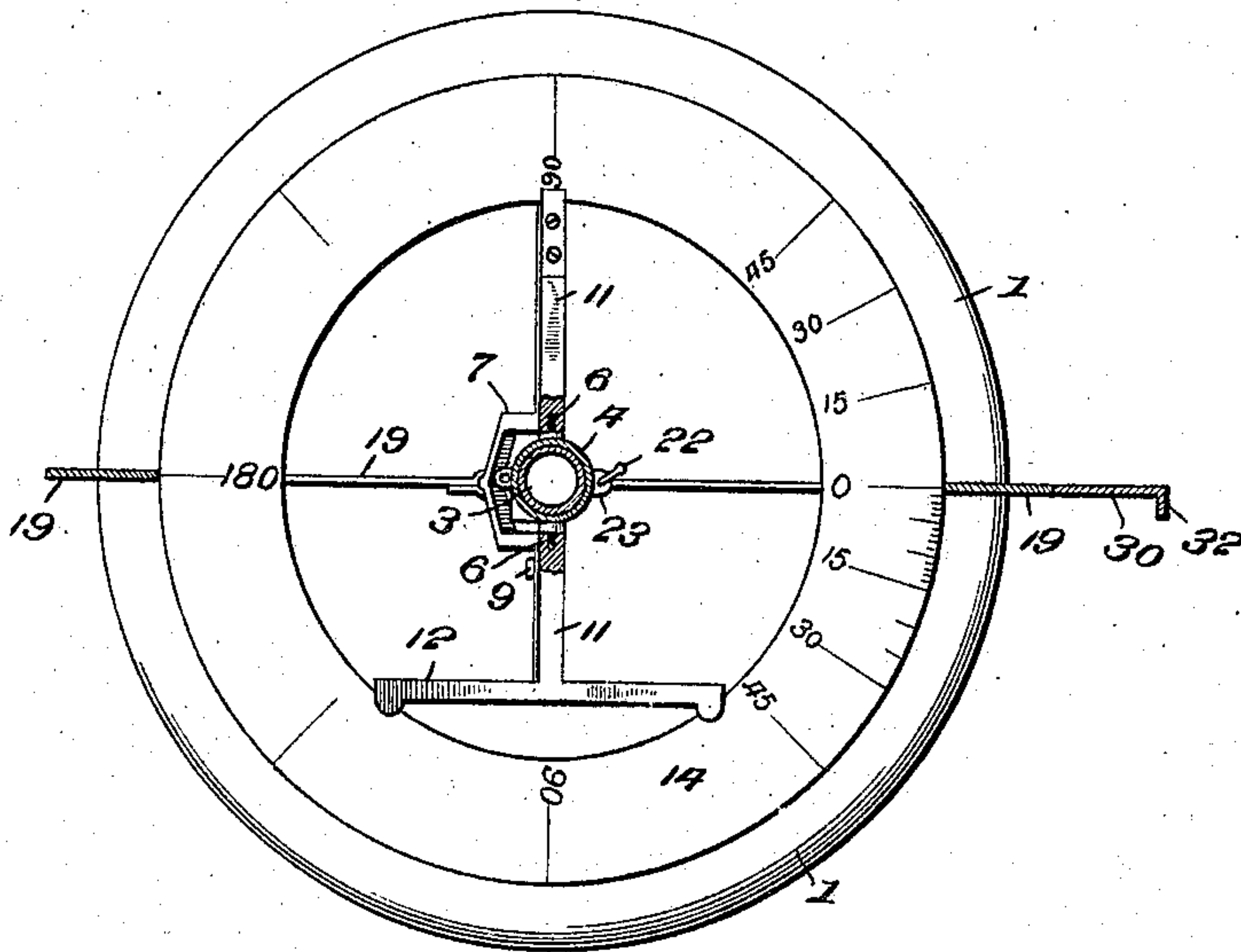


Fig. 4.

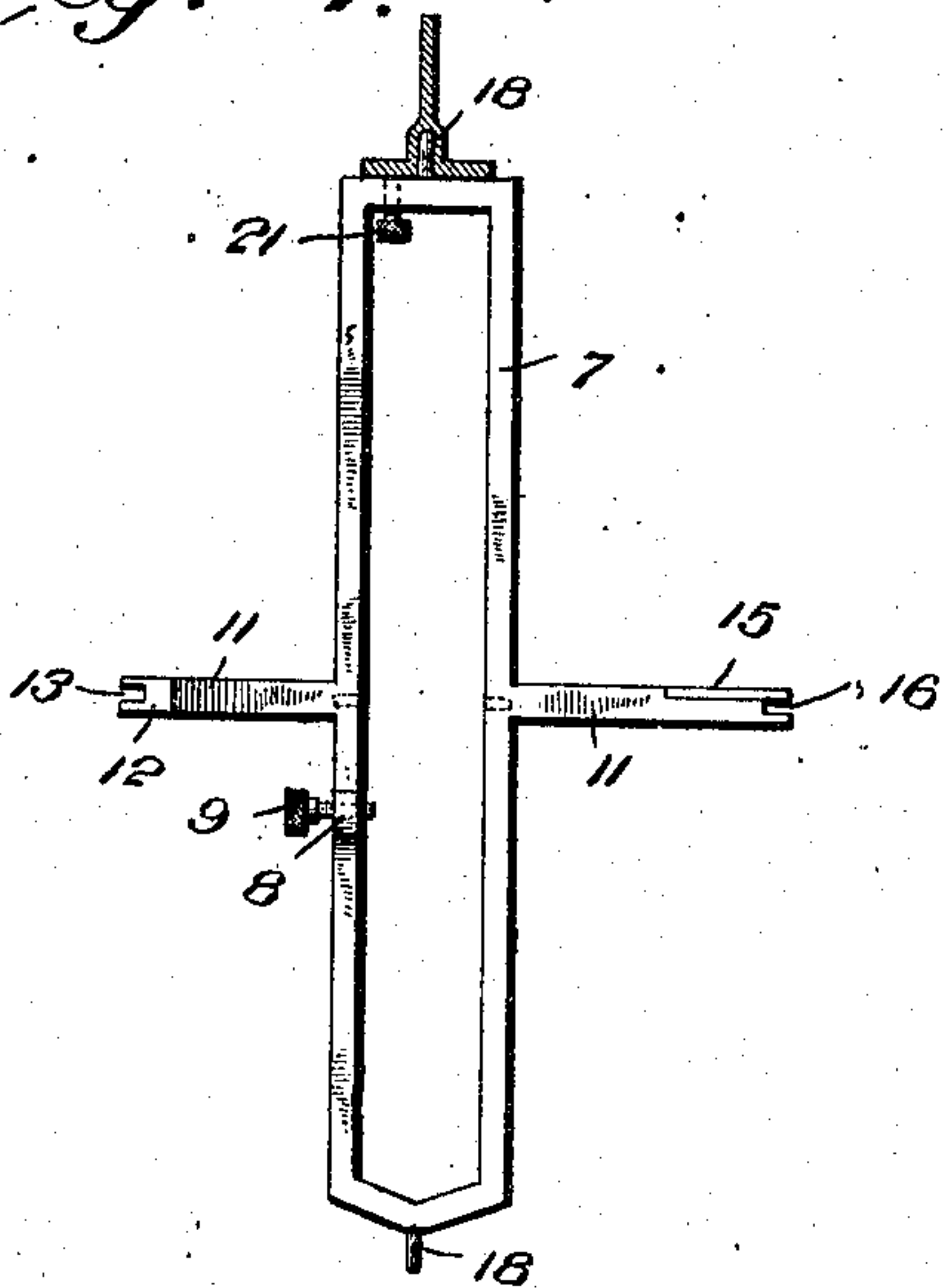


Fig. 6.

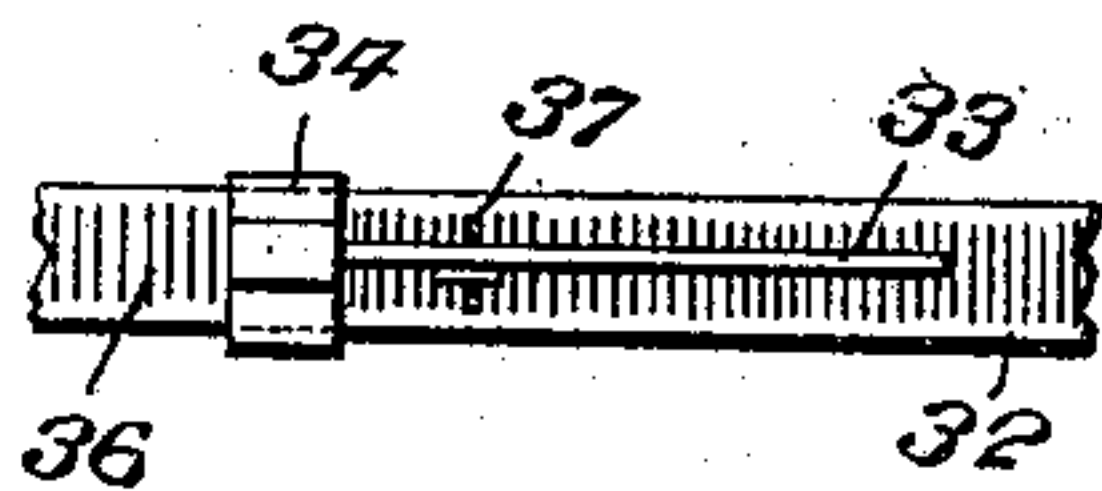
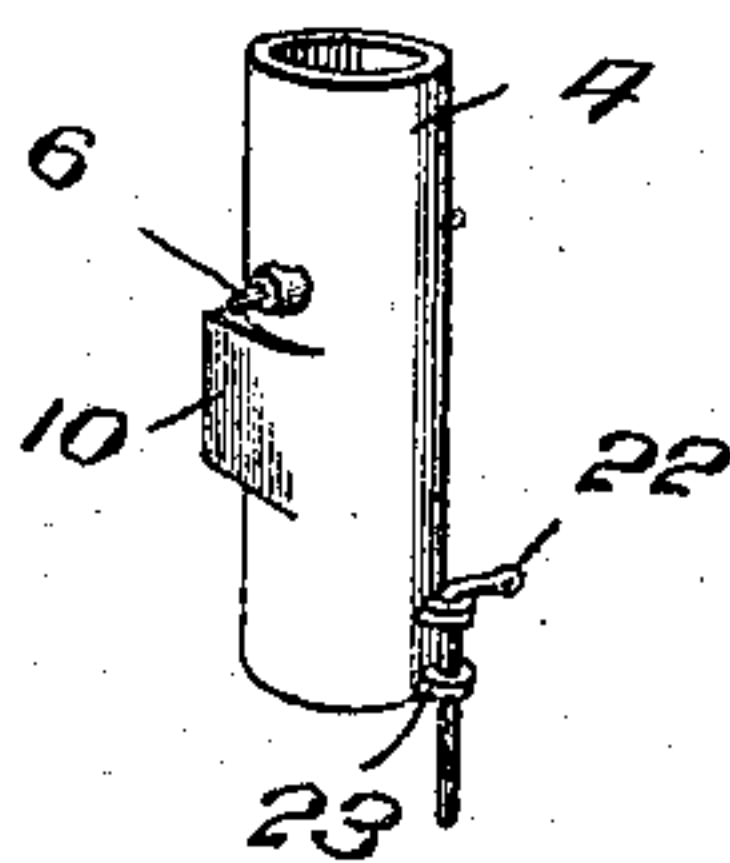


Fig. 5.



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UNITED STATES PATENT OFFICE.

SILVANUS F. ENOS, OF MATTOON, ILLINOIS, ASSIGNOR OF ONE-HALF TO
JOSEPH J. HOAG, OF MATTOON, ILLINOIS.

GEOGRAPHICAL LOCATOR.

No. 848,019.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed June 22, 1906. Serial No. 322,940.

To all whom it may concern:

Be it known that I, SILVANUS F. ENOS, a citizen of the United States, residing at Mattoon, in the county of Coles and State of Illinois, have invented certain new and useful Improvements in Geographical Locators; 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.

My invention relates to new and useful improvements in geographical locators; and my object is to provide a device of this class whereby the location of a point upon the earth's surface from a given point may be readily ascertained.

A further object is to provide means for readily ascertaining the distance between the two points.

Other objects and advantages will be hereinafter referred to, and more particularly pointed out in the claims.

In the accompanying drawings, which are made a part of this application, Figure 1 is a perspective view of my improved device ready for use. Fig. 2 is a central vertical sectional view thereof. Fig. 3 is a transverse sectional view as seen from line 3 3, Fig. 2. Fig. 4 is a detail plan view of the tilting frame employed in connection with my device. Fig. 5 is a perspective view of the supporting-ring for said frame, and Fig. 6 is a detail plan view of a portion of my device as seen from line 6 6 of Fig. 1.

Referring to the drawings, in which similar reference-numerals designate corresponding parts throughout the several views, 1 indicates a pedestal having a tubular socket 2, in which is seated the lower end of a post 3. Surrounding the protruding end of the post 3 is a supporting-band 4, said band resting upon a suitable collar 5, integral with the post 3, the supporting-band being loosely mounted upon the post and adapted to swivel on the collar.

The band 4 is provided with a pair of trunnions 6, one upon each side of the band, and upon which is pivotally mounted a rectangular frame 7, said frame having a depending ear 8, through which takes a set-screw 9, the inner end of the screw taking against a projection 10 on the supporting-band 4, by which means the frame is secured in its adjusted position.

Formed integral with and at right angles to the rectangular frame 7 are arms 11, one of said arms being provided with a cross-head 12, the ends thereof being provided with notches 13, in which is seated a circular plate 14. The opposite arm 11 is cut away at its outer end to form a seat for the keeper 15, a slot 16 being formed between the keeper and the reduced portion of the arm 11, in which takes the circular plate 14. The keeper 15 is removably secured to the arm 11 by means of screws or the like 17, by which means the circular plate 14 may be readily removed from the arms when desired.

The rectangular frame 7 is provided at each end with a pivot-pin 18, on which is swivelly mounted a circular plate 19, the inner circumference of the plate 19 being of such a size as to snugly receive the circular plate 14. One of the pivot-pins 18 is surrounded by a circular projection 20, said projection being preferably integral with the plate 19 and is adapted to provide a bearing for the end of the set-screw 21 in the frame 7, thereby providing means to secure the circular plate 19 in its adjusted position.

The band 4 is prevented from rotating on the post 3 by means of a pin or the like 22, extending through ears 23 on the band and into engagement with an ear 24 on the collar 5.

It is necessary at times to place the circular plate 14 in a substantially vertical position, and to this end the post 3 is flattened at its upper end, as at 25, and at a point intersected by the opposite portion of the circular plate 14, as at 26, thereby permitting the circular plate 14 to be disposed in a substantially vertical position. It is also necessary at times to place the circular plate 19 in a vertical position, and to accomplish this result a portion of the flattened section 25 is cut away, as at 27, and a notch 28 is provided in the post 3 in juxtaposition to the flattened portion 26, the notch 28 being on the opposite side of the post from the cut-away portion 27, so the plate may be turned upon its pivot-points.

The upper end of the post 3 is provided with an arm 29, upon which is pivotally secured a semicircular plate 30, the lower end of the semicircular plate being secured to the post 3 by means of a collar 31, the collar having ears thereon, between which is secured the plate 30. A flange 32 is disposed around the outer edge of the semicircular plate 30 and

projects at each side thereof, upon which is mounted an indicator-arm 33, the arm being slidably secured to the flange by means of a strap 34, said strap being secured to the arm 33 and disposed around the flange 32, the free ends of said strap being pointed to form the indicator-point 35.

The outer surface of the flange 32 is roughened or provided with notches 36, with which is adapted to engage a finger 37, secured to the indicator-arm 33, so that when the indicator-points 35 have been properly adjusted the finger 37 will engage one of the notches 36 and hold the finger and indicator-arm in their adjusted position.

The object of the circular plate 14 is to represent the equatorial line around the earth's surface, and the faces thereof are provided with suitable graduations indicating the degrees of longitude, and the circular plate 19 is arranged to represent the meridian-line, the faces of the plate being graduated to ascertain the degree of latitude, the pivot-pins 18 representing the north and south pole, respectively, and coincident with the graduation-marks indicating ninety degrees. The plate 14 is held at right angles to the plate 19, thereby representing the relative position of the equatorial line and the north and south poles to the earth's surface.

In operation, supposing that the instrument is being used at a point ninety degrees west of Greenwich and forty degrees north and it is desired to locate the city of Washington, the plate 14, indicating the equator, is disposed in a vertical position along the post and is rotated in its bearings until the graduation of ninety degrees is at the top of the post. When the frame 7 is rocked until the scale of forty degrees north registers with the upper end of the post, the frame is then secured in this position by means of the set-screw 9 being directed against the projection 10, so adjusted that the upper end of the post indicates the point ninety degrees west of Greenwich and forty degrees north. The plate 19 is then directed around the equatorial plate 14 until it reaches the graduation indicating seventy-seven degrees west, thereby indicating the longitude of Washington, and as Washington is about thirty-nine degrees north find the graduation indicating thirty-nine degrees north on the meridian-plate 19 and the location of Washington is found. The plate 19 is then secured in its adjusted position by means of the set-screw 21 being directed against the projection 20. If it is desired to ascertain the distance from the given point to Washington, the semicircular plate 30 is disposed over the edge of the circular plate 19, and as the semicircular plate is provided with suitable graduations indicating the distance in miles, the graduations corresponding with the graduation of thirty-nine degrees on the plate 19, the num-

ber of miles between the given point and Washington will be given.

The essential features to follow in operating my improved device is to direct the meridian-plate 19 across the equatorial plate 14 at the longitude of the place to be found and then direct the semicircular measuring-plate across the meridian-plate at the latitude of the place being located.

If it is sought to locate a place west of the given point, the opposite position of the meridian-plate is used, the plate being directed upwardly as far as necessary to represent the place to be found, and if the place should only be a few miles west of the given point the thickness of the post would prevent the proper adjustment of the plate, and therefore the pin 22 is freed from the ears 23 and 24, respectively, and the shaft is rotated half-way around, said shaft being rotated independently of the base and supporting-band 4, thereby retaining the parts in their adjusted position, the object in rotating the shaft being to allow the ends of the frame 7 to enter the notches 27 and 28, and thus dispose the plate 19 in a substantially vertical position.

The object of the indicator-arm 33 is to indicate the direction of the point to be found, and to accomplish this the indicating-points 35 are set at a point at half the distance between the given point and the place to be found—as, for example, should the place be four thousand miles away the indicator-points 35 are disposed around the semicircular plate 30 until the points 35 have reached the graduation of two thousand miles, and the arm 33 will then point substantially to the designated spot upon the earth's surface indicated by the place sought to be found.

As indicated in the drawings, the normal portion of the equatorial plate is placed on that side of the post indicating the south side to show the given point to be located south of the equator. The normally upper edge of the equatorial plate will be placed on the opposite side of the post.

What I claim is—

1. An instrument of the class described comprising the combination with a post and means to support said post, of a band, a frame pivotally mounted upon said band and means carried by the frame to ascertain the location of a point from a given point.

2. The combination with a post having flattened portions and means to support said post, of a band surrounding said post, a frame pivotally secured to said band, and means carried by the frame to locate a point from a given point.

3. A device of the class described comprising the combination with a post having flattened portions, of a band rotatably mounted on said post, a frame pivotally secured to said band and arms integral with said frame

and means carried by the frame and arms to locate a point from a given point.

4. A device of the class described comprising the combination with a post having flattened portions and notches therein, of a band
5 surrounding said post, means to normally hold said band stationary on the post, a frame pivotally secured to said band, means
to lock said frame in its adjusted position,
10 graduated plates carried by said frame

whereby a point may be located from a given point and means to indicate the distance between the two points.

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

SILVANUS F. ENOS.

Witnesses:

JOSEPH J. HOAG,
W. W. McVAY.