

(No Model.)

A. OSBORN.

INSTRUMENT FOR MEASURING DISTANCES.

No. 376,338.

Patented Jan. 10, 1888.

Fig. 1.

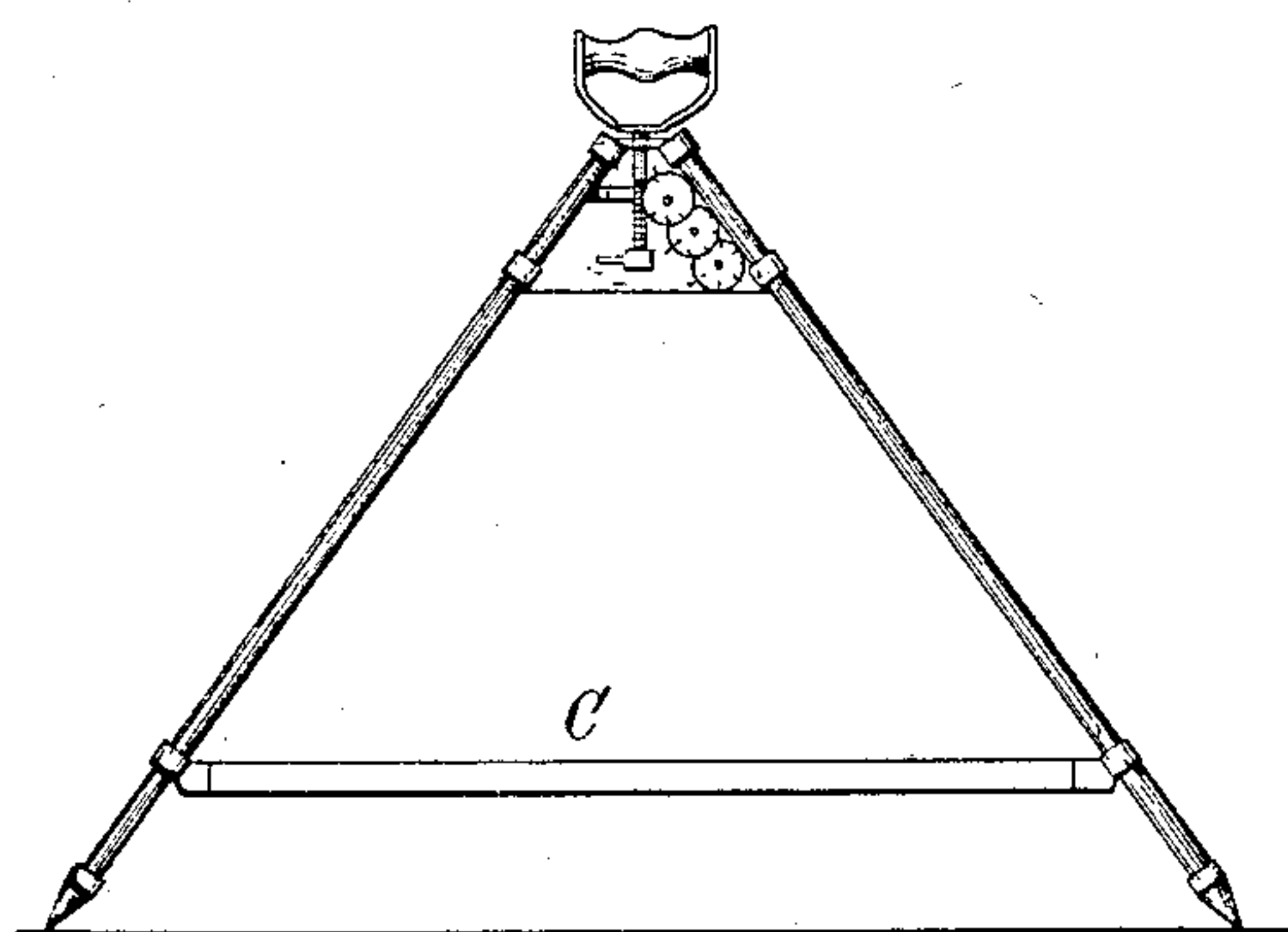


Fig. 4.

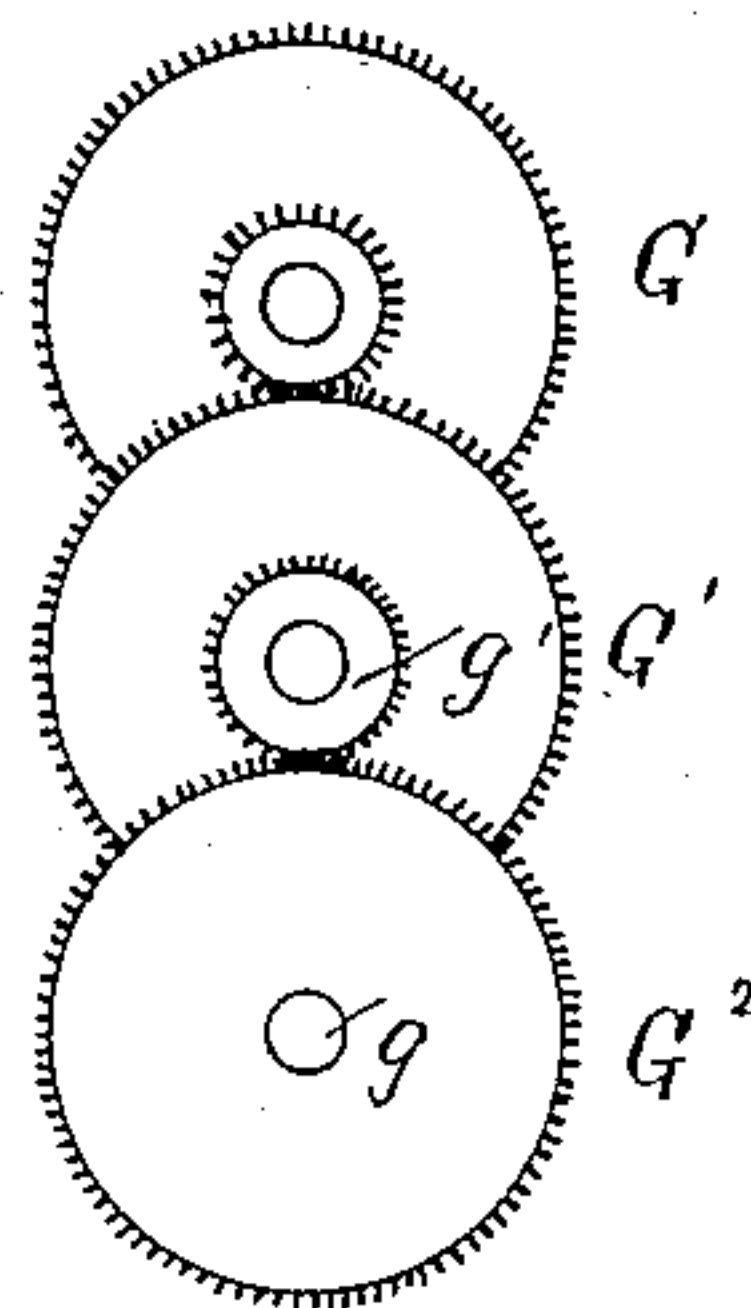


Fig. 2.

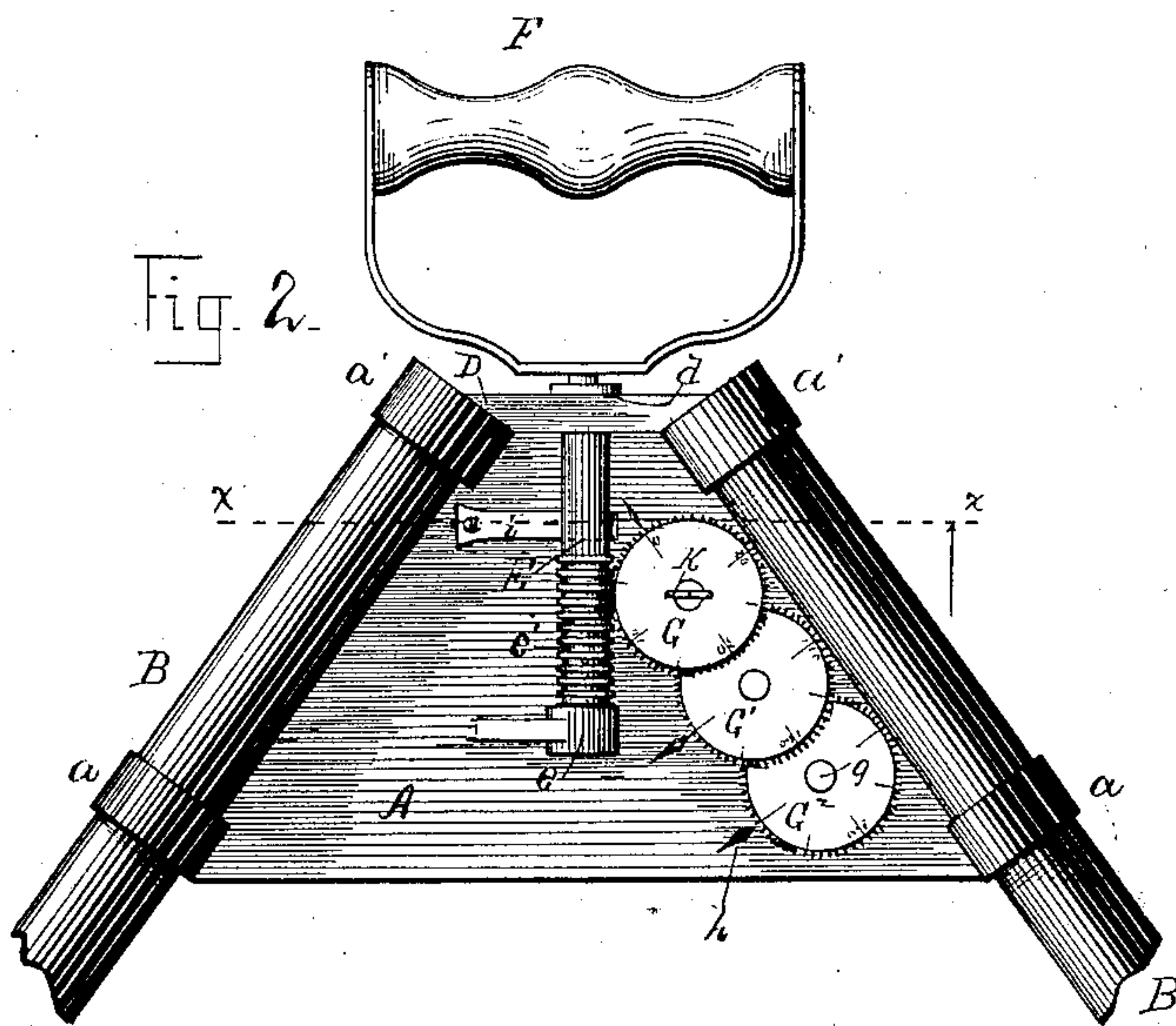
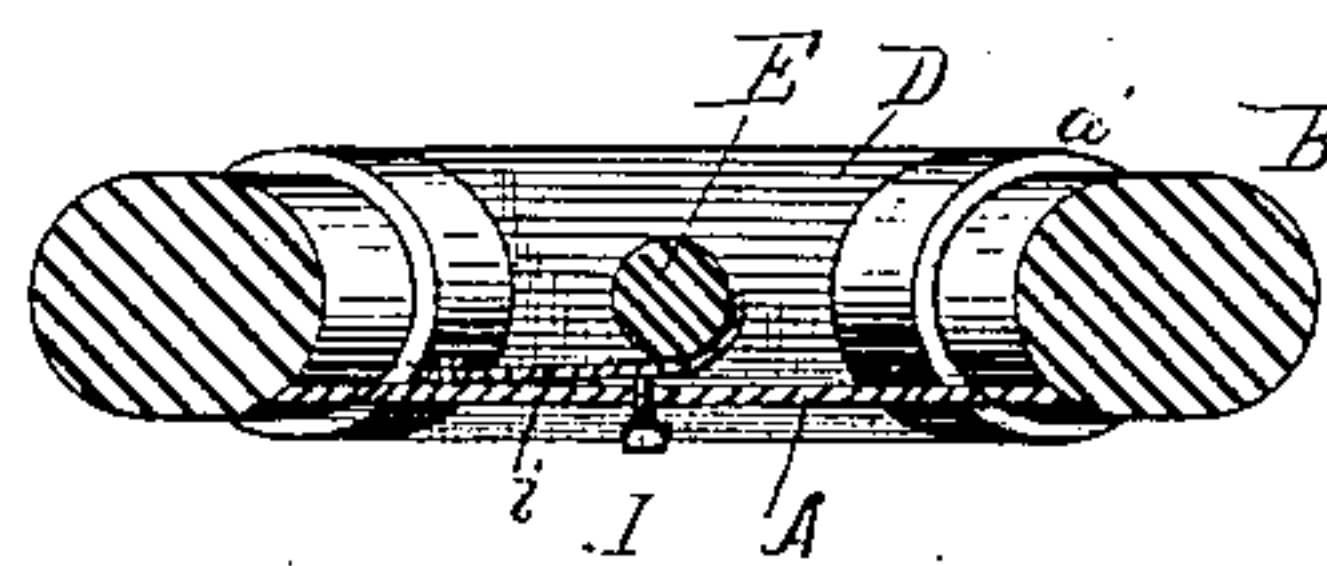


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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INSTRUMENT FOR MEASURING DISTANCES.

SPECIFICATION forming part of Letters Patent No. 376,338, dated January 10, 1888.

Application filed June 11, 1887. Serial No. 241,090. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER OSBORN, a citizen of the United States, residing at Saybrook, county of Ashtabula, and State of Ohio, have invented certain new and useful Improvements in Land-Measuring Instruments; and I do hereby declare the following to be a description of the same and of the manner of constructing and using the invention in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it appertains to construct and use the same, reference being had to the accompanying drawings, forming a part of the specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

My invention is that of a land-measuring instrument.

In the drawings, Figure 1 is a side elevation of the measure. Fig. 2 is an enlarged detail view of the upper portion of the measure, showing the same side as is shown in the preceding view. Fig. 3 is a detail horizontal section, and Fig. 4 is a detail reverse view of the dials.

A is a triangular plate provided at each corner of its base with sleeves *a*, and at its tapering opposite extremity with the tight caps *a'*, said caps and sleeves integral with the plate. B are walking-bars having their upper portions passed through said sleeves and their upper ends seated in said caps. Said plate is of such lateral dimensions that the walking-bars located in said sleeves and caps form with each other an angle of sixty-seven degrees. Said bars are connected toward their footing with cross-bar C. Said bars are suitably ironed at their footings. Plate A has its truncated top provided with the cross-bar D, having perforation *d*, through which passes the worm-rod E, said rod seated at its foot in loop *e*. The top end of said rod has handle F rigid with it. On the face of said plate are the three serrated dials G G' G², each turning on an axle, *g*, and geared to each other by means of pinions *g'*, attached to the under side of dials G G', respectively. The outer faces of the dials are numerically graded, in order to show the number of rods measured—viz., dial G, graded from zero to forty; dial G', from zero to two

hundred, and dial G² from zero to one thousand.

The teeth of dial G are worked by worm *e'* of rod E. Lugs *h* on plate A are zero-stations, at which each of the dials is set at the commencement of a measuring operation. Set-screw I, on the back of plate A, is to press spring *i* against worm-rod E to retard its revolutions when desired. K is a thumb-screw seated on the pivot of dial G, by means of which said dial can be released from the worm-rod when a readjustment of the dials is required.

The instrument, twirled from right to left, is actuated by the right hand in one position on the handle moving one walking-bar forward of the other alternately, each movement causing a registry on the first dial of just one-fourth of a rod; and as movements are repeated the aggregates of rods and fractions will appear on the several dials, forty rods being shown on the second dial when the first makes a revolution, two hundred rods on the third dial when the second makes a revolution, and one thousand rods on the third dial when that makes a revolution, such registry commencing with zero at the several points on the plate. After measuring a number of rods by loosening the thumb-screw K the first dial can be thrown out of worm-gear, and all the dials can be instantly turned back, so that zero will again be at those points. The extreme points of the walking-bars should be four feet and one and a half inch apart, so that every four movements or half-revolution of the worm will register just one rod.

What, therefore, I claim is—

1. In a land-measure, the combination, with walking-bars and a revolving worm-rod provided with a rigid handle, of a system of registering-dials connected together and actuated by said rod, substantially as set forth.

2. In a land-measure, the combination, with walking-bars and a revolving worm-rod provided with a rigid handle, of a registering-dial actuated by said rod, substantially as set forth.

3. In a land-measure, the combination, with plate A, having perforated cross-bar D, and rod E, revolving in said bar, of walking-bars B, substantially as set forth.

4. In a land-measure, the combination, with walking-bars, plate A, provided with zero-

station *h*, and manual worm-rod *E*, of graduated dial-plates actuated by said rod and registering distances from said stations, substantially as set forth.

- 5 5. In a land-measure, the combination, with walking-bars and a registering device, of worm-rod *E* and a friction device adapted to engage with the latter, substantially as set forth.
- 10 6. In a land-measure, the combination, with

walking-bars and a registering device, of worm-rod *E*, and spring *i*, and set-screw *I*, substantially as set forth.

In testimony that I claim the foregoing to be my invention I have hereunto set my hand 15 this 6th day of June, A. D. 1887.

ALEXANDER OSBORN.

Witnesses:

C. H. MUNGER,
A. J. TRUNKEY.