

S. GISSINGER.
Levels.

No. 199,902.

Patented Feb. 5, 1878.

Fig. 1.

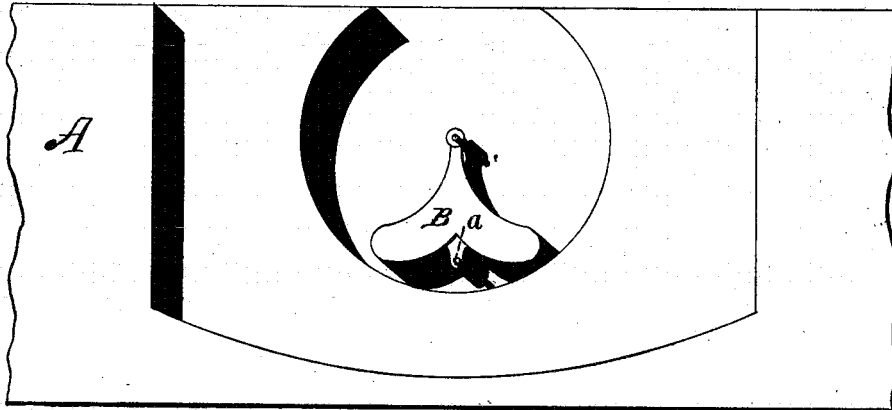


Fig. 2.

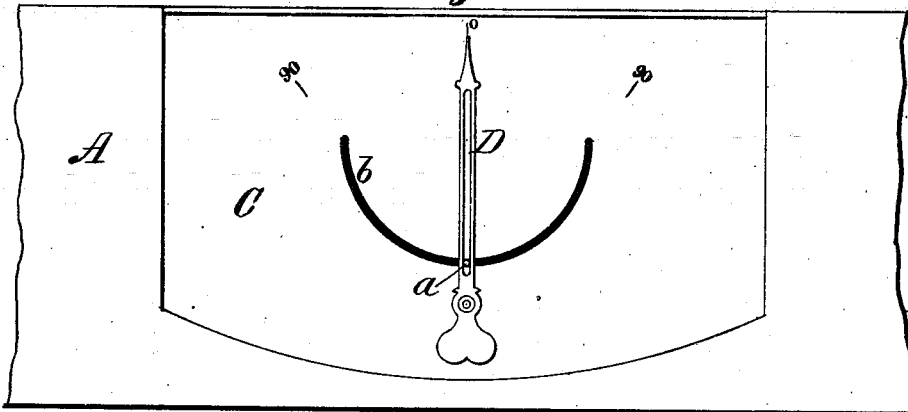
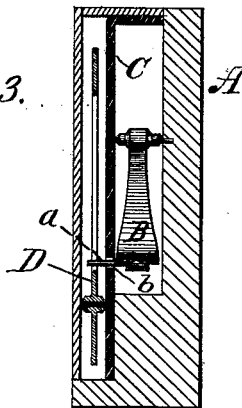


Fig. 3.



Witnesses

F. A. Pollock
G. Smith

By

Samuel Gissinger
Inventor.
Comolly, Bond & Sighe
Attorneys.

UNITED STATES PATENT OFFICE.

SAMUEL GISSINGER, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO E. W. SWENTZEL, OF SAME PLACE.

IMPROVEMENT IN LEVELS.

Specification forming part of Letters Patent No. **199,902**, dated February 5, 1878; application filed June 19, 1877.

To all whom it may concern:

Be it known that I, SAMUEL GISSINGER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Plumbs, Levels, and Clinometers; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a front elevation of stock and pendulum. Fig. 2 is a front elevation of device as it appears when complete. Fig. 3 is a middle transverse section.

This invention relates to that class of instruments known as levels, combining, also, the qualities of plumbs and clinometers; and it consists of a swinging pendulum, having a pin which plays in a slot constructed in a pivoted index, whose extremity indicates differences in level or angle by means of a graduated scale on a dial; and also in the construction and arrangement of parts, as hereinafter more fully described.

A designates the stock in a recess, in which I hang a small weighted pendulum, B, nicely balanced and pivoted. At the lower end of this, in the middle, I locate a pin, *a*, and, to prevent confusion in reading, and also provide a face, I cover it with a plate or dial, C, having a circular or curved slot, *b*, through which the pin *a* projects, and in which it travels, according to the oscillations or motions of pendulum B. On the dial C I pivot an index

or pointer, D, having a long slot, in which the pin *a* plays and operates the index. In this case the index D, being pivoted at a fixed point, will, with its point, describe an arc of a circle, and on this arc on the dial the degrees, from 0 to 90 degrees, may be marked off to show the angles. The recess is then flushed with the stock by glass plates fitted to it.

The instrument thus constructed is extremely simple, and at the same time sensitive to influence. It can be used as a top-level, a plumb, or a clinometer, and is equally effective in all cases.

I claim—

1. The combination of an index or pointer, D, having a longitudinal slot, with a swinging pendulum, B, holding a pin, *a*, which passes through said slot and forms the only connection between pendulum and pointer, as shown and described.

2. The combination of the slotted dial C, slotted pointer D, and pendulum B, said pendulum being provided with a pin, *a*, passing through slotted dial and into slot of pointer, as shown and described.

3. The combination of a swinging pendulum, slotted pointer or index, slotted dial, and connecting-pin, as described.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of June, 1877.

SAMUEL GISSINGER.

Witnesses:

J. J. McCORMICK,
W. B. CONNOLLY.