

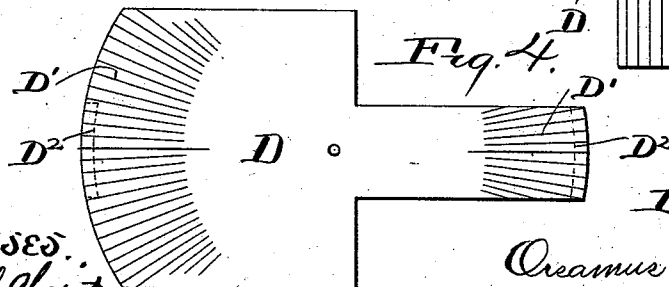
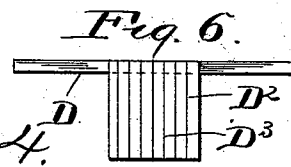
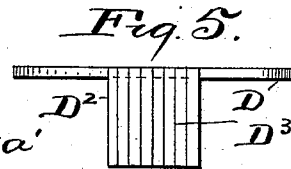
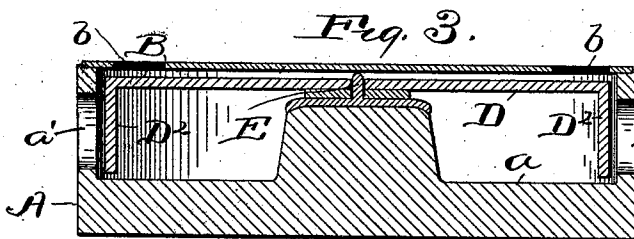
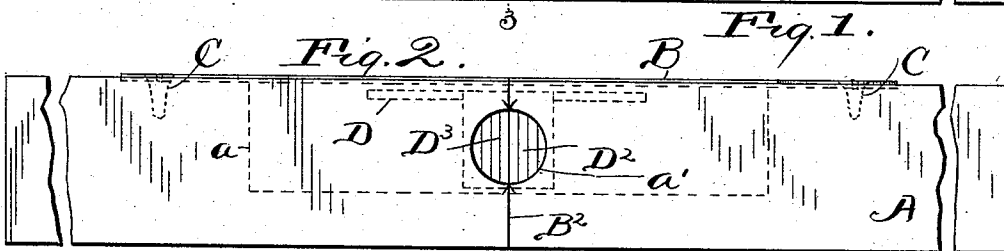
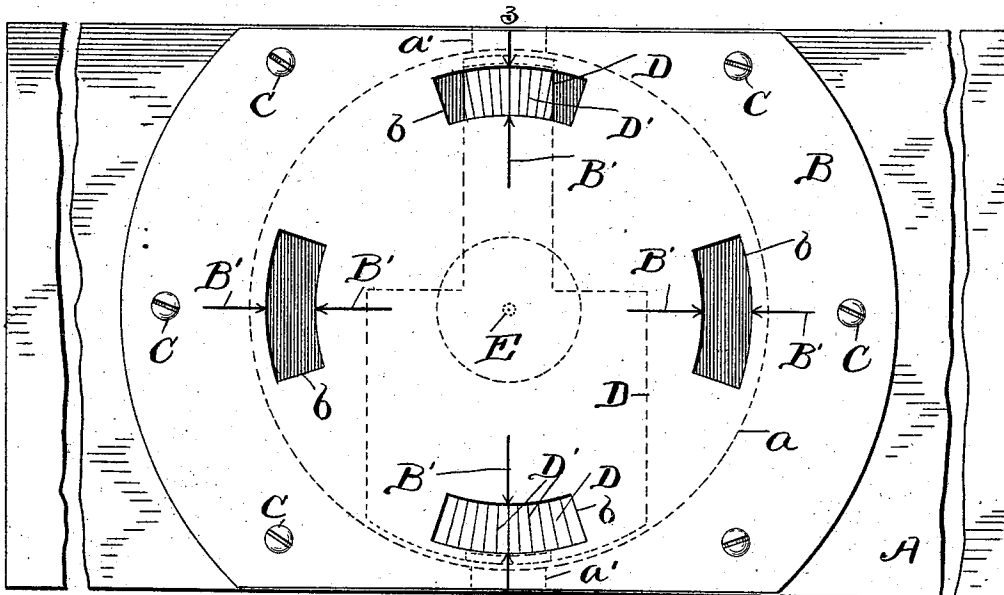
(No Model.)

O. A. WHITE.

COMBINED LEVEL, PLUMB, AND SLOPE INDICATOR.

No. 531,239.

Patented Dec. 18, 1894.



Witnesses:
E. B. Gilchrist
C. W. Jones

Inventor
Oreanus A. White.
By M. D. Siggitt & Co.
his attorneys.

UNITED STATES PATENT OFFICE.

ORSAMUS A. WHITE, OF NORWALK, OHIO.

COMBINED LEVEL, PLUMB, AND SLOPE-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 531,239, dated December 18, 1894.

Application filed August 13, 1894. Serial No. 520,155. (No model.)

To all whom it may concern:

Be it known that I, ORSAMUS A. WHITE, of Norwalk, in the county of Huron and State of Ohio, have invented certain new and useful
5 Improvements in a Combined Level, Plumb, and Slope-Indicator; 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
10 to make and use the same.

My invention relates to improvements in a combined level, plumb, and slope-indicator, the object being to construct a device for the purpose indicated that is not only exceedingly
15 convenient, but that is cheap in construction, and consequently comparatively inexpensive.

With this object in view, my invention consists in certain features of construction, and in combinations of parts hereinafter described
20 and pointed out in the claim.

In the accompanying drawings, Figure 1 is a side elevation of a device embodying my invention, and Fig. 2 is an edge view of the same, portions being broken away in said figures to reduce their size. Fig. 3 is an elevation, mostly in transverse section on line 3—3,
25 Fig. 1. Fig. 4 is a side elevation of the pendulum. Fig. 5 is an elevation showing one end of the pendulum, and Fig. 6 is an elevation showing the opposite end of the pendulum.

Referring to the drawings, A designates the oblong stock or body-portion of the device, the same being composed preferably of wood and having a circular chamber *a* in one side
35 thereof, said chamber being closed at the outer side by a metallic plate B that is preferably removably secured to stock or body-portion A by means of screws C. A pendulum D is pivotally supported within and centrally of
40 chamber *a*. The pendulum consists, preferably, of a metallic plate that is loosely mounted, at its central portion, upon a pin or bearing E rigid with the stock or body-portion of the device. The pendulum is shown detached
45 in Figs. 4, 5 and 6. The same is widened at one end to render that end heavier than the other end, so that the pendulum shall always assume, by gravity, a perpendicular position. Plate B is provided with win-
50 dows or holes *b* through which the pendulum

may be inspected and the pendulum, upon its face, and at each end, is graduated, as at D', preferably by radial lines marked upon the face of the pendulum and bearing distinguishing
55 numbers or characters to indicate the position assumed by the stock or body-portion of the device relative to the pendulum, plate B upon its face adjacent holes or windows *b* being provided with a mark or line B' that is
60 adapted to point out, upon the aforesaid graduated surfaces of the pendulum, the position, as to horizontality or verticality, of the object or surface to which the device or instrument is applied. Windows or holes *b* in plate B are
65 so arranged relative to the pendulum, that the graduations on the face of the pendulum shall be adapted to be seen through said holes or windows. Plate B in the device shown, is provided with four windows or holes *b*, the two
70 located next adjacent to the longitudinal edges of the stock or body-portion of the device, being used in employing the device as a level, and the remaining two windows or holes *b* that are located diametrically opposite each
75 other and centrally widthwise of the device being employed in the use of the instrument as a plumb.

By the construction hereinbefore described, it will be observed that the degree of inclination of any slope can be readily ascertained.
80 Sometimes, however, the surface, whose level or slope is to be indicated is located above the level of the eye and sometimes it is located at an elevation below the level of the eye, or in such places where the face of the device or
85 instrument cannot be conveniently inspected, or, perhaps, cannot be seen at all. To render the instrument useful in cases of this kind I provide a hole *a'* in one or each longitudinal edge of the stock or body-portion of the device,
90 said hole or holes being in open relation with chamber *a*. Each longitudinal edge of the device illustrated is provided with a hole *a'*. The plate of which the pendulum is composed is bent laterally near each end and in the same
95 direction, as at D², and the outer sides of said laterally bent portions of the pendulum are graduated, as at D³, preferably by lines bearing distinguishing marks or characters corresponding with the adjacent graduations on
100

the face of the pendulum, and the arrangement of holes a' in stock or body-portion A relative to the ends of the pendulum is such, that the graduations D^3 upon said ends of the pendulum are adapted to be seen through said holes, each longitudinal edge of stock A being shown provided with a mark or line B^2 that is adapted to point out, upon the aforesaid graduated ends of the pendulum, the position, as to horizontality or verticality, of the object or surface to which the device or instrument is applied longitudinally and edgewise. By means of the laterally extending members of the pendulum, the graduations thereon, and the holes or windows in the longitudinal edges of the stock or body-portion of the device, the position as to horizontality or verticality or slope, of any surface or object, whether above or below the elevation of the eye, can be readily ascertained.

Of course, it is obvious that each longitudinal edge of the stock or body-portion of the device need not necessarily be provided with a hole or window a' , but if only one hole a' were provided it is evident that the device would have to be reversed in changing the same from an operative position below the level of the

eye to a corresponding position at an elevation above the level of the eye.

What I claim is—

A combined level, plumb and slope-indicator, consisting of an oblong stock or body-portion A, chambered as at a , and provided with a hole or window a' in each longitudinal edge and in open relation with the aforesaid chamber; pendulum D pivotally supported centrally of chamber a , said pendulum consisting of a plate bent laterally at each end, and in the same direction, as at D^2 , the face of the pendulum and the outside of the laterally bent members of the pendulum being graduated, as at D^3 , and a plate B closing the outer side of chamber a and provided with holes or windows b and marks or lines B' , all arranged and operating substantially as shown, for the purpose specified.

In testimony whereof I sign this specification, in the presence of two witnesses, this 26th day of July, 1894.

ORSAMUS A. WHITE.

Witnesses:

C. H. DORER,
L. WARD HOOVER.