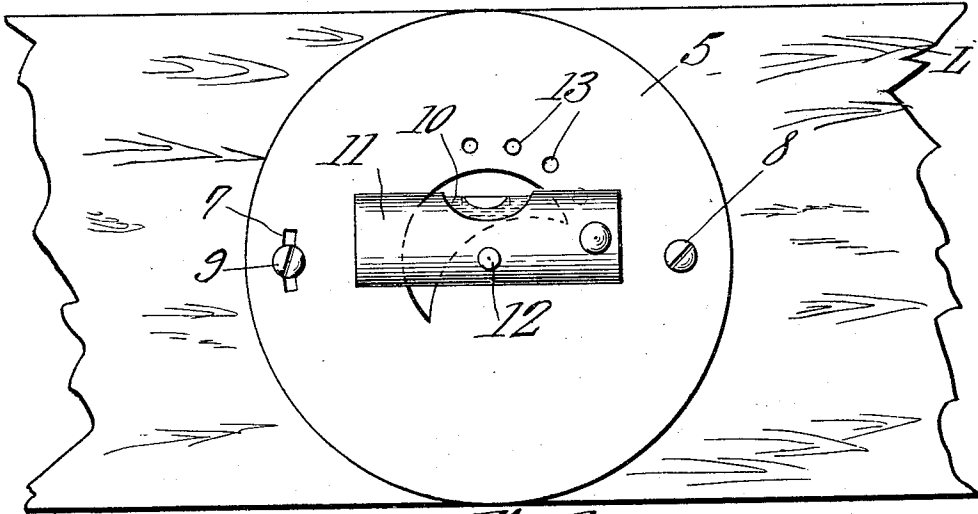


F. W. MERRIMAN.  
LEVEL.

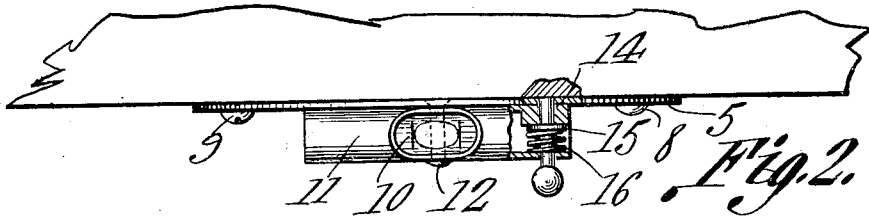
APPLICATION FILED DEC. 5, 1910.

1,007,303.

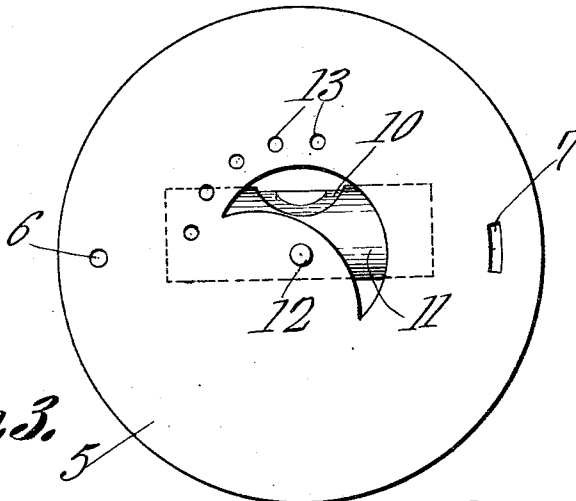
Patented Oct. 31, 1911.



*Fig. 1.*



*Fig. 2.*



*Fig. 3.*

Witnesses

*J. P. Downing*  
*W. L. Smith*

*Frederick W. Merriman*, Inventor

by *C. A. Snow & Co.*  
Attorneys

# UNITED STATES PATENT OFFICE.

FREDERICK WM. MERRIMAN, OF ALAMEDA, CALIFORNIA.

## LEVEL.

1,007,303.

Specification of Letters Patent.

Patented Oct. 31, 1911.

Application filed December 5, 1910. Serial No. 595,686.

### *To all whom it may concern:*

Be it known that I, FREDERICK W. MERRIMAN, residing at Alameda, in the county of Alameda and State of California, have invented a new and useful Level, of which the following is a specification.

It is the object of the present invention to provide an improved combined spirit level and plumb embodied in a simple device which may be readily attached by any one to an ordinary spirit level or other suitable support.

One aim of the invention is to so construct the device that its application to the body of an ordinary spirit level or other support will not necessitate the recessing of the said body nor in fact any change in its construction.

One feature of the invention resides in the means provided for angularly adjusting the support for the spirit tube of the device so that the said support may be held in position to indicate "level," "plumb," and angular adjustment of the body to which it is attached.

A still further feature of the invention resides in so constructing the attaching plate of the device that it may be angularly adjusted upon the support to which it is attached, at the time of its application to the support.

In the accompanying drawings, Figure 1 is a view in side elevation of the device, the same being shown applied to the body of an ordinary spirit level. Fig. 2 is a top plan view, partly in section, Fig. 3 is an elevation of the device removed from the said body of the level and looking at that side opposite the side shown in Fig. 1.

In the drawings, the reference character L indicates an element which may be either the body of a level or some other suitable support for the device embodying the present invention, which device is to be placed upon the market as a distinct article of manufacture and is to be applied to a support such as shown, by the purchaser.

The device of the present invention includes an attaching plate which is indicated by the numeral 5 and while this plate is shown in the drawings as circular in form, it may be of any other suitable contour. The plate is formed with an opening 6 and

opposite this opening with a slot indicated by the numeral 7. In applying the device to the body L, a securing screw 8 is secured through the opening 6 and into the said member L and another securing screw indicated by the numeral 9 is in a like manner secured through the slot 7. The screw 9 is not tightened until the plate 5 has been so adjusted upon the screw 8 as a pivot as to cause the spirit tube, to be presently described, to indicate "level" when adjusted to a predetermined position and the body L is disposed upon a level surface. Both screws 8 and 9 are then tightened so as to hold the plate 5 at this adjustment.

The spirit tube of the device, indicated by the numeral 10, is fixed in a casing 11 and a pivot pin 12 is secured through this casing at a point midway its ends and through the plate 5 at a point midway between the opening 6 and slot 7, the casing being in this manner supported upon the plate for angular adjustment. The plate 5 is formed with an arcuate series of openings 13 and a pin 14 is fitted through one end of the casing 11 and is adapted to have its extremities seat in the openings 13 interchangeably. A collar 15 is secured upon the pin 14 and arranged upon the pin between this collar and one wall of the casing is a spring 16 which serves to hold the extremity of the pin in engagement in any one of the openings 13, as above described. The openings 13 are so arranged that when the pin is seated with its end in one of the openings at the ends of the series, the spirit tube will be in such position as to indicate "level" when the body L is disposed upon a level surface and, that when the pin is engaged with its end in the opening at the other end of the series, the casing 11 will be in a position at right angles to the position just stated, and consequently the spirit tube 10 will be in position to indicate "plumb" when the body L is disposed against an element which is vertical. When the pin is seated with its end in one or another of the openings between the openings above specifically referred to, the spirit tube 10 will indicate when the member against which the element L is disposed is at a predetermined angle such for example as at an angle of 45°. Also it will be readily understood that after the device has been

properly applied to such an element, the casing 11 carrying the spirit tube 10 may be adjusted angularly to indicate plumb, level, and angular positions between these two  
5 points.

What is claimed is:

In a device of the class described, an attaching plate having its opposite faces flat and unencumbered throughout their entire  
10 extents; a spirit tube pivoted to the plate, the distance from the pivot point of the tube to all portions of the periphery of the plate being greater than the distances from the pivot point of the tube to either end of the  
15 tube; there being an opening in the plate

and an elongated slot in the plate, both being adapted for the reception of attaching elements, whereby the plate may be secured to a support; the opening and the slot lying beyond the ends of the tube when the latter  
20 is rotated; and means for securing the tube in adjusted positions upon the plate.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

FREDERICK WM. MERRIMAN.

Witnesses:

W. H. McNAUGHTON,  
D. McNAUGHTON.

---

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

---