

A. M. DAVIES & F. R. HEWITT.
Combined Level, Bevel, and Square.

No. 213,633.

Patented Mar. 25, 1879.

fig. 1.

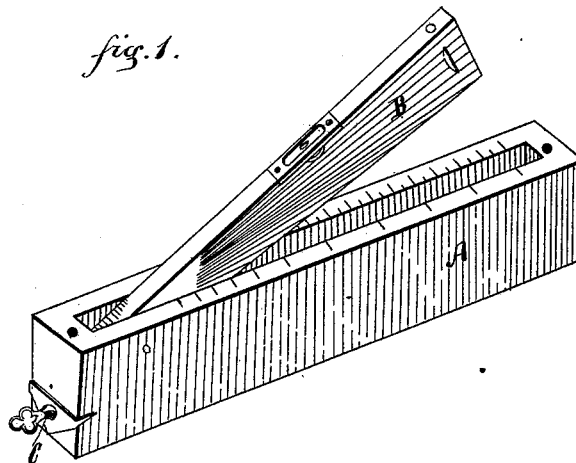


fig. 2.

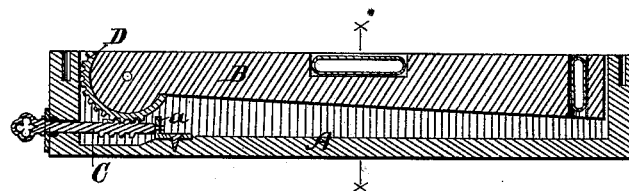


fig. 3.



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UNITED STATES PATENT OFFICE

ADDISON M. DAVIES AND FRANCIS R. HEWITT, OF LYNCHBURG, VIRGINIA.

IMPROVEMENT IN COMBINED LEVEL, BEVEL, AND SQUARE.

Specification forming part of Letters Patent No. **213,633**, dated March 25, 1879; application filed March 14, 1878.

To all whom it may concern:

Be it known that we, ADDISON M. DAVIES and FRANCIS R. HEWITT, both of Lynchburg, in the State of Virginia, have invented a new and useful Improvement in Carpenters' Levels, &c., of which the following is a specification:

The object of our invention is the construction of a carpenter's level which shall be so simple in its construction and exact in operation as to avoid the objectionable qualities incident to most of the devices heretofore used, which are generally so complicated as to require considerable practice before they can be used to advantage, by which much time is lost. They are also liable to be more expensive than my device, which is intended to supply a cheap, exact, and easily-operated instrument, which can be used not only as a level, but as an accurate square and bevel.

Our invention consists in the construction and arrangement of the parts composing our device, and will be fully hereinafter described and claimed.

Referring to the accompanying drawings, Figure 1 is a perspective view; Fig. 2, a longitudinal section; and Fig. 3, a cross-section of the bar.

A represents a bar or block recessed to contain the bar B, which, when at its lowest position, lies flush with the top of the bar A. The bar B is also recessed, and contains therein the glass containing the air-bubble.

The sides of the bar B are marked off with a scale, the lines radiating from a common pivotal point, at which the two bars are secured together by a pin passing through both. The bar A on both sides of the slot or recess is also provided with a scale.

C is a worm journaled at one end in a standard, *a*, in the bottom of the recess in bar A, and at the other end in the end of the said bar, through which it passes, and has on its end a thumb-nut, by which it is operated.

The end of the bar B is slightly enlarged

and curved, and a curved rack, D, placed thereon, which engages with the worm C in such a manner that by turning the thumb-screw the bar B can assume any position from horizontal to perpendicular, moving through an arc of a quarter-circle.

In using this device the instrument is placed on the surface to be leveled, and the thumb-nut turned till the bubble shows that the bar B is level, either horizontally or vertically. A glance at the proper scale will then show the number of degrees or inches from a level.

The device can be used as a square and level by disregarding the air-bubble and using the scales below.

The implement when made of wood should have the edges bound with brass, and can be otherwise finished and ornamented in any manner to suit the taste.

In this manner we construct an implement which answers every purpose of a level, square, and bevel, which, while being perfectly accurate and reliable in use, is so simply constructed that it has the additional merit of being cheap and economical to manufacture.

Having thus described our invention, what we claim as new, and desire to obtain Letters Patent of the United States for, is—

1. The combination, with the recessed bar A, having the worm C, of the bar B, pivoted therein, provided with the curved rack D, and having a spirit-level in its upper part, substantially as and for the purpose set forth.

2. A carpenter's level consisting of two bars, pivoted together and having a worm and rack for operating them, a spirit-level, and graduated scales, all constructed and arranged substantially as described and set forth.

A. M. DAVIES.
F. R. HEWITT.

Witnesses:

A. J. CAMP,
W. MCC. WAUGH.