

J. MORSS & F. B. ABEL.

Improvement in Adjustable Spirit-Levels.

No. 114,027.

Patented April 25, 1871.

Fig. 1.

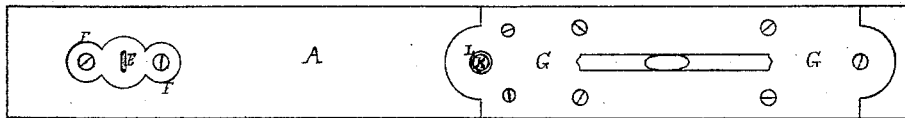


Fig. 2.

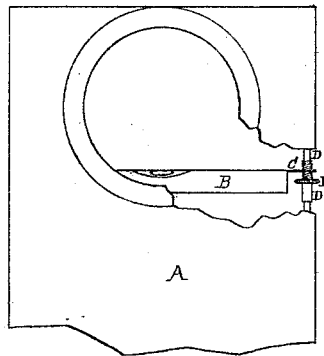
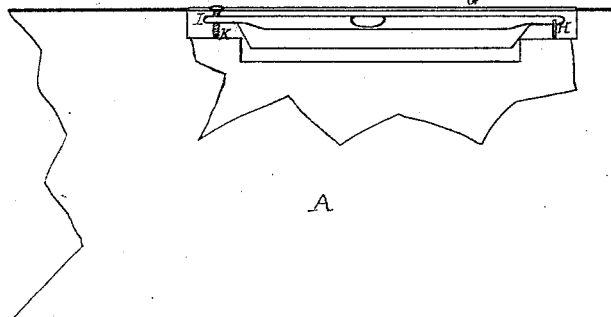


Fig. 3.



Witnesses

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# United States Patent Office.

JOAB MORSS AND FRANKLIN B. ABEL, OF PHILADELPHIA,  
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Letters Patent No. 114,027, dated April 25, 1871.

## IMPROVEMENT IN ADJUSTABLE SPIRIT-LEVELS.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that we, JOAB MORSS and FRANKLIN B. ABEL, both of the city and county of Philadelphia, in the State of Pennsylvania, have invented a certain new and useful Improvement in Spirit-Levels and Plumbs; and we do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use our invention, reference being had to the accompanying drawing which forms a part of this specification, and in which—

Figure 1 is a plan view of our improved spirit-level and plumb;

Figure 2, a side view of part of the same, in which the casing of the plumb is represented as partly broken away so as to show our invention; and

Figure 3, a similar view of the level.

The same parts are denoted by the same letters in all the figures.

A represents a level-stock, containing a spirit-level, which is shown on the right-hand in fig. 1, the plumb being on the left.

To the bubble-glass B of the plumb, or to the bottle-box which protects it, is attached the lug C, through which passes the worm-spindle D.

A small milled wheel, E, is firmly attached to this spindle, and partially projects through a slot in the plate F, which covers these devices, as shown in fig. 1. The slot is of such size that, when the plate is screwed down, its edges press against the periphery of the wheel and prevent it from turning.

The level is covered by a plate or shield, G, and the bottle-box, which contains the bubble-glass, is pivoted at H to the level-stock, as shown in fig. 3.

Through the lug I on the bottle-box passes the adjusting-screw K, above the head of which is a circular

opening, L, in the shield, as a little less in diameter than the screw-head.

The operation of these devices is as follows:

When it is desired to adjust the plumb the screws which hold the plate F are loosened, so as to permit the wheel E to be revolved; and by turning this wheel, the level-stock being in the position shown in fig. 2, the lug C is raised or depressed by the worm on the spindle D, thereby raising or depressing the adjacent end of the bubble-glass. When the adjustment is completed the plate F is screwed down and the bubble-glass thereby secured in position.

To adjust the level the stock is placed in the position shown in fig. 3, the screws which hold the shield G loosened, and the adjusting-screw K turned through the aperture L by a screw-driver. When the adjustment is completed the shield is screwed down, thereby clamping the adjusting-screw and bubble-glass in position.

What we claim as our invention, and desire to secure by Letters Patent of the United States, is—

1. The combination, with the bottle-box and adjusting-screw, of a plate or shield which operates to hold the said screw in position, as described.

2. The combination, with the bottle-box and adjusting-screw, of a plate or shield which operates to hold the said screw in position, and is provided with an aperture through which the said screw may be turned.

3. The combination of the plate F, wheel E, spindle D, and bubble-glass B, operating as shown and described.

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Witnesses:—

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