

T. McWATERS.  
Spirit-Level.

No. 217,633.

Patented July 15, 1879.

Fig. 1.

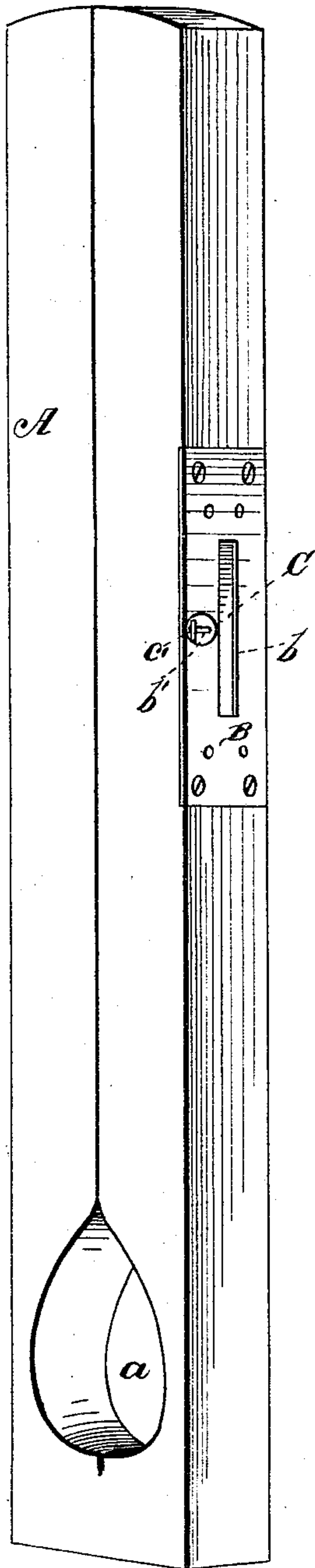


Fig. 2.

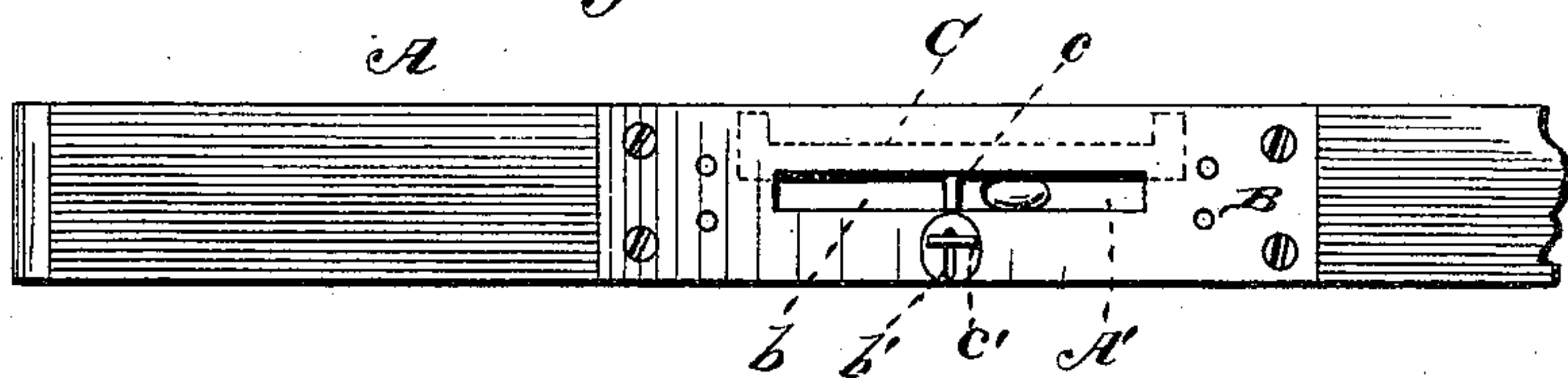


Fig. 3.

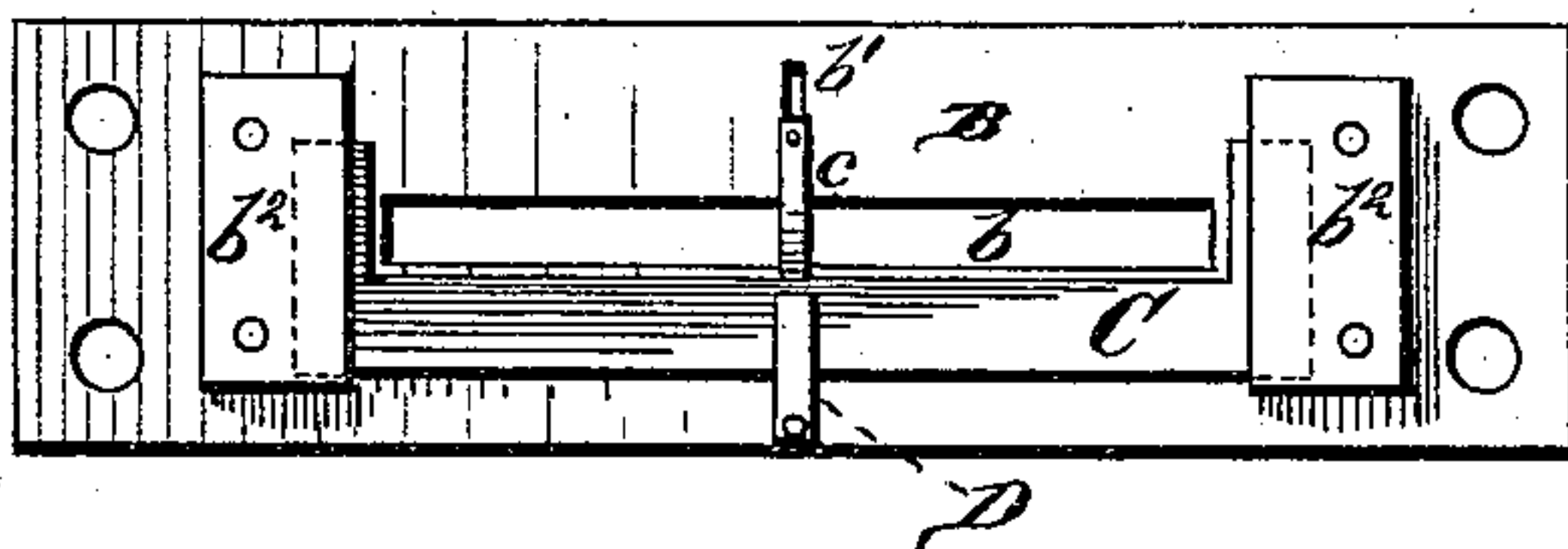
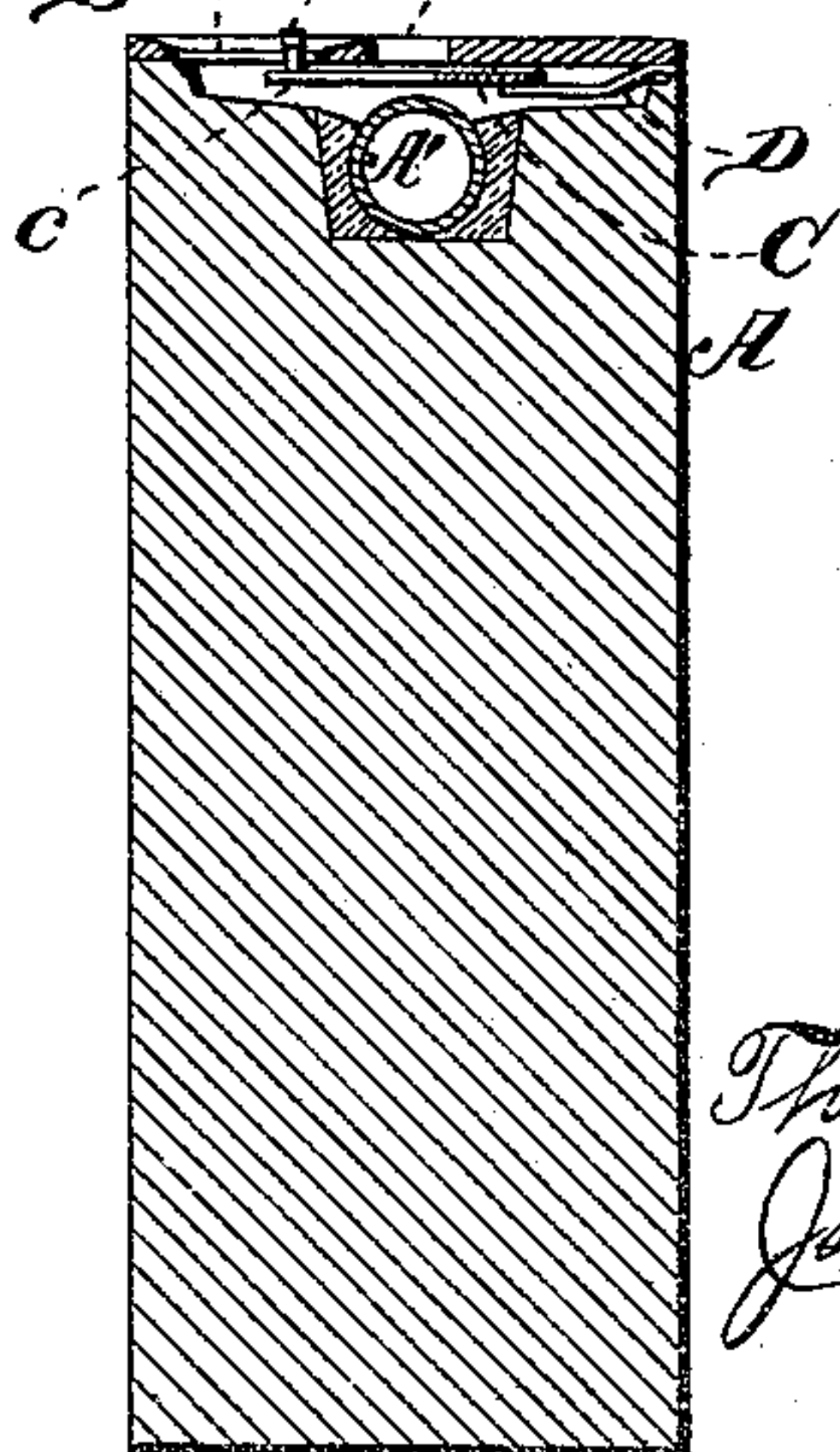


Fig. 4.



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# UNITED STATES PATENT OFFICE.

THOMAS McWATERS, OF WASHINGTON, DISTRICT OF COLUMBIA.

## IMPROVEMENT IN SPIRIT-LEVELS.

Specification forming part of Letters Patent No. **217,633**, dated July 15, 1879; application filed June 5, 1879.

*To all whom it may concern:*

Be it known that I, THOMAS McWATERS, of Washington, in the county of Washington and District of Columbia, have invented certain new and useful Improvements in Spirit-Levels; 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to spirit-levels; and consists in providing the same with a sliding guard to protect the bulb containing the liquid from being broken when not in use, or when used for other purposes, and also serves as a level-indicator or central mark for a spirit-level.

Heretofore spirit-levels have been constructed in such a manner that the bulb was liable to be broken when plumbing rough walls and the like; the object of mine being to provide a cheap and easy means for protecting the bulb, and also preserving the liquid contained therein when exposed to the rays of the sun.

Referring to the drawings, Figure 1 is a representation of a front elevation of my spirit-level. Fig. 2 is a top view of the same. Fig. 3 is an interior bottom view, and Fig. 4 is a transverse sectional view.

The letter A on the drawings represents the body of an ordinary spirit-level, provided with the usual bulb A'.

B represents the face or top plate, provided with a central longitudinal slot, *b*, and a transverse guide-slot, *b*<sup>1</sup>, centrally located in said plate B.

C represents the sliding guard, working in guideways *b*<sup>2</sup> *b*<sup>2</sup>, and provided with an indicating-arm, *c*, said arm *c* being provided at its outer end with a button or thumb-piece, *c*', which facilitates the sliding of the guard C.

The button *c*' is sunk in the plate B to produce a smooth surface, and also to act as a protection for said button or thumb-piece *c*', to prevent its being damaged when used as a plumb-bob or for other purposes.

D represents a friction-spring for retaining the guard in any desired position.

The body of my spirit-level is also provided at or near one end with an opening, *a*, to receive the bob when being used for plumbing.

I am aware that a cover to a spirit-level, as shown in Patent No. 162,641, is not new, and I therefore make no claim to such; but,

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A spirit-level constructed, as described, with a combined guard and level-indicator, adapted to slide back and forth with the guard, as and for the purposes specified.

2. In a spirit-level, the combination of the body A, bulb A', opening *a*, plate B, longitudinal slot *b*, transverse slot *b*<sup>1</sup>, guideways *b*<sup>2</sup> *b*<sup>2</sup>, sliding guard C, indicator *c*, button *c*', and friction-spring D, as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 4th day of June, 1879.

THOMAS McWATERS.

Witnesses:

JAMES T. POWELL,  
GEORGE B. CORKHILL.