

(No Model.)

J. E. WORRELL.
PLUMB LEVEL.

No. 500,452.

Patented June 27, 1893.

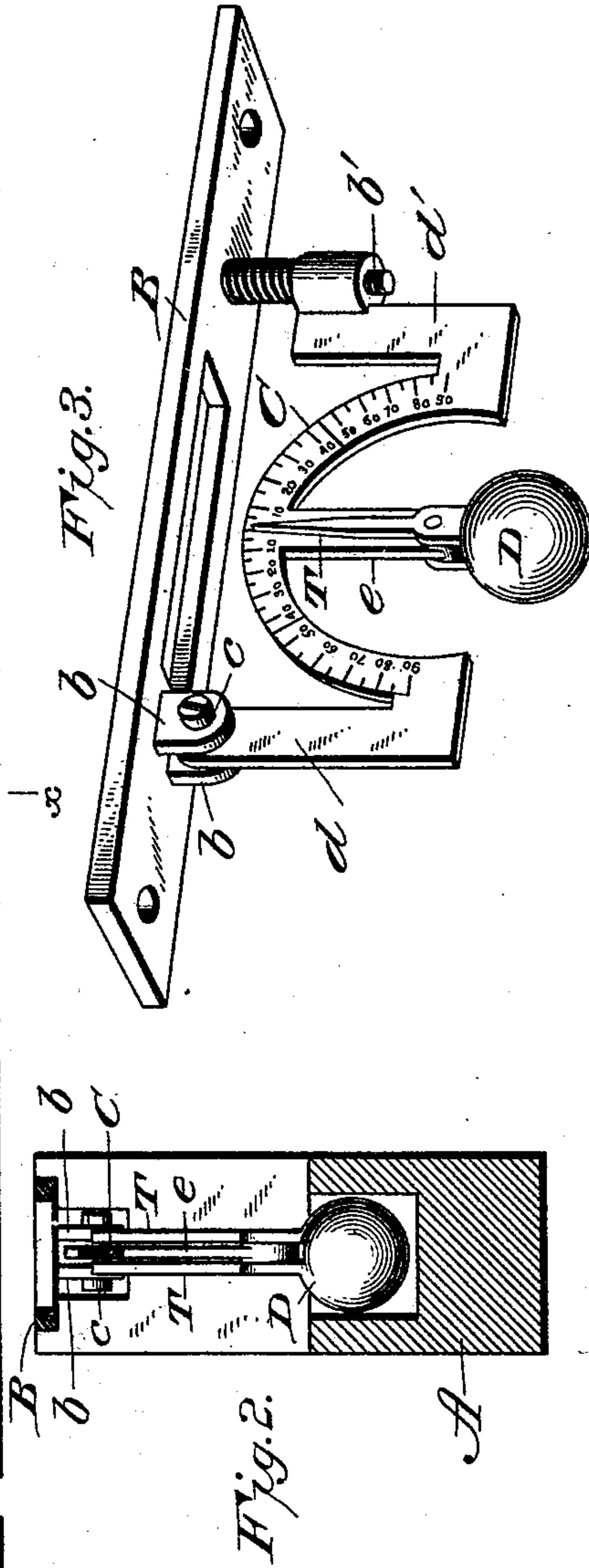
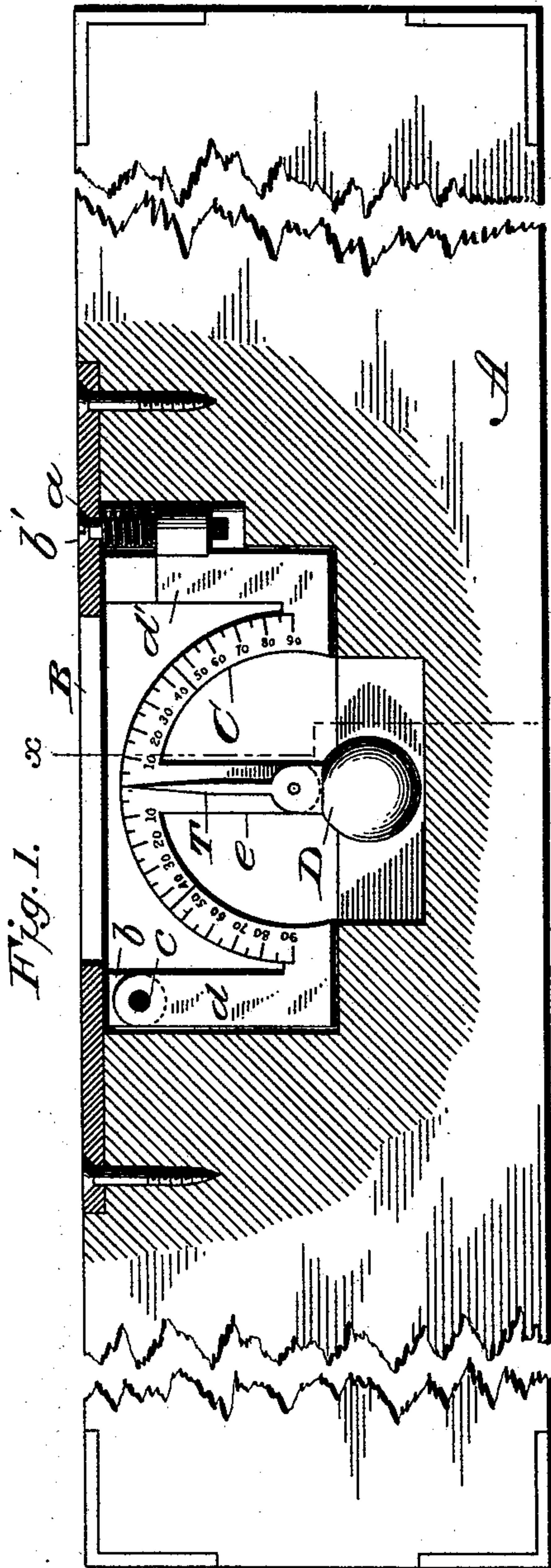
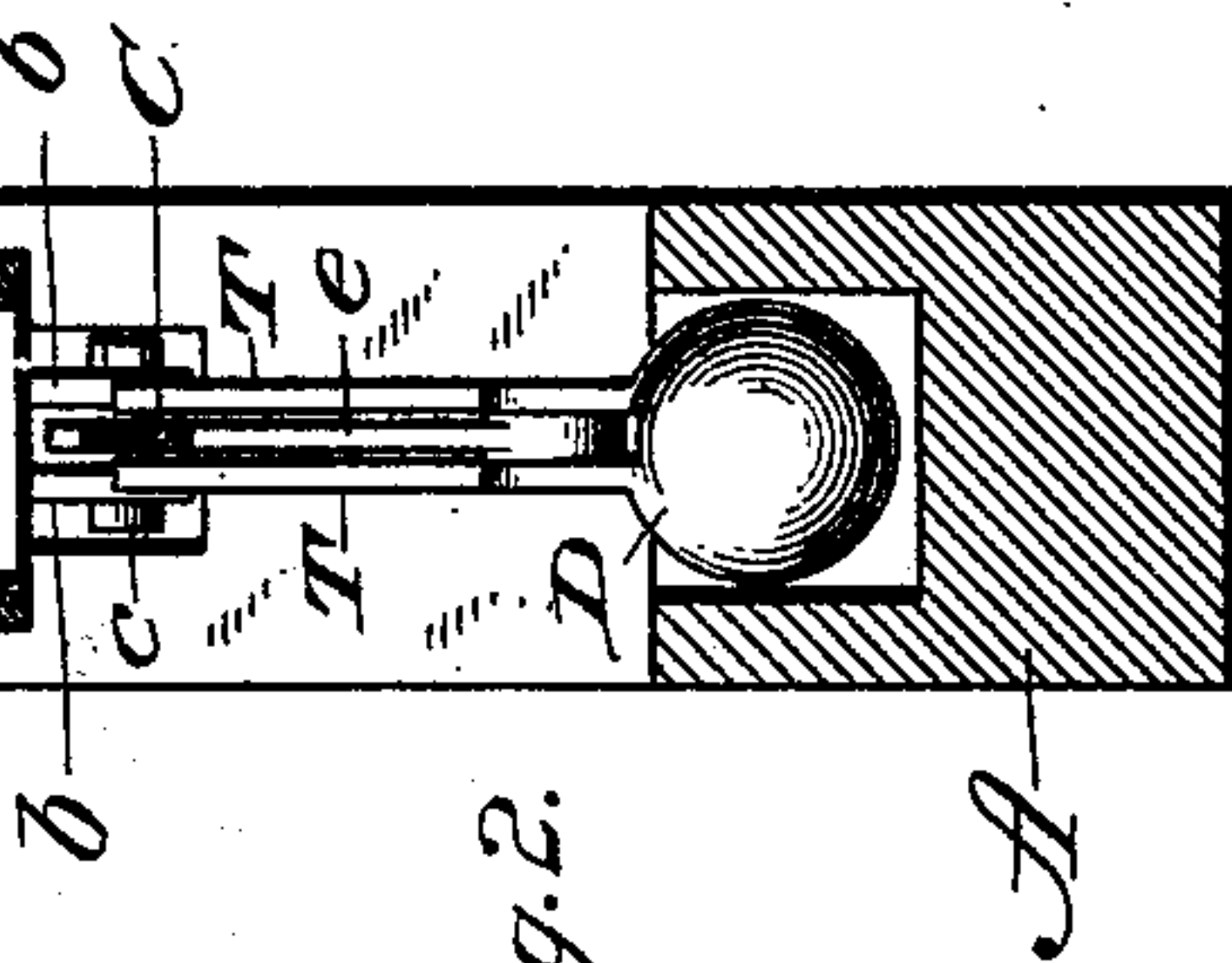


Fig. 3.

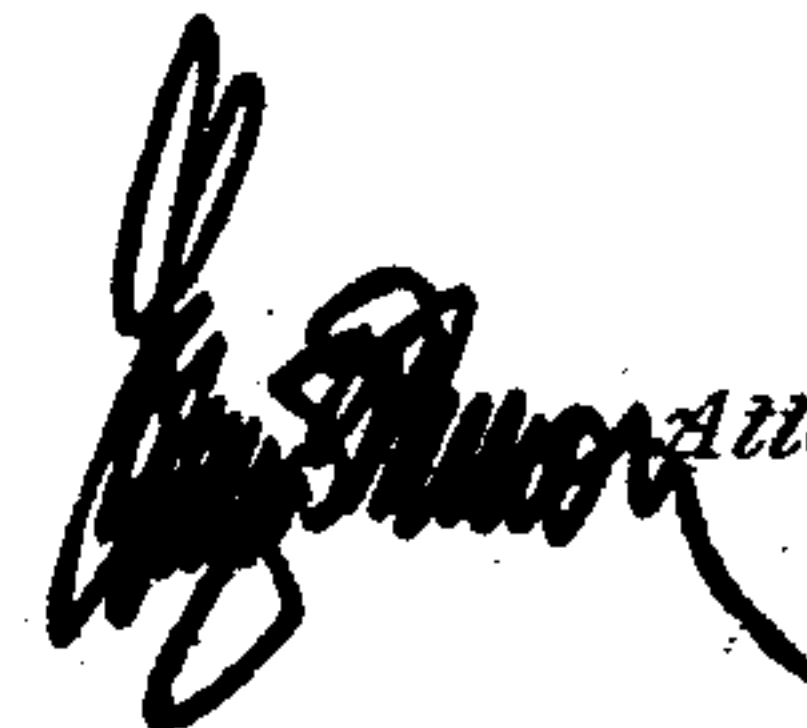


WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN E. WORRELL, OF JEFFERSONVILLE, INDIANA.

PLUMB-LEVEL.

SPECIFICATION forming part of Letters Patent No. 500,452, dated June 27, 1893.

Application filed March 16, 1893. Serial No. 466,360. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. WORRELL, a citizen of the United States of America, residing at Jeffersonville, in the county of Clark and State of Indiana, have invented certain new and useful Improvements in Plumb-Lev-
els; 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.

The object of this invention is provide a plumb-level with a protractor which is adjustably attached to a plate secured to the staff, so that the dial can be accurately adjusted, the plumb-bob and pointer being
pivoted to said dial; and the invention consists in the construction and combination of the parts, as will be hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation broken away to better show the construction of my improvement. Fig. 2 is a sectional view through the line $x-x$ of Fig. 1. Fig. 3 is a detail perspective view.

A designates the level-block or staff, which may be of ordinary construction with the corners protected by metallic angle plates as shown. The central part of the staff is cut away as shown, beyond which recesses are provided to receive the plate B, dial C, and plumb-bob D. The plate above and on a line with the dial is provided with an aperture in which is fitted a glass plate, and on each side of the dial a glass plate is attached to the staff. The plate B is provided with apertures through which the securing bolts pass, and with an aperture a through which passes a set-screw, the purpose of which will be hereinafter set forth.

$b b$ designate depending lugs formed on the plate B, the lower ends of said lugs being apertured to receive a pivot-pin c , which passes through an upwardly projecting member d , formed integral with the dial. The opposite end of the dial also has an upwardly projecting member d' , the upper end of which is enlarged and provided with a threaded aperture with which the set-screw b' is adapted to engage, said set-screw being encircled by
a helical spring which bears against the un-

der side of the plate B and against the enlarged end of the member d' to retain the dial in its adjusted position.

The dial has centrally a depending member e upon which is hung a weight or plumb-bob D, said plumb-bob being formed with pointers T T, which are adapted to move over the graduations on the dial, as will be readily understood.

Should for any reason the dial be moved out of proper line with the staff it can be adjusted by turning the set-screw b' .

I am aware that prior to my invention it has been proposed to provide a plumb-level with an adjustable plate from which hangs a pointer-weight adapted to move over graduations on a quadrant, and I do not claim broadly a plumb-level having the gage or registering mechanism adjustable, but

What I do claim as new, and desire to secure by Letters Patent, is—

1. In combination with a staff A cut away and recessed for the reception of a plate B and dial, a dial pivotally attached to the plate at one end and adjustably at the other, the dial having centrally a depending member from which is suspended a weight carrying pointers, substantially as shown, and for the purpose set forth.

2. In combination with a staff A, a plate B rigidly secured thereto and provided with depending lugs, a dial having upwardly projecting end members, one of said members being held in pivotal engagement with the lugs while the other member is engaged by a set screw, said set-screw being encircled by a helical spring, together with a weight pivoted to the dial and provided with pointers which move over the graduations, substantially as shown, and for the purpose set forth.

3. In a plumb-level, the combination of a plate having a central sight-aperture, an aperture a through which passes a set-screw b' , and lugs $b b$, together with a dial C having end members d and d' and a central depending member e , and a weight d provided with pointers T T, the parts being organized substantially as shown, and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN E. WORRELL.

Witnesses:

F. J. LINDLEY,
M. N. HALL.