

(No Model.)

C. F. RICHARDSON.
SPIRIT LEVEL.

No. 570,056.

Patented Oct. 27, 1896.

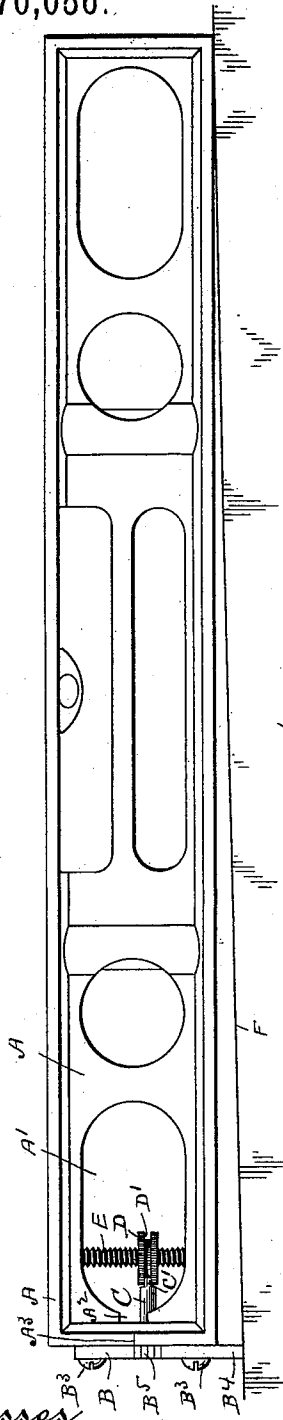


Fig. 1.

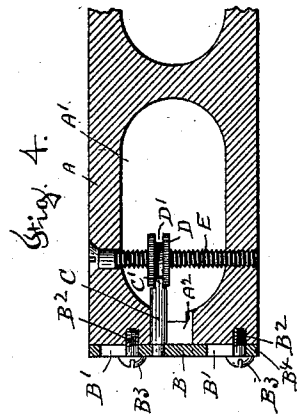


Fig. 4.

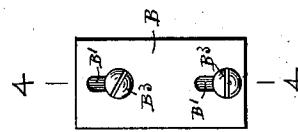


Fig. 3.

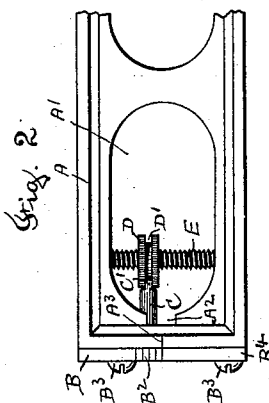


Fig. 2.

Witnesses
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By his Attorney

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UNITED STATES PATENT OFFICE.

CHARLES F. RICHARDSON, OF ATHOL, MASSACHUSETTS.

SPIRIT-LEVEL.

SPECIFICATION forming part of Letters Patent No. 570,056, dated October 27, 1896.

Application filed February 1, 1896. Serial No. 577,768. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. RICHARDSON, a citizen of the United States, residing at Athol, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Spirit-Levels, of which the following is a specification, reference being had to the accompanying drawings, forming a part of the same, in which—

Figure 1 represents a side view of a spirit-level embodying my improvement. Fig. 2 is a side view of one end of my improved level. Fig. 3 is an end view; and Fig. 4 represents a portion of the level shown in sectional view on line 4 4, Fig. 3.

Similar letters refer to similar parts in the different figures.

The object of my present invention is to provide means for varying the position of one end of the level with reference to its supporting-surface, whereby the inclination of the surface upon which the level is supported may be determined; and it consists in providing one end of the level with a sliding plate capable of being moved below the bottom surface of the level and in means for actuating the same, whereby it is moved and locked in position by the same device.

A denotes the frame of a spirit-level embodying my improvement.

B is a sliding plate provided with slots B' B', through which screws B² B², having heads B³, pass and enter the end of the frame A, allowing the plate B to slide freely on the screws B².

The frame A is provided with an opening A' and also with a slot A² between the opening A' and the end of the frame to receive an arm C, which is held in the plate B and extends into the opening A' and having its inner end flattened, as at C', and entering an annular groove D' in the circular nut D, which is carried upon a screw E, held in a fixed position in the frame A. By raising the nut D on the screw E in the position shown in Fig. 4 the arm C is moved to the upper end of the

slot A² and the plate B is made to coincide with the end of the frame A, allowing the level to be used in the ordinary manner. By moving the nut D downward upon the screw E the sliding plate B is moved downward, bringing its lower end B⁴ below the bottom surface of the frame A and forming a support for the end of the level, as represented in Fig. 1, thereby raising that end of the level to correspond with the inclination of the surface F upon which the level is supported. The edge of the sliding plate B is graduated at B⁵, and the frame A of the level is provided with an indicator-mark A³, in order to indicate the amount of inclination of the supporting-surface F in the length of the frame A.

I am aware that a sliding plate attached to the end of a spirit-level for the purpose of providing a support by which the end of the level is raised is not new, and I do not claim such broadly. By means of my present invention I am able to adjust the position of the sliding plate by means of a "screw-feed," which not only enables the plate to be moved through very minute distances, but also holds it against displacement without the use of other tightening or locking devices.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination with the frame of a spirit-level, provided with an opening A' near its end and a slot A² between said opening and the end, of a sliding plate capable of sliding vertically upon the end of the level, an arm C projecting from said sliding plate through said slot into said opening, a fixed screw held in the frame of the level parallel with said sliding plate and passing through said opening and a grooved nut held in said screw and engaging said arm, substantially as described.

Dated the 28th day of January, 1896.

CHARLES F. RICHARDSON.

Witnesses:

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