F. BUTLER.

SPIRIT LEVEL.

APPLICATION FILED FEB. 10, 1915.

1,153,760.

Patented Sept. 14, 1915.

Fig. 1,

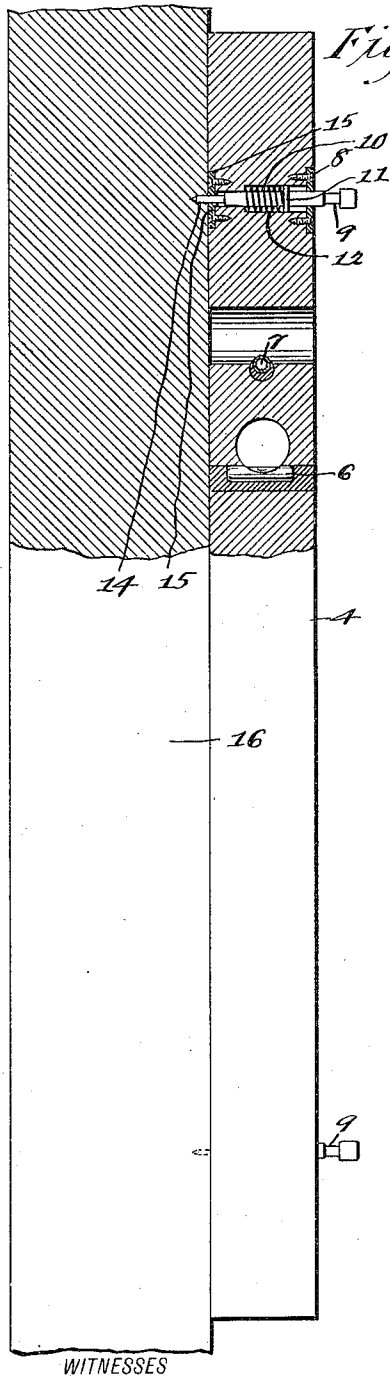


Fig. 2,

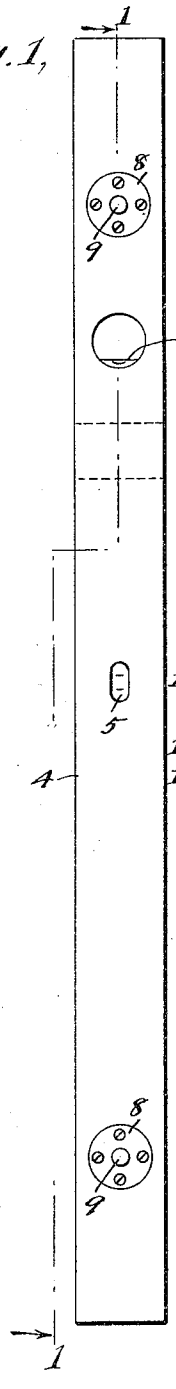
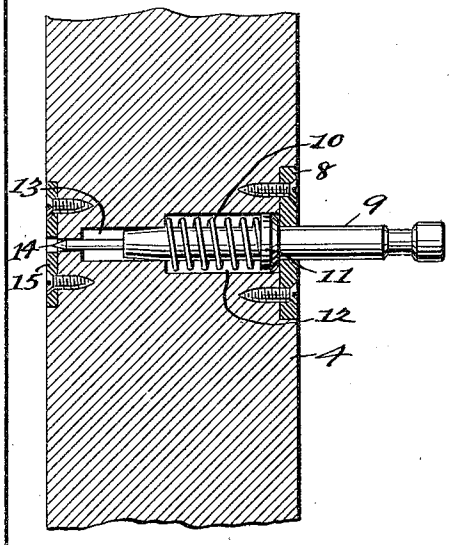


Fig. 3.



WITNESSES

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SPIRIT-LEVEL.

1,153,760. Specification of Letters Patent. Patented Sept. 14, 1915.

Application filed February 10, 1915. Serial No. 7,322.

To all whom it may concern:

Be it known that I, FRANK BUTLER, a citizen of the United States, and a resident of Oxnard, in the county of Ventura and State of California, have invented certain new and useful Improvements in Spirit-Levels, of which the following is a specification.

My invention relates to levels and plumbs, and one of the main objects thereof is to provide means whereby it is possible to level or plumb any board, post, or timber without removing the device from its first seat, providing the article being adjusted has parallel faces or lines.

A further object is to provide means whereby the device may be fastened to the article being adjusted, temporarily, thus permitting the free use of both hands of the operator in adjusting the said article; and further objects are to provide such devices which are simple in construction and use, highly efficient, capable of a wide range of use, and comparatively inexpensive.

My invention is fully described in the following specification, of which the accompanying drawings form a part, in which like reference characters are used to designate like parts in each of the views, and in which:—

Figure 1 is a side view of my device applied to a length of timber, partly in section, for use as a plumb; Fig. 2 is a face view thereof, on its upper edge; and Fig. 3 is an enlarged, sectional, view of the holding means which I employ, but in released position as distinguished from the holding position shown in Fig. 1.

In the drawings forming a part of this application I have shown a preferred embodiment of my invention, comprising the usual strip or block 4 of suitable material in common use for levels and plumbs, said block having a spirit level tube 5, and two plumbing spirit tubes 6 and 7 arranged perpendicular to each other and in parallelism with the corresponding sides or edges of said block. This double arrangement of the tubes 6 and 7 permits a test in or for two vertical planes perpendicular to each other at the same time to accurately plumb a post, timber, or the like.

Adjacent each end of the block 4. in the upper face thereof, is a plate 8 having a pin 9 passed therethrough and movable therein, said pin projecting normally well above the upper face of said block and the respective plate 8; this position of each pin is insured through the medium of a coil spring 10 on said pin, between a flange 11 thereon and the bottom of a bore 12 in said block, said pin passing through a reduced bore 13 and being itself reduced in diameter to provide a pointed end 14 guided in a plate 15 in the bottom of the block 4.

The spring 10 normally forces the flange 11 against the plate 8 which limits the movement of the pin 9 upwardly, and the downward movement of said pin is limited by said flange as will be seen. The pointed end 14 is normally within the bottom surface of the block 4, as shown in Fig. 3, thus preventing scratching of the surface of an article against which my device may be placed.

In practice, I place the device in a desired position on a post or other article which I desire to bring into a vertical or horizontal position, as shown at 16, Fig. 1, and then tap the heads of the pins 9 with a hammer to drive the pointed ends of said pins into the post 16, or other article, and my device is thus temporarily locked to said post which may then be adjusted until it is in true perpendicularity with a previously tested horizontal beam or equivalent; this is possible, as stated, because of the perpendicularly arranged spirit tubes 6 and 7, whereas the tube 5 had been employed to test the horizontal beam or the like. After a test has been successfully made or the adjustment of a timber accomplished, the pins 9 may be withdrawn from the timber and the device used in the conventional manner.

I do not seek to confine myself to any specific materials, size, shape, or finish of the device or any parts thereof, my intent being as stated in the first paragraph of this specification.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

A device of the class described, comprising a block provided with spirit tubes in desired relationship therewith and with each other, each end of said block having three bores on the same axis from one edge thereof to the other of progressively increased diameters, a pin provided with a shoulder adjacent one edge of said block and with a reduced member slidable in the bore of least diame-

ter, said pin fitting in the bore of intermediate diameter and the shoulder thereof being within the bore of greatest diameter, said pin projecting beyond said block on the edge adjacent the bore of greatest diameter, a spring in said last named bore coiled around said pin and normally maintaining said shoulder toward the adjacent edge of said block and said reduced member within the bore of least diameter, a guide plate provided with an opening in register with said bore of least diameter, and a guide plate having an opening on the axis of said bores of less diameter than that of said shoulder.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK BUTLER.

Witnesses:

EDWARD J. MCMANIS,

C. A. GUEDEMANN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."