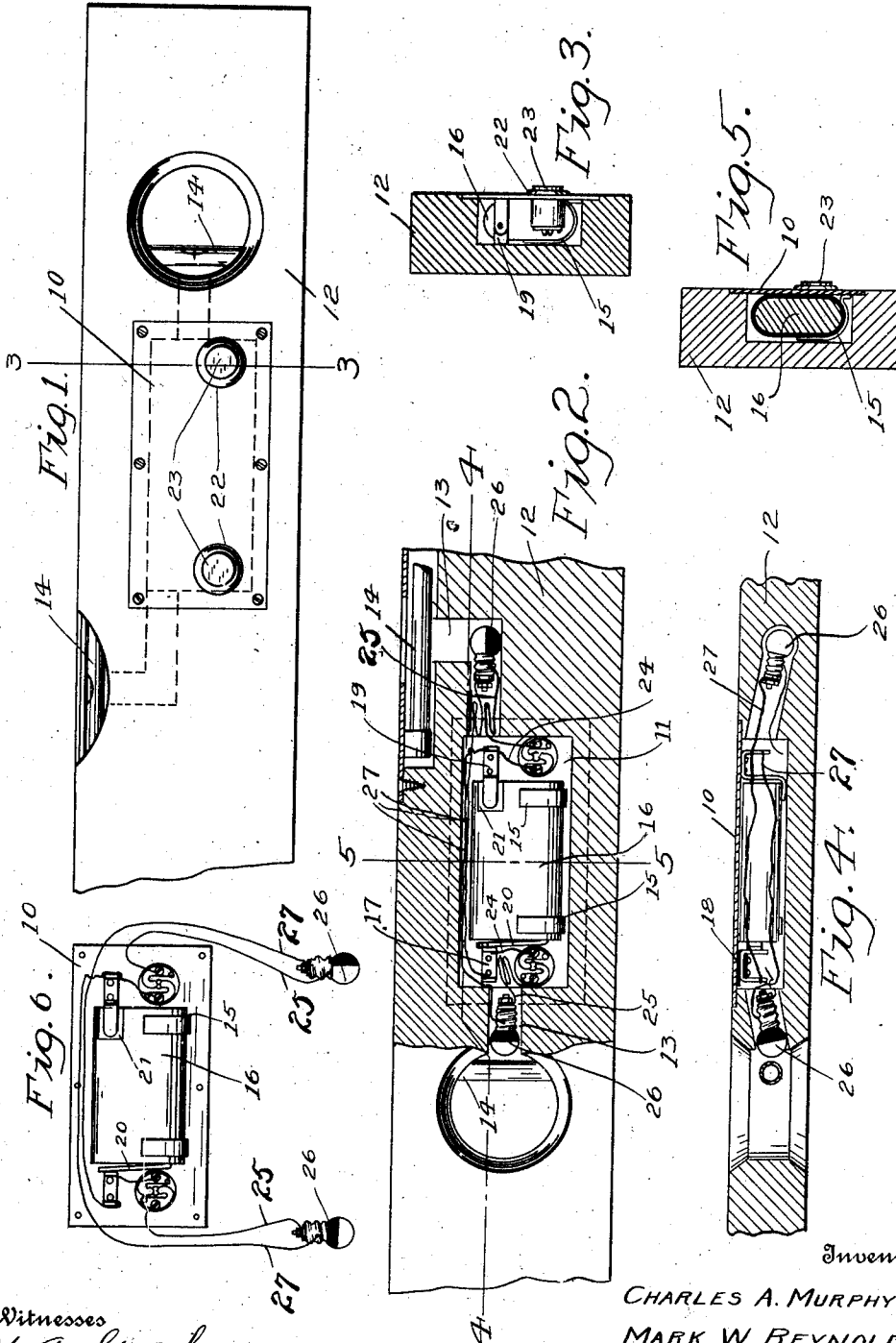


C. A. MURPHY & M. W. REYNOLDS.
ILLUMINATED SPIRIT LEVEL.
APPLICATION FILED NOV. 13, 1911.

1,043,128.

Patented Nov. 5, 1912.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES A. MURPHY AND MARK W. REYNOLDS, OF OAKLAND, CALIFORNIA.

ILLUMINATED SPIRIT-LEVEL.

1,043,128.

Specification of Letters Patent.

Patented Nov. 5, 1912.

Application filed November 13, 1911. Serial No. 659,898.

To all whom it may concern:

Be it known that we, CHARLES A. MURPHY and MARK W. REYNOLDS, citizens of the United States, residing at Oakland, in the county of Alameda and State of California, have invented certain new and useful Improvements in Illuminated Spirit-Levels, of which the following is a specification.

This invention relates to spirit levels of the type which carpenters use and the principal object of the device is to provide an improved attachment which may be applied by any one skilled in the art to any of the ordinary wooden levels, the purpose of the attachment being to provide for the illumination of the bubble in the level vial whether the same be for the plumb or for the level proper.

With the above and other objects in view the invention consists of certain novel features of construction and combinations of parts as will be hereinafter fully illustrated in the accompanying drawings, described in the specification and specifically set forth in the claim.

In the accompanying drawings, like characters of reference indicate like parts in the several views, and: Figure 1 is a side elevation of the level. Fig. 2 is a fragmentary sectional view showing the illuminating means mounted in the level. Fig. 3 is a section along the line 3-3, Fig. 1. Fig. 4 is a section along the line 4-4, Fig. 2. Fig. 5 is a section along the line 5-5, Fig. 2. Fig. 6 is a view in elevation showing the attachment separate from the body of the level.

This attachment consists of a plate 10 which is intended to serve as a cover plate for a recess 11 formed in the level 12, the recess having openings 13 leading therefrom to points adjacent the vials 14. Secured to the plate 10 are clips 15 for the reception of a battery 16. Adjacent this battery there is mounted a contact member 17 which is in-

sulated from the plate by insulation 18. There is also provided a second contact member 19. The first of these contact members engages one pole as at 20 of the battery while the second member engages the other pole 21. Mounted in insulated casings 22 are push buttons 23 of the ordinary type and attached to these push buttons are the ends of wires 24. From each push button a wire 25 runs to and is soldered to a lamp 26. From each lamp a wire 27 extends to one pole of the battery. The other wires 24 from the push buttons are connected to the opposite poles of the battery. The lamps are located in the openings 13 so that when the push buttons are closed by pushing thereon the circuit will be closed through the respective lamp according to the button pushed and the bubble of the level vial will be thereby illuminated.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

Having thus described the invention, what is claimed as new, is:

An attachment for a level having a recess in its side and openings leading therefrom to points adjacent the level vials, said attachment comprising a cover plate for said recess, battery clips carried thereby, battery contacts mounted on the plate, push buttons mounted on said plate, wires connecting said push buttons and contacts, other wires leading from said contacts and push buttons, and lamps adapted to fit within said openings soldered to said wires.

In testimony whereof we affix our signatures in presence of two witnesses.

CHARLES A. MURPHY.
MARK W. REYNOLDS.

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