No. 802,879. PATENTED OCT. 24, 1905.

A. J. PERKS.

SPIRIT LEVEL ATTACHMENT.

APPLICATION FILED JULY 23, 1904.

Fig. 1

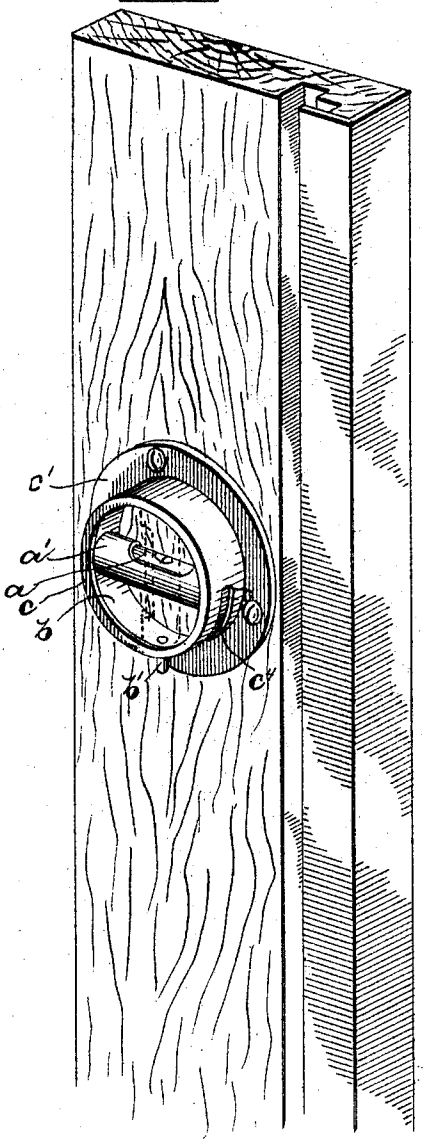


Fig. 2.

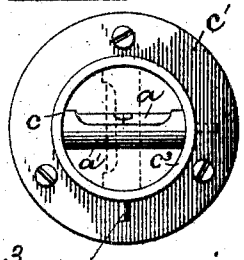


Fig. 3.

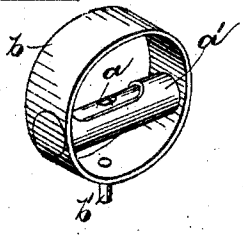


Fig. 4.

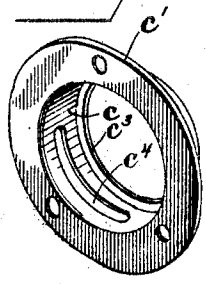


Fig. 5

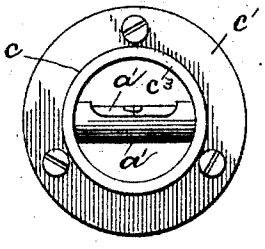


Fig. 6

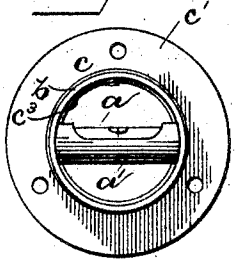
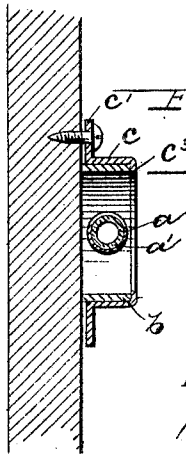


Fig 7



WITNESSES:

J. Llewellyn Walker

Chas. T. Mich

INVENTOR.

Albert J. Perks

BY

Staley & Bowman

ATTORNEYS

UNITED STATES PATENT OFFICE.

ALBERT J. PERKS, OF SPRINGFIELD, OHIO, ASSIGNOR TO WEBSTER & PERKS TOOL CO., A COPARTNERSHIP COMPOSED OF ALBERT J. PERKS AND HERMAN VOGES, JR., OF SPRINGFIELD, OHIO.

SPIRIT-LEVEL ATTACHMENT.

No. 802,879. Specification of Letters Patent. Patented Oct. 24, 1905.

Application filed July 23, 1904. Serial No. 217,793.

To all whom it may concern:

Be it known that I, ALBERT J. PERKS, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Spirit-Level Attachments, of which the following is a specification.

My invention relates to improvements in spirit-levels; and the object of my invention is to provide a simple device of this character which can be readily attached to any article with which it is desired to be used—for instance, the straight-edges now in common use by wall-paper hangers.

My invention consists in the constructions and combinations of parts hereinafter described, and set forth in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a device embodying my invention shown attached to the article with which it is designed to be used, the article illustrated being a straight-edge for paper-hangers. Fig. 2 is a top plan view of the same. Figs. 3 and 4 are perspective views of parts of the same detached. Fig. 5 is also a top plan view with the adjustable feature removed. Fig. 6 is a bottom plan view of the device. Fig. 7 is a vertical sectional view of the device shown attached to the straight-edge or other tool.

Like parts are represented by similar letters of reference in the several views.

In the accompanying drawings, a represents the level-glass or bubble-tube, which is inclosed in a tubular metallic casing a', cut away at one side in the usual way to expose the tube or glass. The bubble-tube and its casing is supported by a ring b, being secured therein in any desirable way. Surrounding the supporting-ring b is a retaining-frame c, the inner edge of which is provided with an outwardly-extending flange c', perforated, as shown, for the reception of screws or other securing devices. The opposite or outer edge of the retaining-frame c is provided with an inwardly-extending flange c^3. The supporting-ring b is adapted to fit snugly within the said retaining-frame, but is free to revolve therein, and is made of slightly greater depth than the distance between the inner side of the flange c^3 and the inner edge of said frame, as shown in Fig. 7. When the frame is secured in position to the article with which the device is to be used, the flange c^3 will bear against the outer edge of the supporting-ring b, and thus clamp the same firmly in position.

In order that the device may be used either as a plumb or level, I have provided means for giving the bubble-tube-supporting ring b a quarter-turn, or moving it a distance of ninety degrees in its retaining-frame. To the ring b is secured a laterally-projecting pin or handle b', adapted to extend through a slotted opening c^4, formed in the periphery of the retaining-frame c, the said slotted opening extending around the periphery of said frame a distance of one-fourth the circumference thereof, or ninety degrees. When the parts are assembled in position, the relation of the slot to the pin will be such that one end of the slot will form a stop or abutment for the pin to bring the bubble-tube parallel with the horizontal plane of the straight-edge or other article with which the device is to be used, and the other end of the slot will form a stop or abutment to arrest the pin at such point as will bring the bubble-tube parallel with the longitudinal plane of the article.

As the parts wear the screws can be tightened to keep the desired friction between the supporting-ring and the clamping-flange on the retaining-frame to permit the said ring to turn freely in said frame, but at the same time to insure its being held in its adjusted position.

The retaining-frame and supporting-ring, as well as the metallic casing surrounding the bubble-tube, may all be formed from sheet metal, and the device is not only very simple and easy to construct, but may be very readily applied to a straight-edge or other article.

Having thus described my invention, I claim—

1. In a leveling instrument, a bubble-tube, a supporting-ring for same, a retaining-frame for said ring, means for securing said frame to the article to which it is to be applied, and an inwardly-extending flange on said frame to adjustably clamp said ring in position on said article, substantially as specified.

2. In a leveling instrument, a bubble-tube, a supporting-ring for same, a retaining-frame surrounding said ring and means for securing said frame to the article to which it is to be applied, and an inwardly-extending flange on said frame adapted to bear on said ring, the

width of said ring being slightly greater than the distance between said flange and the opposite edge of said frame, substantially as specified.

3. In a leveling instrument, a bubble-tube, a supporting-ring for the same, a retaining-frame surrounding said ring, an outwardly-extending securing-flange on the inner edge of said frame, means for securing said flange to the article to which said instrument is to be applied, and an inwardly-extending clamping-flange for said ring on the outer edge of said frame to adjustably clamp the ring to said article, substantially as specified.

In testimony whereof I have hereunto set my hand this 19th day of July, A. D. 1904.

ALBERT J. PERKS.

Witnesses:
CHAS. I. WELCH,
CLIFTON P. GRANT.