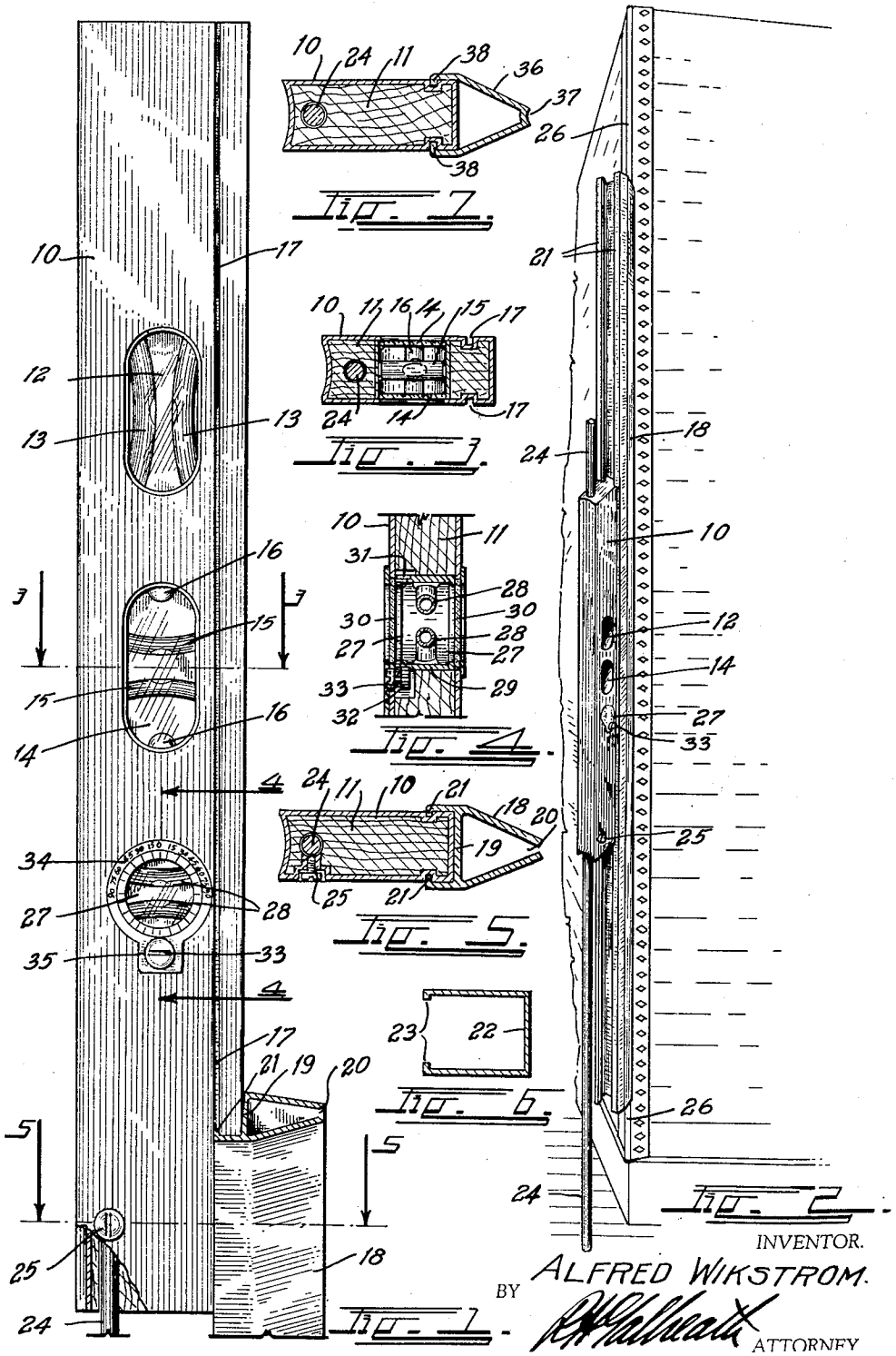
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PLUMB AND LEVEL

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PLUMB AND LEVEL

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This invention relates to a plumb and level, more particularly to a device of this character for use by metal lathers in plumbing corner beads.

At present it is necessary to place the usual plumb on one side of a corner bead and plumb it with one wall. The plumb must then be moved to the other side and the setting changed to plumb it with the other wall. Since the second setting may throw the first setting out of plumb, it must be again plumbed a third or fourth time on opposite sides to finally plumb the bead. The principal object of this invention is to provide a plumb and level which will plumb a corner bead in all directions at the same time.

With the present levels, it is necessary for the lather to hold the level in place with one knee to free his hands for nailing the corner bead in place. Another object of this invention is to provide a self supporting level or plumb which will firmly support itself in place thus allowing the mechanic free use of both hands at all times.

Other objects of the invention are to so construct the plumb and level that its work face or straight edge can be removed and replaced to adapt it for different uses and purposes, and to provide means for angle plumbing for use in setting bevels and inclines accurately.

Other objects and advantages reside in the detail construction of the invention, which is designed for simplicity, economy, and efficiency. These will become more apparent from the following description.

In the following detailed description of the invention, reference is had to the accompanying drawing which forms a part hereof. Like numerals refer to like parts in all views of the drawing and throughout the description.

In the drawing:

Fig. 1 is a face view of the improved plumb and level with the contact face or straight edge partially removed.

Fig. 2 is a perspective view illustrating the improved plumb and level in use for plumbing a corner bead.

Figs. 3, 4, and 5 are detail sections, taken on the lines 3—3, 4—4, and 5—5, respectively.

Fig. 6 is a section through an alternate form of contact face.

Fig. 7 is a cross section through a second alternate form of straight edge.

A typical metal corner bead is illustrated at 26.

The invention employs a level member which may be formed in any desired manner with two broad faces and two narrow faces. The preferred construction of the level member is illustrated in Fig. 5, with an enclosing metal shell or casing 10 surrounding a wooden core 11. The casing protects the wooden core from damage and the latter cooperates with the casing to form a substantial, solid structure. The device could, however, be formed of solid metal, wood, or other materials if desired.

The level is formed with three windows extending entirely therethrough. One of the windows, which will be herein designated the first window 12, contains two oppositely facing bubble tubes 13 of the kind usually found in typical levels. A middle window 14 contains two oppositely facing bubble tubes 15, which extend parallel to the greatest width of the level member, and two cross bubble tubes 16, which extend at right angles to the tubes 15. The tubes 15 indicate whether the narrow faces of the level member are plumb. The tubes 16 indicate whether the broad faces of the level member are plumb, and these two tubes cooperate to determine whether the entire level member is plumb.

The broad faces of the level member are provided with longitudinally extending grooves 17 for receiving straight edges of various designs. For setting corner beads of the narrow bead variety, a straight edge, such as illustrated at 18 is used. This edge consists of two side members joined by a cross plate 19 to form a bead receiving channel 20 for snugly engaging the sides of the corner bead.

The side members of the straight edge extend rearwardly and terminate in inwardly turned flanges 21 which engage in the slots 17. This construction allows the level member to be comparatively short and easily handled since the straight edge can be of any desired length and may extend beyond both extremities of the level a shown in Fig. 2.

For straight flat plumbing, a facing strip, such as shown in Fig. 6, having a flat forward face 22 and inwardly turned flanges 23 may be fitted in the grooves 17.

A supporting leg 24 enters the bottom of the level and may pass entirely therethrough. The level may be set in any desired position on the supporting leg by means of a suitable set screw 25. If the edge member 18 is formed of iron, it can be magnetized so as to form a long "horseshoe" type magnet with its poles at the opposite sides of the bead channel 20. It will then magnetically attach itself to the corner bead 26 so as to be completely supported allowing the operator the free use of both hands.

A third window 27 may be formed in the level member for use in setting inclines or angles. In this window two bubble tubes are mounted in a rotatable sleeve 29 behind suitable glasses or lenses 30. The sleeve is formed with a ring gear 21 which is engaged by a pinion gear 32 operated from a key shaft 33. By rotating the key shaft, the tubes may be placed at any desired angle with the axis of the level. The angle is terminated by means of an index scale 34 marked upon a face plate 35 on the face of the level.

In the form shown in Fig. 7 the straight edge member consists of a V-shaped metallic strip 36 having a channel 37 formed along its apex for engaging the bead of the corner bead 26. The base of the strip is open, there being two inwardly turned flanges 38 along the opening for engagement with the grooves 17 of the level.

While the level has been illustrated with but one of each type of window therein it may be manufactured with more than one of each type if desired.

For instance, a duplicate of the window 14 could be placed at the opposite end of the level to make it more convenient for the user to view the tubes 15 at all times without it being necessary to turn the level end for end.

While a specific form of the improvement has been described and illustrated herein, it is desired to be understood that the same may be varied, within the scope of the appended claims, without departing from the spirit of the invention.

Having thus described the invention, what is claimed and desired secured by Letters Patent is:—

1. A combined plumb and level comprising: a level member; bubble tubes in said member for determining horizontals and perpendiculars; a metallic edge member along one edge of said level member having a slot in its face, said edge member being magnetized so that the opposite edges of said slot will be magnetic poles.

2. A combined plumb and level comprising: a level member; bubble tubes in said member for determining horizontals and perpendiculars; a straight edge member; means for removably attaching said edge member to said level member; a supporting rod extending beyond one extremity of said level member; and means for attaching said level member at any desired position on said rod.

3. Means for supporting a plumb against a metallic surface comprising: a metallic straight edge on said plumb having a slot formed therein, the metal of said straight edge being magnetized so that the opposite edges of said slot will be magnetic poles.

4. Means for supporting a plumb against a metallic surface comprising: a metallic straight edge on said plumb having a slot formed therein, the metal of said straight edge being magnetized so that the opposite edges of said slot will be magnetic poles, said slot extending longitudinally throughout the entire length of the contacting face of said straight edge so that said poles will extend throughout the length of said edge.

5. A straight edge for a level and plumb comprising: a relatively long sheet metal strip having a substantially U-shaped cross section; and inwardly turned flanges along the open sides of said strip to engage longitudinal grooves in the opposite sides of a level and plumb to hold said strip in alignment therewith.

6. A straight edge for a level and plumb comprising: a relatively long sheet metal strip having a substantially U-shaped cross section; inwardly turned flanges along the open sides of said strip to engage longitudinal grooves in the opposite sides of a level and plumb to hold said strip in alignment therewith; and an indented channel along the medial line of said strip to receive an article to be plumbed.

7. A straight edge for a level and plumb comprising: two inwardly inclined longitudinally extending side strips spaced from each other to form an open channel between them throughout their length; a cross strip connecting said side strips throughout their length; and inwardly turned flanges formed on said strips to engage longitudinally extending grooves in the opposite faces of said plumb and level to hold said straight edge in alignment therewith.

8. A straight edge for a level and plumb comprising: two inwardly inclined longitudinally extending side strips spaced from each other to form an open channel between them throughout their length; a cross strip connecting said side strips throughout their length; and inwardly turned flanges formed on said strips to engage longitudinally extending grooves in the opposite faces of said plumb and level to hold said straight edge in alignment therewith, said straight edge being magnetized so that the two side strips will present opposite magnetic poles.

9. In a plumb and level a wooden core member; a sheet metal casing enclosing said core provided with longitudinally extending grooves in opposite faces adjacent one edge thereof; a straight edge member; and inwardly turned flanges on said straight edge member slidably engaging said grooves to maintain said straight edge in alignment with said casing.

10. In a plumb and level of the type having a relatively long member provided with spirit levels, a straight edge for said member, comprising: a sheet metal strip band to form a channel for receiving one edge of said long member; and inwardly turned flanges on said channel enclosing longitudinally extending grooves in said long member.

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