No. 615,781. Patented Dec. 13, 1898.

J. L. BALSER.

PLUMB.

(Application filed Sept. 16, 1897.)

(No Model.)

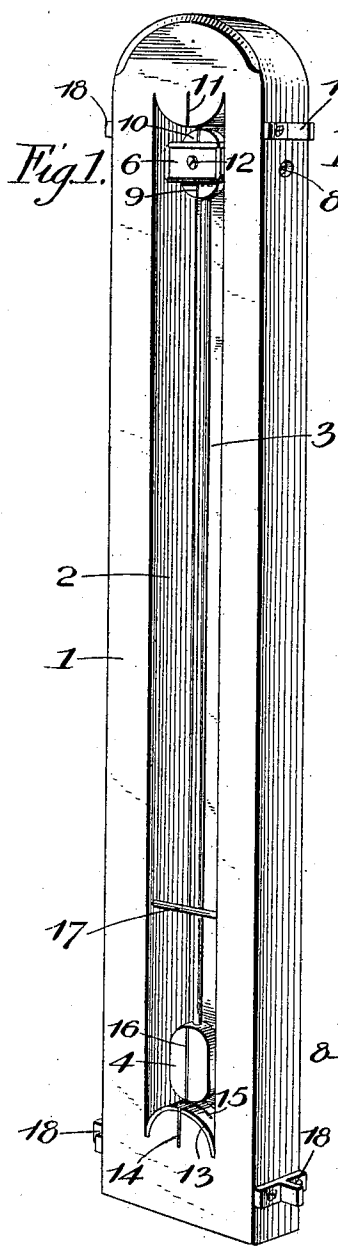


Fig. 1.

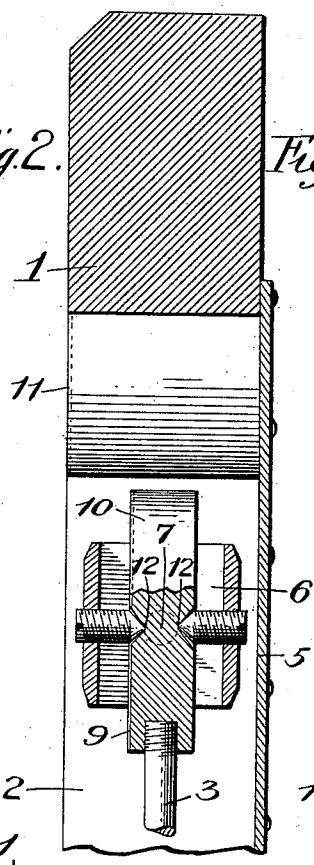


Fig. 2.

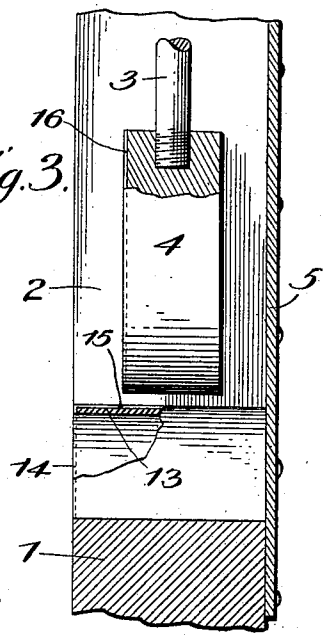


Fig. 3.

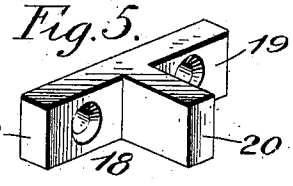


Fig. 5.

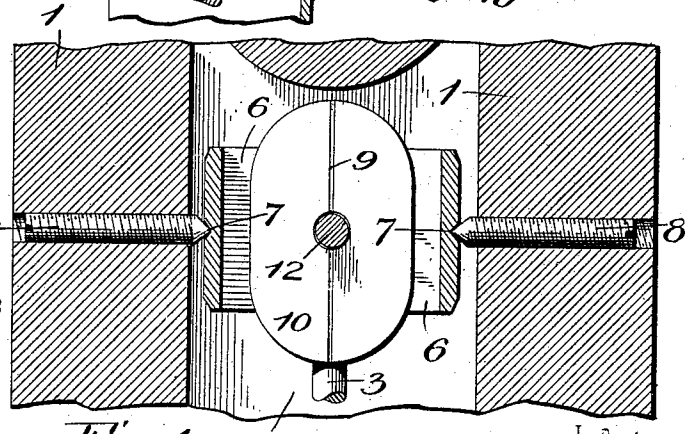


Fig. 4.

Inventor

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JOSIAH L. BALSER, OF SHARONVILLE, OHIO.

PLUMB.

SPECIFICATION forming part of Letters Patent No. 615,781, dated December 13, 1898.

Application filed September 16, 1897. Serial No. 651,867. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH L. BALSER, a citizen of the United States, residing at Sharonville, in the county of Hamilton and State of Ohio, have invented a new and useful Plumb, of which the following is a specification.

My invention relates to plumbs adapted for builders' use; and the object in view is to provide a device of this class by which an upright object may be plumbed in both directions—namely, in planes perpendicular to each other—to avoid changing the device after plumbing in any direction in order to secure the desired position in the perpendicular plane.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claim.

In the drawings, Figure 1 is a perspective view of a plumb constructed in accordance with my invention. Fig. 2 is a partial vertical section showing the means whereby the pendulum is mounted. Fig. 3 is a vertical section showing the plumb-bob. Fig. 4 is a partial vertical section at right angles to the plane of Fig. 2. Fig. 5 is a detail view of one of the bearings detached.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a plumb-board, recessed, as at 2, to form a cavity in which is mounted the plumbing-pendulum, consisting of a rod 3 and the plumb-bob 4, the rear side of said recess being closed by a thin metallic plate 5 or its equivalent, whereby when the back of the instrument is arranged toward the wind or a draft of air the pendulum is shielded, and hence is not affected by the current of air.

The pendulum is universally mounted for swinging movement in relatively perpendicular planes—namely, laterally and forwardly and rearwardly—and the preferred means whereby I accomplish this universal movement of the pendulum include a yoke 6, mounted for forward and rearward oscillatory or tilting movement by means of adjustable center points 7, fitted in center sockets in the end walls of the yoke, said center points being carried by adjusting-screws 8 to provide for taking up lost motion due to wear and to secure the lateral centering of the yoke in the recess. An index line or cut 9 on the head 10 of the pendulum and in alinement with the shank or rod 3 should be alined with the index-line 11 on the plumb-board at the upper end of the cavity. This pendulum-head is mounted for lateral swinging movement in the yoke by means of adjustable center points 12, threaded in the side walls of the yoke and engaging suitable center sockets in the head. Located at the bottom of the recess in the plumb-board is an index-plate 13, provided with perpendicularly-disposed index-lines 14 and 15, the former being adapted for alinement with an indicator-line 16 on the plumb-bob to indicate a vertical position in a lateral plane and the latter being transversely disposed for alinement with the face of the plumb-bob to indicate a vertical position in a plane at right angles to said lateral plane. A stop or limiting rod 17 is arranged to span the recess contiguous to the front surface of the plumb-board to prevent excessive forward deflection of the pendulum.

It is necessary in order to plumb in perpendicularly-disposed planes to provide means for securing a proper bearing of the plumb-board upon the object, and it is also desirable to provide such bearing for the plumb-board as to enable it to be placed in any desired position to suit the direction from which the wind may be blowing or to suit the position of the operator. Hence I employ T-shaped bearings 18, (shown in detail in Fig. 5,) consisting of a base-plate 19 and a perpendicularly-disposed tongue 20, the surfaces of the tongue forming right angles with the surface of the base-plate, whereby either angle may be applied to the angle of a post, strip, frame, or other object which it is desired to plumb in both of two perpendicularly-disposed planes. The special advantage of the construction described consists in the fact that after plumbing in one direction it is unnecessary to remove the instrument and apply in a perpendicularly-disposed plane in order to plumb in said other plane. By placing the bearings against an object to be plumbed the desired position in both of said planes is attained when the

plumb-bob is alined with the intersection of the perpendicularly-disposed index-lines on the plate 13, and without removing the instrument the object which has been plumbed may be stayed or secured, thus avoiding a repetition of the plumbing operation, which is often required when it is possible to plumb in only one direction.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

A plumb comprising a longitudinally-slotted plumb-board provided at its back with a plate covering the slot and forming a shield, the yoke 6 arranged in the slot at the upper end thereof, the adjusting-screws 8 pivotally supporting the yoke, the adjustable center points 12 mounted in the sides of the yoke and arranged at right angles to said screws, a pendulum provided at its upper end with a head pivotally supported by the center points 12, a plumb-bob arranged at the lower end of the pendulum, and the T-shaped plates 18 arranged at the top and bottom of both sides of the plumb-board and having outwardly-extending tongues and forming front and rear right angles, whereby the plumb is adapted to be used either right or left without changing its position, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOSIAH L. BALSER.

Witnesses:
J. C. HARPER,
ROBERT C. PUGH.