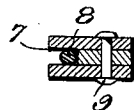
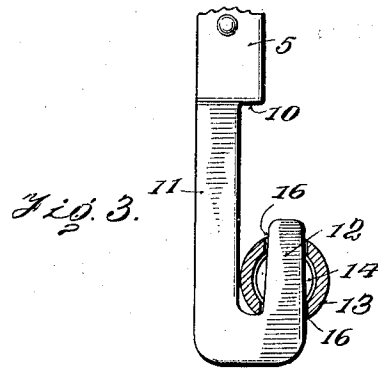
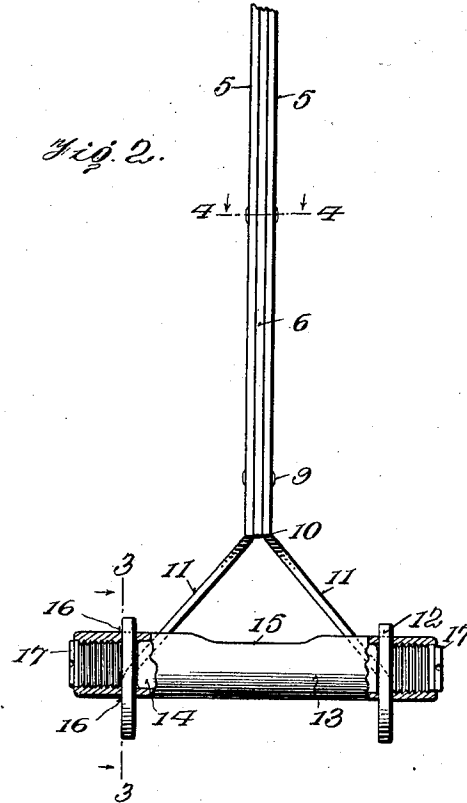
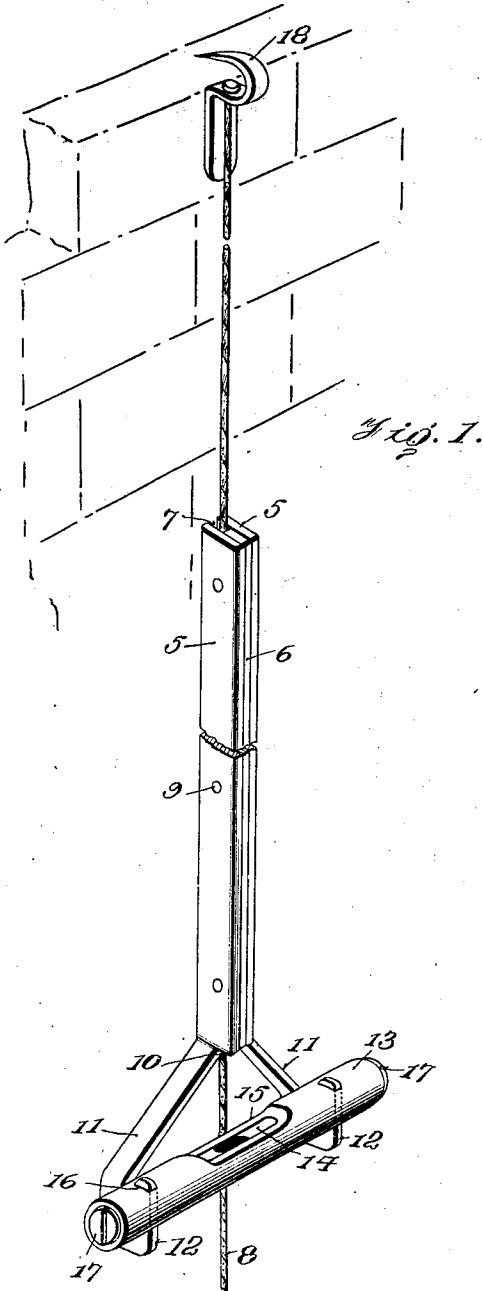


A. JOHNSON.
PLUMB LINE.
APPLICATION FILED MAY 6, 1910.

991,446.

Patented May 2, 1911.



Witnesses
W. H. Hoodson,
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Fig. 4.

By

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UNITED STATES PATENT OFFICE.

ALEXANDER JOHNSON, OF CROMWELL, CONNECTICUT.

PLUMB-LINE.

991,446.

Specification of Letters Patent.

Patented May 2, 1911.

Application filed May 6, 1910. Serial No. 559,796.

To all whom it may concern:

Be it known that I, ALEXANDER JOHNSON, citizen of the United States, residing at Cromwell, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements in Plumb-Lines, of which the following is a specification.

This invention relates to plumb lines and more particularly to means for supporting a spirit tube on the line so as to determine when the latter is vertical or plumb.

The object of the invention is to provide a holder having means for attachment to a plumb line and provided at its lower end with a horizontally disposed spirit tube.

A further object is to provide a spirit tube holder having a longitudinal seating recess formed therein for the reception of a plumb line, said holder being adjustable longitudinally of the line and held in adjusted position by frictional contact with said line.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency, as well as to reduce the cost of manufacture.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

For a full understanding of the invention and the merits thereof, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of a plumb line attachment constructed in accordance with my invention, showing the same in position on a plumb line; Fig. 2 is a front elevation partly in section of the holder detached; Fig. 3 is a vertical sectional view taken on the line 3-3 of Fig. 2; Fig. 4 is a transverse sectional view taken on the line 4-4 of Fig. 2.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The improved device forming the subject matter of the present invention includes a supporting frame or holder comprising longitudinally disposed plates 5 spaced apart by an intermediate filling piece or block 6 to

produce a longitudinally disposed seating recess 7 at the rear of the holder for the reception of a plumb line, indicated at 8, said filling block being retained in position between the plates 5 by rivets or similar fastening devices 9.

The lower ends of the plates 5 are reduced at 10 to form diverging supporting arms 11, the free ends of which are bent laterally and upwardly to form vertically disposed securing hooks or fingers 12. Supported on the fingers 12 is a horizontally disposed tubular member or casing 13 in which is seated a level or spirit tube 14 of any suitable construction, there being an observation opening 15 formed in the top of the casing 13 to expose the bubble of the spirit tube.

The opposite ends of the casing 13 are formed with vertically alined openings 16 to permit the passage of the fingers 12, thus to retain the casing 13 in position thereon. The interior walls of the casing 13 are threaded for engagement with correspondingly threaded plugs 17, which latter bear against the adjacent faces of the supporting fingers 12 and serve to lock the casing in position on the holder.

One end of the plumb line 8 is provided with a hook 18, the bill of which is adapted to be driven or otherwise embedded in a stud, wall or other suitable support for the purpose of suspending the line therefrom.

Attention is here called to the fact that the width of the seating recess 7 is such as to cause the walls thereof to frictionally engage the plumb line 8 so as to support the holder in adjusted position on said line.

In using the device, the hooked terminal 18 of the plumb line is attached to a wall or other suitable support, after which the holder is attached to the line by wedging said line in the seating recess 7. The holder is then adjusted vertically of the line to the desired height, after which the operator grasps the lower end of the line and moves the holder laterally to the right or left until the spirit bubble is centered in the observation opening, thus indicating that the line 8 is vertical or plumb.

If desired, the line 8 may be chalked so that by removing the holder from the line and pulling said line outwardly in the usual manner, a mark may be formed on a wall or other support.

The device is extremely simple in construction

struction and may be manufactured and placed on the market at a comparatively small cost.

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

1. The combination with a plumb line, of a holder slidably mounted on the line and having a longitudinal recess formed therein for the reception of said line, and a level carried by the holder.
2. The combination with a plumb line having means for attachment to a support, of a holder slidably mounted on the line and having a longitudinal seating recess formed therein for the reception of said line, a casing carried by the lower end of the holder and provided with an observation opening, and a level seated in said casing.
3. A device of the class described comprising longitudinally disposed plates spaced apart to form a seating recess for the reception of a plumb line, the lower ends of the plates being provided with upstanding fingers, a casing supported on said fingers, and a level carried by the casing.
4. A device of the class described including longitudinally disposed plates terminating in supporting arms, the free ends of which are bent upwardly to produce upstanding fingers, a casing having recesses formed therein for the reception of the fingers, a level housed within the casing, and removable plugs engaging the opposite ends of said casing and bearing against the fingers.
5. A device of the class described includ-

ing longitudinally disposed plates having their lower ends terminating in supporting arms, the free ends of which are bent upwardly to form upstanding fingers, a filling piece interposed between the plates to form an intermediate recess for the reception of a plumb line, a casing having recesses formed therein to permit the passage of the fingers, a level housed within the casing said casing having its intermediate portion provided with an observation opening and its opposite ends interiorly threaded, and correspondingly threaded plugs engaging the threads on the casing and bearing against the adjacent faces of the fingers.

6. A device of the class described, comprising a body portion having a seating recess therein and opening through one longitudinal edge of said body portion for the reception of a plumb line, a supporting member carried by the body portion, a casing mounted on the supporting member, a level housed within the casing, and removable closures for the opposite ends of said casing.

7. A device of the class described, including a body portion having a seating recess therein and opening through one longitudinal edge thereof for the reception of a plumb line, and a level carried by said body portion.

In testimony whereof, I affix my signature in presence of two witnesses.

ALEXANDER JOHNSON. [L. S.]

Witnesses:

A. SAMSON,
FRED P. HOLT.