

L. M. RUDY.
PLUMB RULE.

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1,017,111.

Patented Feb. 13, 1912.

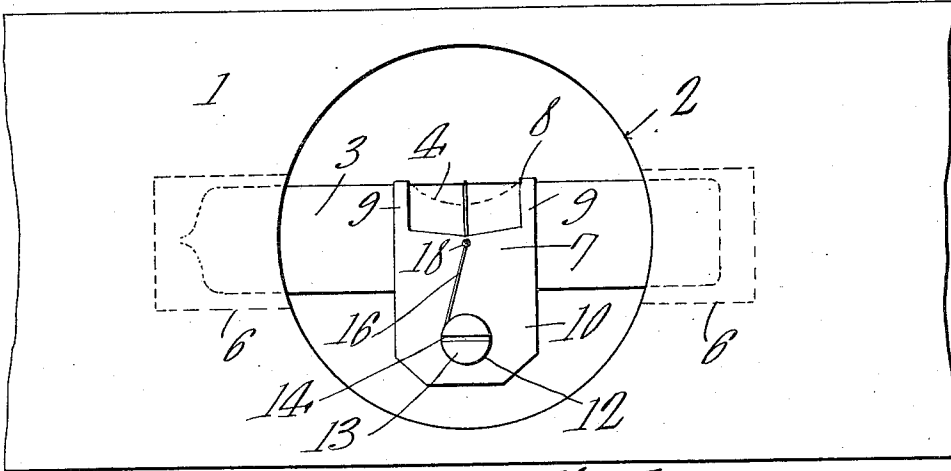


Fig. 1.

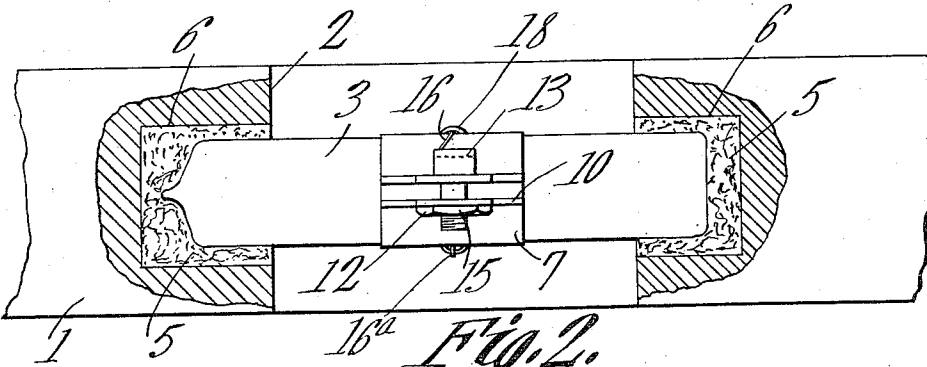
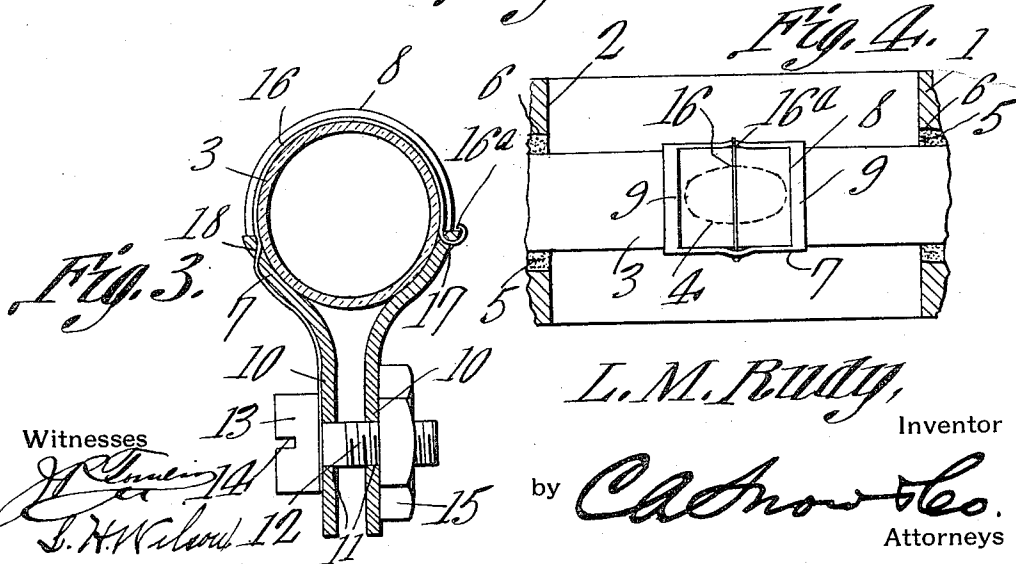


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

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PLUMB-RULE.

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To all whom it may concern:

Be it known that I, LAWRENCE M. RUDY, a citizen of the United States, residing at Shreveport, in the parish of Caddo and State of Louisiana, have invented a new and useful Plumb-Rule, of which the following is a specification.

This invention relates to improvements in what may be termed spirit levels which may be equally well used as plumbs.

The invention has for its object to provide for readily manipulating or applying the device.

A further object of the invention is to secure accuracy in the reading or registration of the instrument.

A still further object is to greatly simplify the construction and arrangement of the parts, together with reducing or lessening the number thereof.

A still further object of the invention is to carry out the aforesaid ends in an expeditious and effective way.

The invention consists of certain instrumentalities and features substantially as hereinafter disclosed and defined by the claims.

In the accompanying drawing illustrating the preferred embodiment of my invention, wherein various changes and modifications may be made as relates to the details of the construction and arrangement of the parts without departing from the spirit of the invention, Figure 1 is a side elevation of the invention, parts being broken away. Fig. 2 is an inverted view of the device, parts also being broken away and others also shown in section, disclosing the glass or transparent spirit-level tube embedded in plaster of Paris. Fig. 3 is a central sectional elevation of the device. Fig. 4 is a broken plan view thereof.

In carrying out my invention, I provide the usual stock or straight-edge member 1, with a preferably circular opening or orifice 2 opening laterally therethrough, and arranged to extend midway of said orifice, transversely of its axis, but parallel with the axis of the stock or member 1, is a transparent or glass tube, tubular member or vial 3, which contains the usual mobile globule-like air bubble 4. Said tube, or tubular member or vial 3, is suitably embedded at its ends in a hardening plastic material, preferably plaster-of-Paris 5, deposited around said ends and within sockets

or recesses 6 produced in the member 1, at opposite points of the margin of the orifice 2.

A split or divided ring-like clasp or bridle member 7 is applied to, and practically encompasses the tubular member 3, about centrally, within the circular orifice 2.

The clasp or bridle 7, preferably formed of more or less resilient metal, of the sheet type, is provided, about centrally, in its upper arcuate portion with a viewing opening 8 for observing the air bubble or globule 4 in the tubular transparent member 3, the resulting lateral portions forming two indicators, the indicators proper, 9, which are strap-like in outline and which will be again subsequently referred to. Said lateral portions terminate or merge into downward plate-like extensions 10 also of arcuate or curvilinear outline in continuation of the corresponding contour of the upper portion of the clasp or bridle, to suitably conform to and embrace the tubular member. The downwardly extended portions or terminals 10 of the clasp or bridle 7 are opposed to each other, with an intervening space, especially as seen in Fig. 3, and through openings 11 therein is received an adjusting screw 12 whose head 13 is preferably provided with a screw-driver bit receiving slot 14 for the convenient actuation thereof in the manner indicated, a suitable retaining nut 15 being applied to or threaded upon the opposite end of said screw. This arrangement allows of readily adjusting the clasp or bridle upon the tubular bubble-containing member 3, as circumstances require or suggest in maintaining the accuracy of the instrument, as in centralizing the position of the air-bubble or globule, as will be readily appreciated.

A member 16 serves as a supplemental indicator as for instance when the bubble or globule 4 may be of quite reduced dimensions or outlines which it assumes, as well understood, under the action of solar or other heat according to the exposure or location of the instrument or its contiguity to a heated body. Said supplemental indicator or member 16 which may be a slender wire, as indicated, is applied to or arranged upon the air-bubble or globule containing tube, exactly centrally of the bubble or globule viewing space 8, said wire or member conforming to the upper arc or curvature of said tube as clearly seen in Fig. 3.

One end of the wire or member 16 is suitably connected as at 16^a to the regulating clasp or bridle member 7, it being preferably inserted through, and secured in an aperture 17, produced in said regulating clasp member, centrally of the bottom edge of the viewing opening 8 and laterally of the tubular member 3 as seen in Fig. 4. The wire or member 16 is passed upon the opposite side of the tubular member 3, downwardly through an aperture or passage 18 in the member 7, also seen in Fig. 3, as well as in Fig. 1, at a point immediately in transverse alinement with the point of attachment 16^a of said wire. From this point the wire 16 is extended farther downwardly and caused to conform to the outline of that side of the clasp or bridle 7 and finally caught around the adjusting screw 12, whereby it may be suitably held in place and, together with the clasp or bridle, be readily removed or displaced in event of the breakage of the bubble or globule containing tube for the consequent substitution of an unimpaired bubble-containing tubular member therefor.

It will be observed that the reading of the instrument primarily or under usual conditions is effected through the registration of the members or indicators 9 with the globule or bubble 4 according to the movement of the latter as controlled by the position of the body or object to which the instrument may be applied, as will be readily appreciated.

It is clearly apparent that my invention is adapted to be applied for use not only upon horizontal surfaces, as in the use of the ordinary spirit level, but that it may also have the function of a plumb.

It is also observed that the invention is characterized by extreme simplicity, embracing but few parts, is readily applied for use and is inexpensive of manufacture.

What is claimed is:—

1. A device of the character described, including a bubble containing tubular member, indicator forming members and a supplemental indicator forming member, said indicator forming members encompassing said bubble containing member, the said supplemental member being intermediate of the other members.

2. A device of the character described, including an air-bubble containing tubular member, an indicator forming member having a passage therein and comprising a split clasp member embracing said tubular member, the resulting depending limbs thereof being equipped with an adjusting screw, and a supplemental indicator formed of a wire applied to the upper portion of said tubular member, said clasp member having a viewing opening in its upper portion receiving said supplemental indicator, one end of said wire being attached to the first referred to indicator and extending through the passage in said indicator oppositely to its said attached end, the other end of said supplemental indicator forming wire being attached to said adjusting screw.

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

LAWRENCE MILTON RUDY.

Witnesses:

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