Sept. 5, 1950 A. O. KRAUSSER 2,521,525

ADJUSTMENT ATTACHMENT FOR SPIRIT LEVELS

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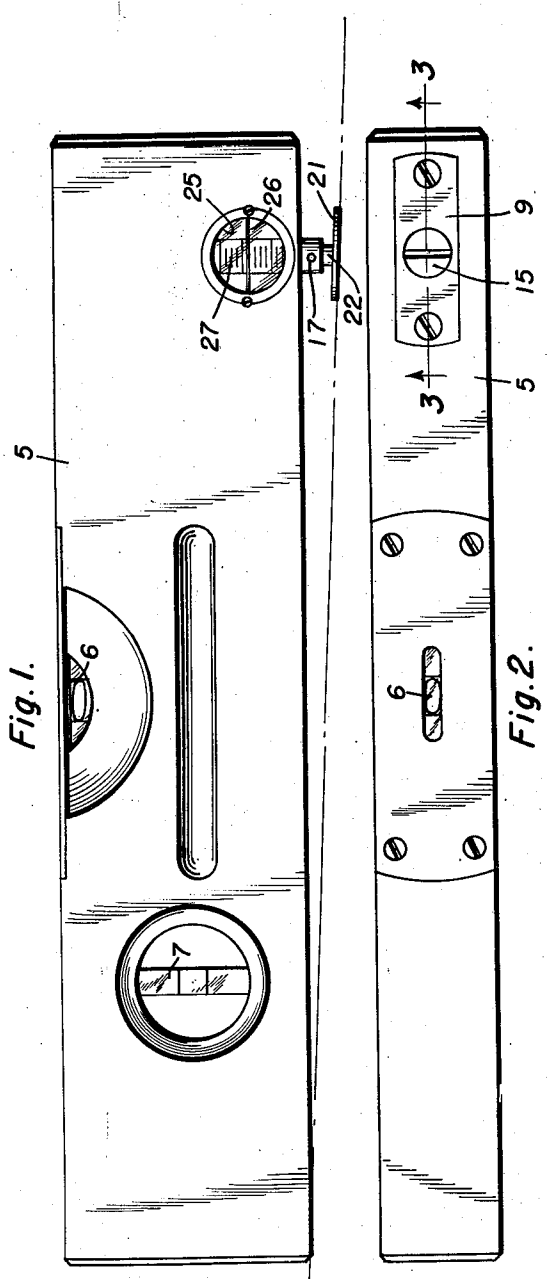


Fig. 1.

Fig. 2.

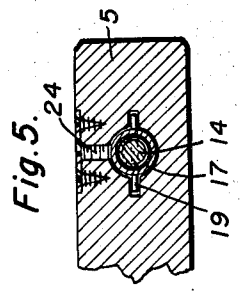


Fig. 5.

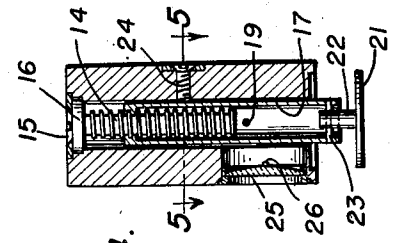


Fig. 4.

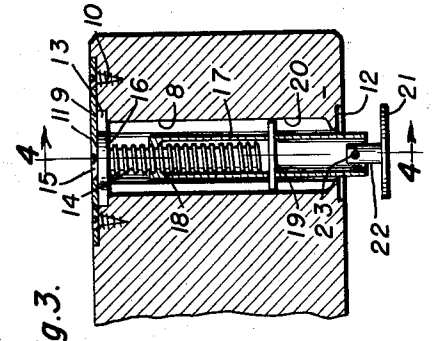


Fig. 3.

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ADJUSTMENT ATTACHMENT FOR SPIRIT LEVELS

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1 Claim. (Cl. 33—214)

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The present invention relates to new and useful improvements in spirit levels, and more particularly to an inclinometer attachment therefor to indicate the inclination or slope of a surface on which the level is placed.

An important object of the present invention is to provide an inclinometer attachment including a pivoted self-leveling foot adapted to rest on an inclined surface at one end of a level to support the level in a horizontal position, together with a feed screw for vertically adjusting the foot and a scale to indicate the degree of inclination of the surface on which the foot is resting.

A still further object is to provide an attachment of this character for spirit levels which may be easily and quickly mounted in position in the level and which, at the same time, is efficient and reliable in operation, relatively inexpensive to manufacture, and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view of a spirit level equipped with the inclinometer attachment;

Figure 2 is a top plan view;

Figure 3 is a fragmentary sectional view taken on a line 3—3 of Figure 2;

Figure 4 is a transverse sectional view taken on a line 4—4 of Figure 3; and

Figure 5 is a sectional view taken on a line 5—5 of Figure 4.

Referring now to the drawings in detail wherein, for the purpose of illustration, I have disclosed a preferred embodiment of the invention, the numeral 5 designates a spirit level of conventional construction and in which are mounted the horizontal and vertical spirit tubes 6 and 7, respectively.

One end of the body of the spirit level is formed with a vertical bore 8 over the upper end of which is secured a plate 9 by screws or the like 10, the plate having a countersunk opening 11 therein. The lower end of the bore 8 is countersunk as shown at 12 and the upper end of the bore under the plate 9 is also countersunk as shown at 13.

A feed screw 14 is formed with a beveled head 15 positioned above the plate 9 and a flange 16 below the head and positioned under the plate 9 and seated in the countersink 13, to thus hold

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the screw against vertical movement during rotation thereof.

A sleeve 17 is slidably mounted for vertical movement in the bore 8 and is formed with an internal screw-threaded upper portion 18 with which the screw 14 is threadedly engaged. A pin 19 extends transversely of the sleeve below the screw with the ends of the pin projecting outwardly from the sides of the sleeve and traveling in grooves 20 formed in the body of the level at diametrically opposite sides of the bore 8 to prevent rotation of the sleeve.

A foot 21 in the form of a disk is provided with an upstanding stem 22 projecting into the lower end of the sleeve and pivoted thereto by a transverse pin 23.

In the operation of the device, the rotation of the screw 14 by a screwdriver or the like will feed the sleeve 17 vertically in the body of the level whereby to raise and lower the foot 21 to thus vertically adjust one end of the level to support the level in a horizontal position when placed on a sloping surface or object. The sleeve 17 is secured in its vertically adjusted position by a set screw 24 threaded through one side of the body of the level.

The body of the level, at its side thereof opposite from the set screw 24, is provided with a window opening 25 having a marker or pointer 26 positioned therein and cooperating with a scale 27 marked on one side of the sleeve 17 to indicate the degree of adjustment of the level 5. Sliding movement of the sleeve 17 into the bore 8 is limited by engagement of the pin 19 by the lower end of the screw 14.

When the inclinometer attachment is not in use, the foot 21 may be retracted into the counterbore 12 at the bottom of the level.

In view of the foregoing description taken in conjunction with the accompanying drawings, it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention, the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and within the scope of the appended claim.

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

An attachment for spirit levels having a vertical bore in the body thereof and provided with

vertical grooves at diametrically opposite sides thereof, a tube slidable vertically in the bore, interengaging means between the tube and said grooves to hold the tube against rotation, a feed screw threadedly engaged with the tube to vertically adjust the tube, means for holding the screw against vertical movement in the level, and a foot having a stem pivoted within the lower end of the tube, said interengaging means including a transverse pin carried by said tube and having end portions received in said vertical grooves, said pin being disposed below and perpendicular to said screw, said pin adapted to be engaged by one end of said feed screw to limit movement of said tube in one direction, said means holding the screw against vertical movement in said level including a plate carried by the body of the level, said plate having a countersunken opening aligning the bore, said feed

screw having a beveled head positioned in said opening for rotation, and a flange formed with said feed screw, spaced from said head and bearing against the inner surface of said plate.

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