

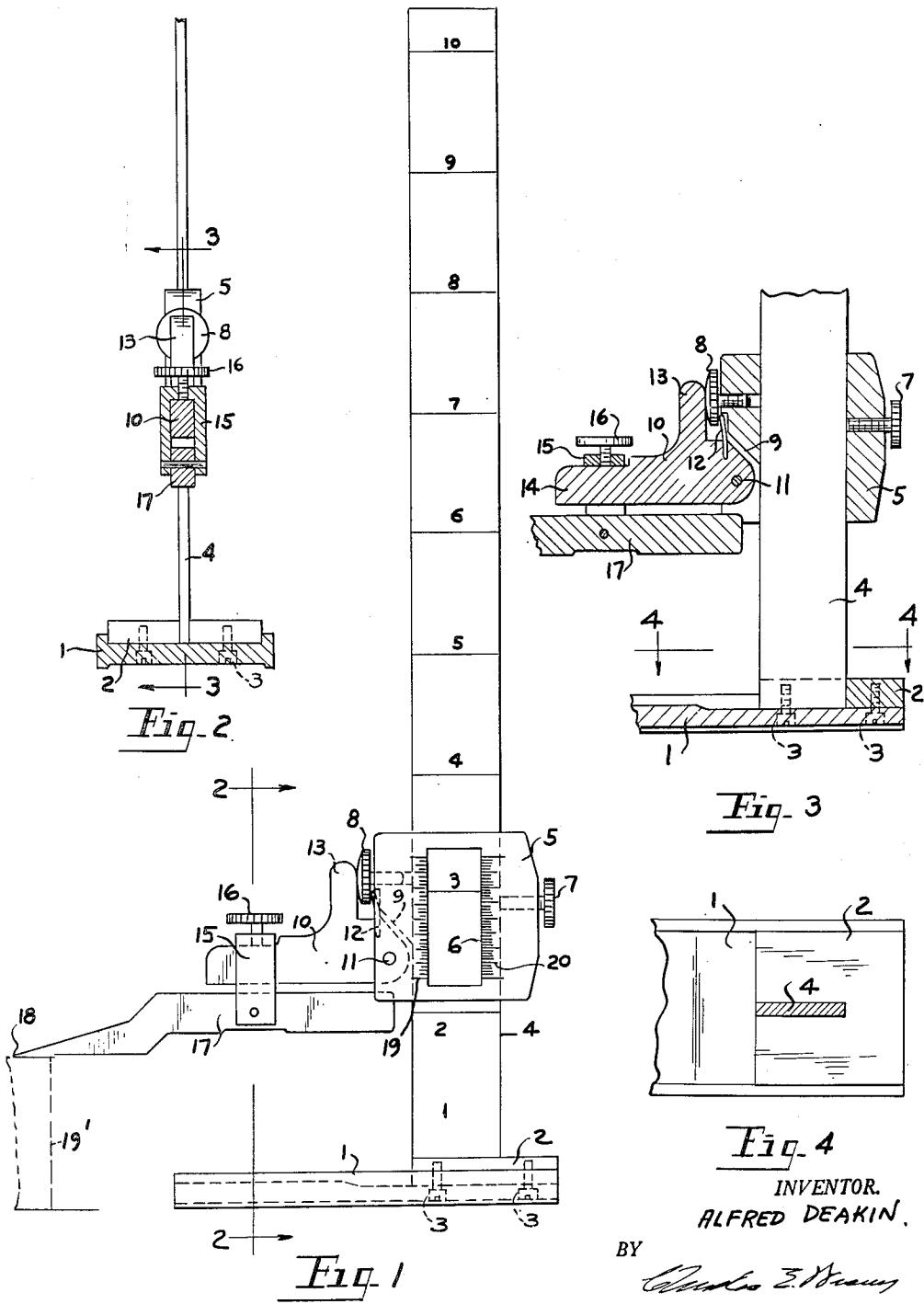
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HEIGHT GAUGE

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HEIGHT GAUGE

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1 Claim. (Cl. 33—171)

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This invention relates to a height gauge the object being to provide a new and improved form of gauge including a floating scribe useful in determining fractional heights relative to a base line and may also be used as a checking gauge.

In the drawing:

Fig. 1 is a side elevation of my improved gauge.

Fig. 2 is a section taken on line 2—2 of Fig. 1.

Fig. 3 is an enlarged section taken on line 3—3 of Fig. 2.

Fig. 4 is a section taken on line 4—4 of Fig. 3.

The gauge according to my invention includes the base member 1 on the upper surface of which is a plate 2 secured in position by the screws 3. Secured to the plate 2 is a vertical standard 4 of thin sheet material and having graduations in inches and slidable on the standard 4 is a member 5 having a slot 6 in one face thereof through which the graduations on the standard may be observed. The member 5 has a threaded aperture on one side to receive a screw 7 which engages an edge of the vertical member 4 and the opposite side of the member 5 has a screw 8. The slidable member 5 has a slot 9, as shown in Figs. 1 and 3, and in the slot 9 is one end of a member 10 which is pivoted on the pin 11 on member 5 and a leaf spring 12 has one end seated in the upper edge of the inner end of the member 10 and the free end of the spring engages the inner face of the head of the screw 8. The member 10 has an upwardly extending arm 13 which is held in engagement with the outer face of the head of the screw 8 by the spring 12 and by turning the head of the screw 8 the member 10 is turned on the pin 11 as an axis.

On the outer end 14 of the member 10 is a U-shaped member 15, shown more clearly in Fig. 3, and a headed screw 16 has a threaded end in a threaded aperture provided therefor in the base of the U-shaped member 15 for operative engagement with member 10 to secure member 15 in position thereon. Loosely pivoted between the two sides of the U-shaped member is a scribe 17 having a pointed end 18 as shown more clearly in Fig. 1.

The slidable member 5 has in one face there-of graduations 19 and 20 on the opposed longitudinal edges of the slot 6. The standard 4 has transverse lines 1 to 10 inclusive in parallel relation which are one inch apart and the longitudinal side edges of the slot 6 are calibrated as may be desired, as for instance in inches and fractions of an inch.

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In use of the device the base 1 is positioned on a flap supporting surface and the member 5 is movable longitudinally of the standard 4 to position the point 18 of the scribe practically in contact with the element to be measured and, by loosening the screw 7, the member 5 may be moved longitudinally to position the point 18 practically in contact with the said element as indicated by dotted lines 19' in Fig. 1.

10 It is further to be understood that the point 18 of the member 17 may be utilized to determine the distance of a mark or slot on one side of the element 19' from the surface on which it is positioned. The head of the screw 8 is positioned between the end of the spring 12 and arm 13 of the member 10. By such arrangement the pivoted member 10 is always held from accidental movement.

Operation

20 When used as a scribe to mark a longitudinal line upon the vertical side wall of an object, both the object and the base 1 are positioned upon a flat surface. Assuming it is desired to 25 scribe a horizontal line upon the sidewall of the object one inch up from its bottom, a conventional accurate gauge block of cubical shape and of a predetermined one inch height is positioned upon base 1 directly under the arm 17.

30 Thereafter the member 5 is released by loosening screw 7 and dropped until scribe 17 engages and levels itself upon the top surface of the particular gauge block, and by virtue of its pivotal mounting 11 the scribe levels down upon the top surface of said block, after which the 35 screw 7 is tightened.

40 The screw 8 is then turned counter-clockwise so that it moves outwardly against the arm 13 of member 10 effecting a slight counter-clockwise pivoting movement of the scribe support 10 to exert a downward pressure upon the scribe for holding the same in a horizontal position snugly against the top surface of the gauge block or blocks which may be employed, depending upon the desired height.

45 The scribe tip 18 is positioned below the bottom surface of the central portion of the scribe a distance exactly equal to the height of the base 1 so that it is known that the tip 18 is positioned 50 relatively to the object to be scribed at the same height as the height of the gauge block or stacked gauge blocks mounted on base 1 directly below said scribe. The base 1 is then slid along the flat surface upon which it is 55 supported with the scribe tip 18 bearing against the vertical wall of the object to thereby mark

a line thereon which is, when using a one inch gauge block, one inch in height from the base of the body.

As screw 16 bears against the top surface of member 10, it is apparent that turning of said screw would cause member 17 and its support 15 to move upwardly, with member 17 possibly contacting member 10, if desired. Under some conditions this may not be necessary if a gauge block of cubical form is used, as such a block would in effect "freeze" the free swinging motion of scribe bar 17. However, with screw 16 tightened, bar 17 would engage member 10 so that outward adjustment of screw 8 would effect a counter-clockwise pivotal movement of member 10 tending to move bar 17 tightly down upon the gauge block. 15

It is believed obvious from the foregoing description that the device is comparatively simple in construction and well adapted for the purpose described. 20

Having thus briefly described my invention, its utility and mode of operation, what I claim and desire to secure by Letters Patent of the United States is:

In combination, a flat base, an upright standard secured thereon, a member slidably mounted upon the standard, an adjustable set screw on said member engageable with said standard for securing said member in vertically adjusted position, a scribe support pivotally mounted at one end upon said member at one side of

said standard, a set screw with its stem threadably mounted on said member and with its head retainingly engaged by said support upon one side thereof, a spring interposed between the other side of said head and said support, whereby rotation of said latter set screw effects pivotal movement of said support, an inverted U-shaped element slidably positioned over the outer end of said support, a set screw on said element engageable with said support, and an elongated scribe centrally positioned within the ends of said element and pivotally and loosely mounted thereon, adapted to bear upon a gauge block of predetermined height upon said base.

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