U. I. T. BLOMBERG.

GRADUATED MECHANIC'S GAGE.

APPLICATION FILED JUNE 9, 1919.

1,334,217. Patented Mar. 16, 1920.

FIG. 1

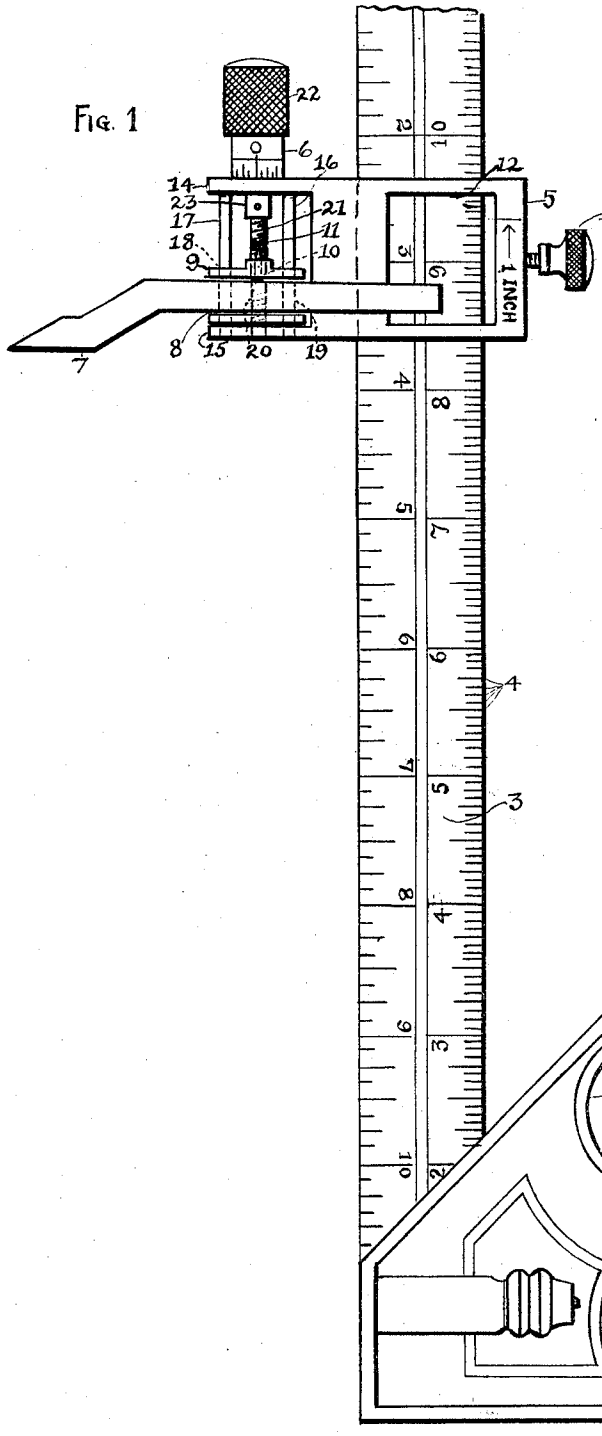


FIG. 2

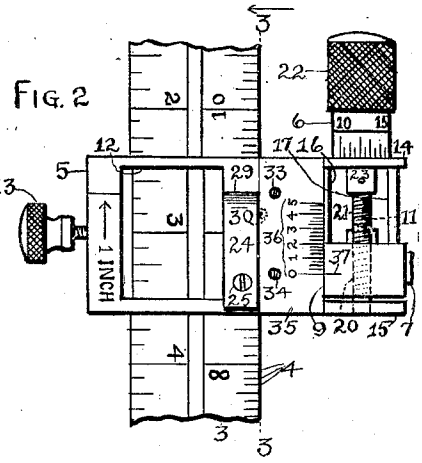
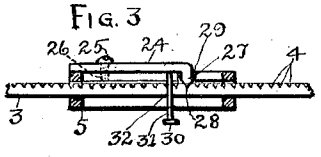


FIG. 3



INVENTOR:

Ulrik I. T. Blomberg

By Warner Peckham

Attorney

UNITED STATES PATENT OFFICE.

ULRIK I. T. BLOMBERG, OF CHICAGO, ILLINOIS.

GRADUATED MECHANIC'S GAGE.

1,334,217. Specification of Letters Patent. Patented Mar. 16, 1920.

Application filed June 9, 1919. Serial No. 302,636.

To all whom it may concern:

Be it known that I, ULRIK I. T. BLOMBERG, a subject of the King of Sweden, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Graduated Mechanics' Gages, of which the following is a specification.

My invention relates to gages and has particular reference to improvements in combination squares and height gages. The objects of the invention are to provide an eye, time and labor saving attachment for combination squares, rules and the like; a simplified and improved height gage, and to provide what I term a universal attachment for graduated scales, whereby any graduation thereon may be quickly and correctly located automatically. With these objects in view my invention consists in the novel construction, combination and arrangement of parts hereinafter described in detail, illustrated in the accompanying drawing, and more particularly pointed out in the appended claims.

In the drawing—

Figure 1 is a side elevation of a well known form of combination square, partly broken away, with my improvement applied thereto.

Fig. 2 is a view of the opposite side of my attachment with a broken away portion of the rule or blade.

Fig. 3 is a section taken substantially on the line 3—3 of Fig. 2.

In the drawing 2 represents a well known form of combination and try-square having a head or base with angularly related sides and a blade or rule 3 with any of the usual indented graduations 4. The prevailing forms of height, depth and like gages have various forms of slides to be adjusted at any of these graduations with the aid of accurate visual observations, which involves considerable eye strain, loss of time and numerous mistakes. The mechanic must ordinarily have recourse to such visual aids as magnifying glasses. The present invention relieves the operator from these strains and loss of time by an automatic self-locating mechanism, which is provided with an improved slide 5. In the present embodiment of my invention this slide is also equipped to take the place of the well known combination of two connected and relatively adjustable slides on height gages, one slide being an anchor while the other is adjusted by means of a micrometer screw. In the present improvement the slide 5 is provided with a micrometer head 6 and a scriber, marker or pointer 7 that is longitudinally adjustable and mounted in a slot, groove or channel 8 formed in a small slide block 9 in which is a threaded bore 10 that is engaged by a set-screw 11 which holds the member 7 against accidental movement. The slide 5 is of light or "open" construction and has the usual slot therethrough for the blade or rule 3. Through the slide 5, at right angles to the blade, is an opening 12 through which both sides of the blade are visible opposite said opening. The slide 5 also has the usual thumb screw 13 which is caused to bear against the edge of the blade to hold it in an adjusted position. The end of the slide opposite to that in which said thumb screw is mounted is bifurcated to provide in simplified form a pair of bearing arms 14 and 15 to which are secured in any usual manner a pair of guide rods 16 and 17 which are slidably engaged in bores 18 and 19 through the slide block 9. In the latter is a threaded bore 20 for a micrometer screw 21 the lower end of which has its bearing in the arm 15 and is held against longitudinal movement by a knurled head 22 on one side of the arm 14 and a collar 23 secured to the screw at the opposite side of said arm. The slide 5 carries a click, pawl or stop device engageable with any of the indented notches or graduations 4. In the present construction this top device is in the form of a simple spring 24 having one end thereof secured by a screw 25 to a threaded hole 26 in the side of the slide 5. The opposite end of said spring is bent at right angles to provide a lug 27 which terminates in a V-shaped edge 28 to be engaged with any of the graduations 4 and hold the slide against accidental movement relative to the blade and in exact adjustment until the thumb screw 13 is tightened. An opening 29 is made in the side of the slide 5 which communicates with the slot or opening for the blade 3. If it is desired to relieve the blade 3 from pressure of the stop device in moving the slide from one point to another on the blade, a push button 30 on a stem 31 passing through a

bore 32 in the slide 5 and secured to the spring 24 may be provided with slight additional expense.

On the slide 5 adjacent to the micrometer screw is shown secured by screws 33 and 34 a plate 35 having usual micrometer graduations 36 thereon, opposite which a mark or graduation 37 on the face of the block 9 may be minutely adjusted by the micrometer screw.

In the present construction and arrangement the slide block 9 operated by the micrometer screw has the same range of adjustment that the additional slide has on height gages heretofore provided, and the single slide has a larger range of movement along the blade or rule than several slides connected by a micrometer screw, which, necessarily, take up considerable space along the blade. Hence a shorter blade with the present improvement will have the same range as a blade of longer length encumbered with several slides. The weight of the instrument is also reduced and space in the tool box saved.

The manual adjustment of the anchor slide, which in the present case is the single slide 5, is the more difficult part of the adjustment of a height gage, as the close adjustment must be made without the aid of a screw and accurate eyesight where no automatic stop is provided. My attachment is serviceable on any gage having a blade with indented graduations, including try-squares, combination squares, height and depth gages, surface gages, calipers, beam trammels, gear-tooth, thread tools, etc., with vernier or other readings.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with a gage having a head or base and a blade with depressed graduations thereon, of a slide having clamping means thereon, a click or dog on said slide adapted to yieldingly engage any of said graduations and hold the slide in an adjusted position, a movable bearing member mounted in said slide, a scriber mounted on said member for adjustment in a direction at right angles to said blade, and a micrometer screw having threaded engagement with said member and bearings in said slide.

2. The combination with a gage comprising a head and a blade with depressed graduations thereon, of a slide movable along said blade, means for clamping said slide to said blade, means on said slide which automatically engage any one of said graduations to hold the slide in any adjusted position, a scriber or pointer, a movable slideblock having slide bearings in said slide, and a micrometer screw also having bearings in said slide and connected with a threaded bore in said slideblock.

In testimony whereof I have hereunto signed my name.

ULRIK I. T. BLOMBERG.