B. S. THOMPSON.

SQUARE GAGE.

APPLICATION FILED JUNE 16, 1916.

1,230,627. Patented June 19, 1917.

Fig. 1,

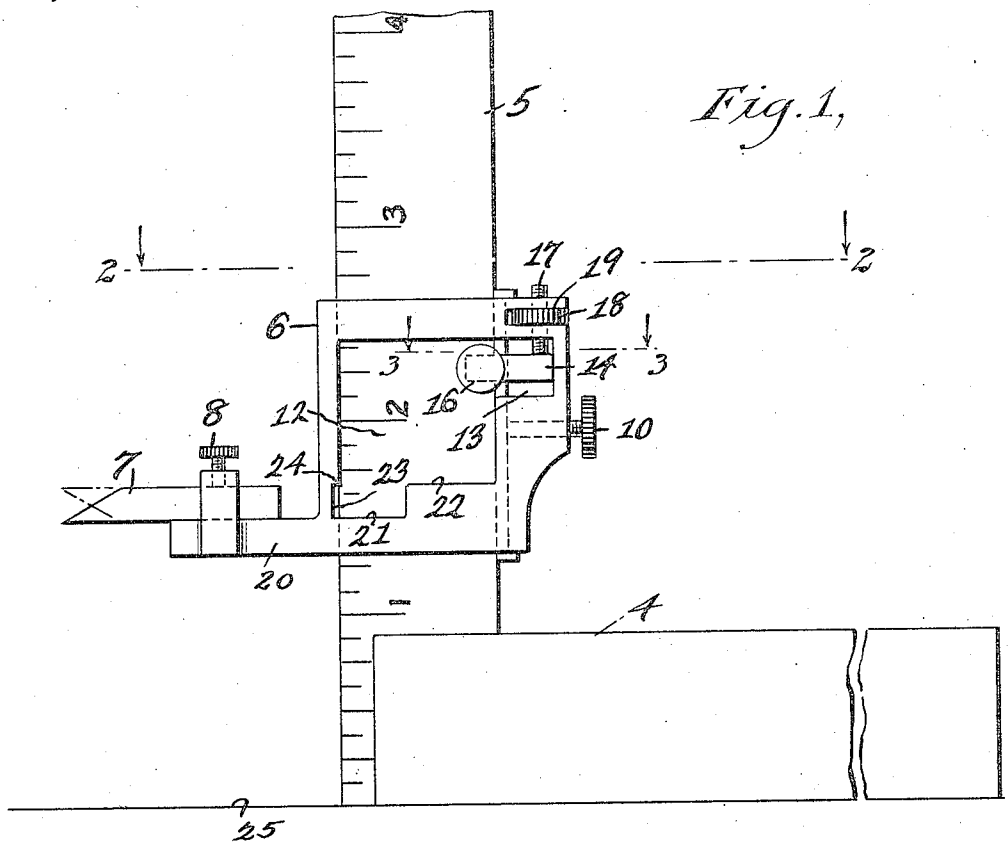


Fig. 2,

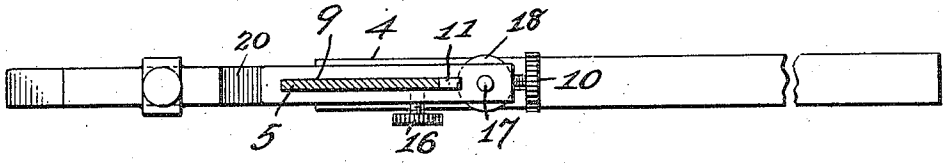
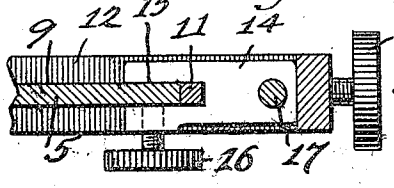


Fig. 3.



WITNESSES

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SQUARE-GAGE.

1,230,627. Specification of Letters Patent. Patented June 19, 1917.

Application filed June 16, 1916. Serial No. 103,963.

To all whom it may concern:

Be it known that I, BOYD S. THOMPSON, a citizen of the United States, and a resident of Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Square-Gages, of which the following is a specification.

My invention relates to gages, with a particular reference to what are technically termed height gages and which are now provided as a separate implement, and the main object of my invention is to provide a gaging attachment for a conventional square and which attachment is capable of very fine adjustments.

When the conventional surface gage is used it is necessary to set the scriber thereon to the right height by means of a square set on a surface plate but with my attachment the setting is accomplished with the square and attachment held in the hand, with a good light, and with the scale in horizontal position instead of vertical which facilitates the reading of the scale.

The adjustment may be made by means of the scale on the square or, if desired, may be made by means of calipers or dividers and, for very fine work, by calipers provided with micrometer or vernier readings.

My invention is fully described in the following specification, of which the accompanying drawings form a part, in which like characters refer to like parts in each of the views, and in which:—

Figure 1 is a side view of a square provided with one embodiment of my invention;

Fig. 2 is a section taken on the line 2—2 of Fig. 1; and Fig. 3 is an enlarged section taken on the line 3—3 of Fig. 1.

Referring to the drawings, 4 represents a conventional square having a relatively thin metal blade 5 upon which my invention is detachably mounted, said blade having the usual scale thereon.

The attachment comprises a carrier 6 for a scriber 7 detachably and reversibly held by means of a set screw 8, the carrier being slotted at 9 to receive the blade 5 in a freely slidable manner and being also provided with a set screw 10 whereby it may be locked in adjusted position on the blade 5, a binding strip 11 being interposed between the screw 10 and blade 5 to prevent injury to the latter and to give a greater degree of binding than would be possible with the screw only, and said carrier is provided with an opening 12 to facilitate the reading of the scale on said blade.

The carrier 6 is also provided with a recess 13 within which is a slidable bar 14 slotted at 15 to receive the blade 5 and provided with a set-screw 16 for locking said bar to said blade and with an integral threaded rod 17 slidable in a suitable bore in the carrier and engaged with a milled button 18 imprisoned in a slot 19 in the carrier.

The arm 20 of the carrier for the scriber 7 is surfaced on its side toward the scriber and I provide a surface 21 within the opening 12 in line with the scriber contacting surface of the arm 20 whereby scriber adjustment by means of the square scale is facilitated, and I provide a supplemental surface 22 in line with the upper surface of the scriber and a small recess 23 extending from the surface 21 to a small surface 24 in line with the upper side of the scriber and with the surface 22.

When my invention is used for rough work the attachment may be adjusted along the scale on the blade 5 and locked by means of the set screw 10, the surface 21 being used for such adjustment when the scriber is in the position shown and the small surface 24 being used when the scriber is reversed into the position indicated by dotted lines. When the attachment is adjusted by means of calipers or dividers the surfaces 21 or 22 are used in conjunction with the surface upon which the square rests according as the scriber is in the position shown in full lines or in the position indicated by dotted lines.

When a fine adjustment is desired, as by micrometer or vernier readings, the bar 14 is first locked to the blade 5 by means of its set screw 16, the set screw 10 being free from the blade at this time, the bar 14 being so locked after the attachment has been moved along the blade to an approximate adjustment. After the bar 14 is so locked the milled button 18 is rotated in one direction or the other until the surface 21, with the scriber as shown in full lines, registers with the calipers or dividers which rest on the surface 25 on which the square rests, or until the surface 22 registers with said calipers or dividers if the scriber is reversed, and, after

the exact adjustment has been attained, the set screw 10 is tightened to lock the carrier in place.

From the foregoing it will be seen that a light and inexpensive substitute is provided for the ordinary height gage and fully as efficient as the latter, my attachment requiring little room in a mechanic's tool-box and saving the investment in two independent tools, the square and the height gage.

My invention is very simple though entirely practical and, while I have shown a preferred type, I do not desire to limit myself to any specific details but reserve the right to make changes over the form shown, provided such changes come within the spirit of the invention and the scope of the appended claims.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. As an article of manufacture, for use on the graduated blade of a square, a carrier slotted for said blade, a threaded rod slidably held at one edge of said carrier, a nut threaded on said rod and held in said carrier against movement axially of said rod, a slotted bar secured to one end of said rod and adapted to straddle said blade, a set-screw for locking said bar to said blade, to permit carrier adjustment on said blade by the rotation of said nut, a set-screw for locking said carrier to said blade after such adjustment, and a scriber on said carrier.

2. As an article of manufacture, for use on the graduated blade of a square, a carrier slotted to receive said blade and open at the side to reveal the graduations, an arm extended from said carrier surfaced on its upper side, a scriber adjustably held on said arm, said opening being formed to present a surface contiguous to said graduations and in line with the surfaced upper side of said arm, and a surface contiguous to said graduations and in line with the upper surface of said scriber, and means for adjustably locking said carrier to a blade.

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