

May 26, 1931.

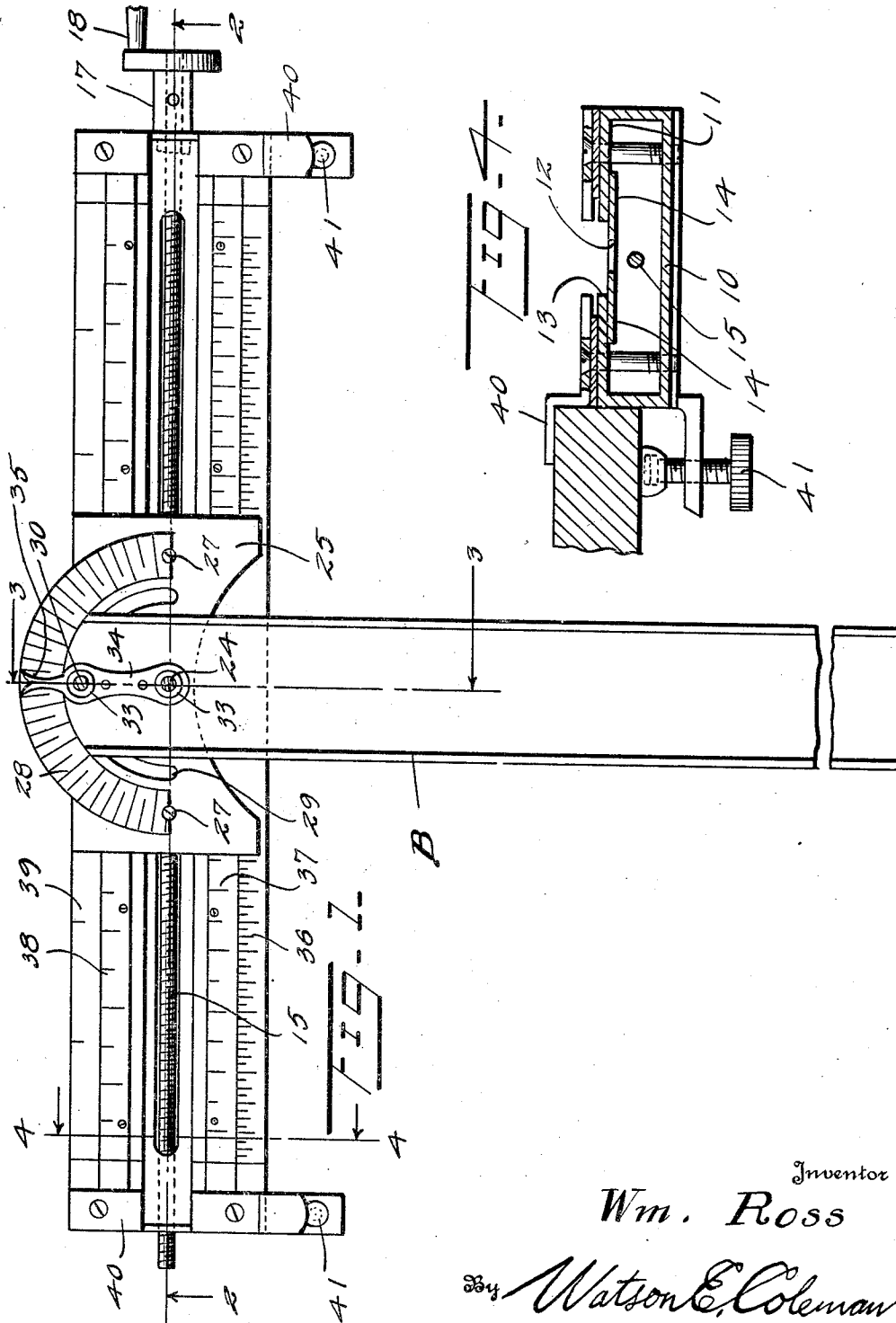
W. ROSS

1,807,438

T-SQUARE WITH SLIDING PIVOTED BLADE

Filed Dec. 29, 1928

2 Sheets-Sheet 1



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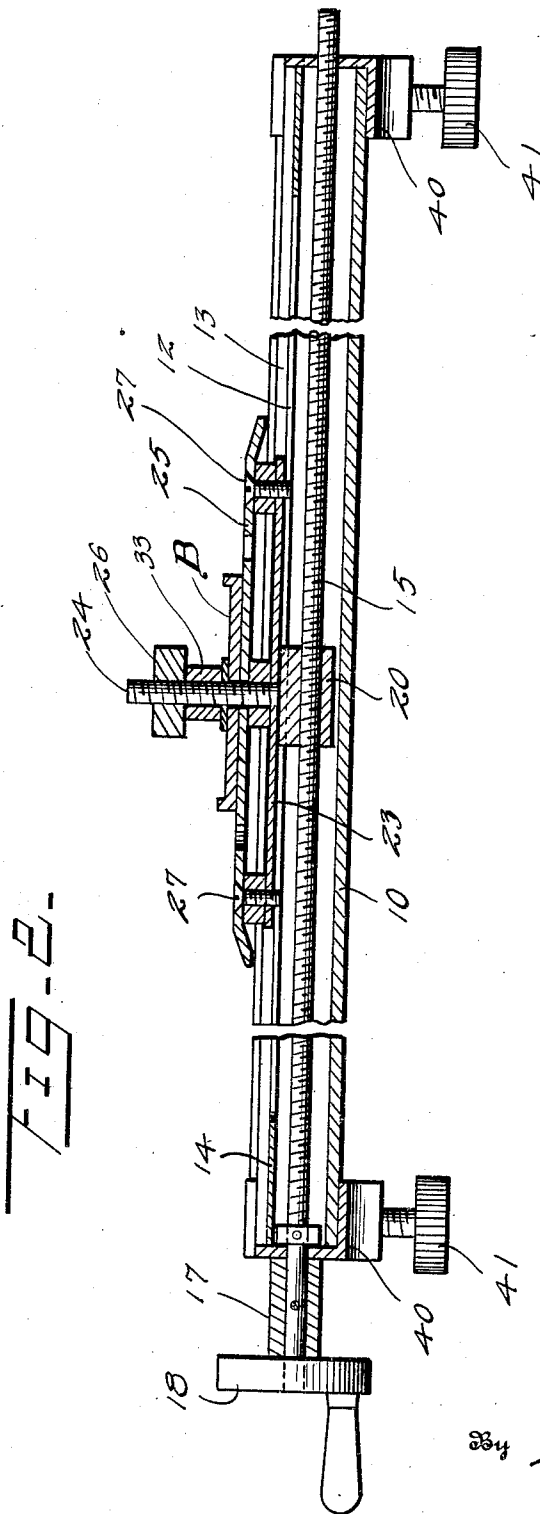
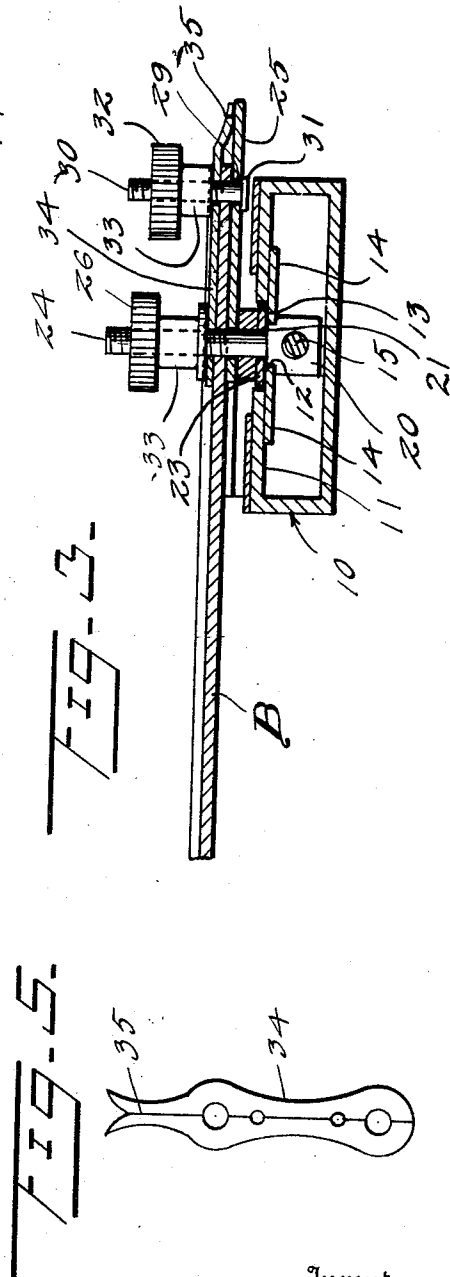
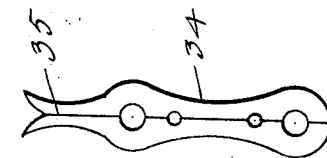
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T-SQUARE WITH SLIDING PIVOTED BLADE

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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T-SQUARE WITH SLIDING PIVOTED BLADE

Application filed December 29, 1928. Serial No. 329,130.

This invention relates to drafting instruments, and more particularly to an instrument of the type usually defined as a T-square.

An important object of the invention is to provide a device of this character, wherein the blade is adjustable with relation to the head not only angularly but likewise longitudinally, and means are provided whereby the head may be secured to a drawing board, table or the like, thus permitting the structure to accomplish not only its normal functions but likewise those of a rule or, as hereinafter more fully set forth, a plurality of rules.

A further object of the invention is to produce a device of this character which may be very readily adjusted, which may be cheaply and durably manufactured and which will be a general improvement in the art.

These and other objects I attain by the construction shown in the accompanying drawings, wherein for the purpose of illustration is shown a preferred embodiment of my invention and wherein:—

Figure 1 is a plan view of a drafting instrument constructed in accordance with my invention;

Figure 2 is a section on the line 2—2 of Figure 1;

Figure 3 is a section on the line 3—3 of Figure 1;

Figure 4 is a section on the line 4—4 of Figure 1;

Figure 5 is a plan view of the indicator pointer.

Referring now more particularly to the drawings, the numeral 10 indicates a hollow casing rectangular in cross section and elongated to a desired extent. The upper wall 11 of this casing has a longitudinal groove 13 formed therein, the bottom wall of this groove being provided with a longitudinal slot 12. This structure may readily be produced by forming through the upper wall a slot of the width of the desired extreme width of the enlarged portion of the slot and then securing to the under surface of the upper wall guide strips 14, the adjacent edges of which are spaced to produce the normal or narrowed portion of the slot. Extending longitudinally

of the casing and rotatably mounted in the end walls thereof is a threaded rod 15 held against longitudinal movement with relation to the casing, as for example, by a collar 16 and a hub 17 of a handle 18, by means of which the rod may be rotated.

Mounted upon this rod is a nut 20 having upon its side face an extension 21 slidably fitting the slot 12. A slide 23 fits within the groove 13 and rests upon the bottom wall thereof.

The nut 20 at the extension 21 thereof has a threaded stem 24 projecting upwardly through the slide 23 and a plate 25 hereinafter referred to as a protractor plate and is provided with a clamping nut 26 above this plate. The protractor plate is secured to the ends of the slide 23 by screws 27 and has formed thereon or secured thereto a protractor dial 28 and formed therein an arcuate slot 29 concentric with the protractor plate and having as its axis the threaded stem 24.

Through the slot 29 projects a bolt 30, the head 31 of which engages the under surface of the protractor plate and the threaded stem of which projects upwardly through the blade B and is provided thereabove with a clamping nut 32. Beneath each of the clamping nuts 26 and 32 are spacing collars 33 and the lower ends of these spacing collars abut the upper face of a dial pointer 34 which is rigidly secured to the blade and moves therewith. This dial pointer has an index line 35 for co-ordination with graduations of the protractor dial 28. Upon the upper wall of the casing 10 are longitudinally extending scales 36, 37, 38 and 39, these scales being preferably of the architectural type and having differently spaced graduations designating proportional sections of feet and inches, the gauge lines of which coact with the side edges of the protractor plate. Of these scales, the scale 36 is preferably a double scale of $\frac{1}{8}$ " and $\frac{1}{4}$ " to the foot graduated in $\frac{1}{48}$ ths of an inch, the scale 37 scales of $\frac{3}{8}$ " and $\frac{3}{4}$ " to the foot graduated in $\frac{1}{2}$ ds of an inch, the scale 38 scales $\frac{1}{2}$ " and 1" to the foot graduated in $\frac{1}{48}$ ths of an inch and the scale 39 $1\frac{1}{2}$ " and 3" to the foot graduated in $\frac{1}{2}$ ds of an inch. It will be noted that such scales are similar

to the scales employed on the ordinary triangular architect's rule.

The ends of the casing are preferably provided with C-clamps 40, each having an adjustable screw 41 directed through one arm thereof whereby they may be secured to a drawing board or table.

In securing the protractor plate 25 to the slide, washers are preferably disposed about the screws 27 and the threaded stem 28 to maintain the protractor plate in such spaced relation to the upper surfaces of the rules that it will not bear thereagainst.

It will be obvious that an apparatus of this character will be of considerable advantage in practically all drafting operations and will be particularly adapted for use in architectural work. The blade B may be arranged at any desired angle to the head and in its secured position, may be adjusted to any suitable position along the head.

It will also be obvious that the construction hereinbefore set forth is capable of a certain range of change and modification without materially departing from the spirit of the invention and I accordingly do not limit myself thereto except as hereinafter claimed.

I claim:—

1. A drafting instrument of the T-square type comprising a hollow head provided in its upper face with a longitudinally extending groove, the bottom wall of the groove being provided with a longitudinally extending slot, a screw-threaded shaft rotatably mounted within and extending longitudinally of the head, a nut mounted upon the shaft to travel therealong, a slide mounted within the groove and connected to the nut through the slot, the slide resting upon the bottom wall of the groove and contacting with the side walls thereof, a plate secured to the slide to move therewith, and a blade carried by said nut and rotatably adjustable relatively to the plate.

2. A drafting instrument of the T-square type comprising a hollow head provided in its upper face with a longitudinally extending groove, the bottom wall of the groove being provided with a longitudinally extending slot, a screw threaded shaft rotatably mounted within and extending longitudinally of the head, a nut mounted upon the shaft to travel therealong, a stem extending upwardly from the nut and through the slot to a point above the head, a slide mounted upon the stem and arranged within the groove, the slide resting upon the bottom wall of the groove and contacting with the side walls thereof, a plate secured to the slide to move therewith and having said stem extending upwardly therethrough, the plate having an arcuate slot with the stem as its center, a blade pivotally connected near one end to the stem, and a bolt extending upwardly through the

arcuate slot in the plate and through the blade and having clamping means.

In testimony whereof I hereunto affix my signature.

WILLIAM ROSS.

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