Sept. 21, 1937. J. SHULKIN 2,093,783

TRANSVERSE T-SQUARE DEVICE

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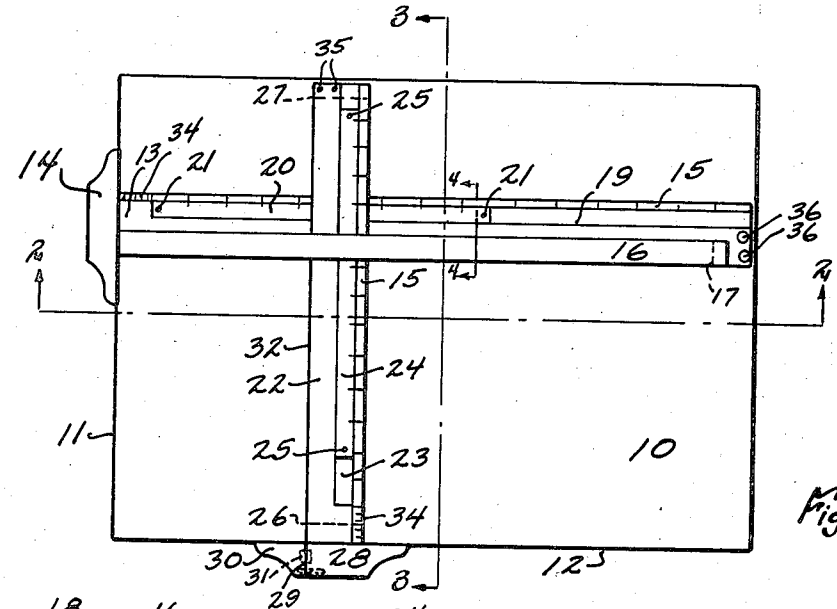


Fig. 1

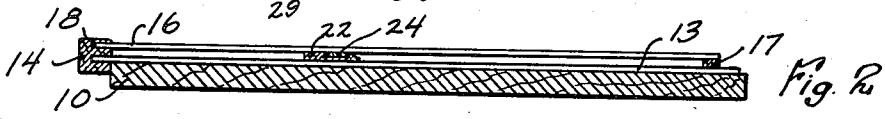


Fig. 2

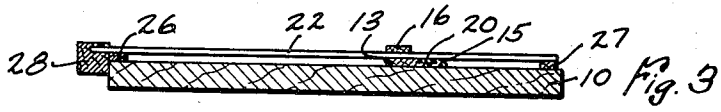


Fig. 3

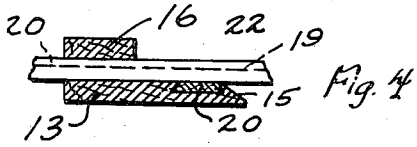


Fig. 4

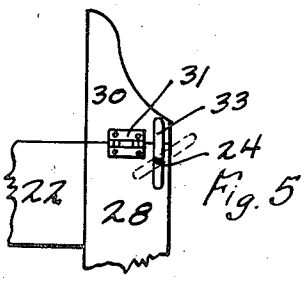


Fig. 5

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TRANSVERSE T-SQUARE DEVICE

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2 Claims. (Cl. 33—76)

My invention relates to a T-square device usable for drafting or other purposes.

An object of my invention is to provide a pair of T-squares which can be at right angles to each other.

A further object of my invention is to provide means for locating desired points conveniently using one of the T-square edges as a base without the necessity of mental computations and the like.

A further object of my invention is to provide means for fixing either of the T-squares to provide a rigid base member if such is necessary.

A further object of my invention is to provide means for allowing positioning of the T-squares as close to the edge as possible.

A further object of my invention is to provide all of the above mentioned objects in a structure of great simplicity which can be manufactured at a very reasonable cost.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawing, in which:

Figure 1 is a plan view showing the device as used,

Figure 2 is a sectional view of Figure 1 taken along the lines 2—2 thereof,

Figure 3 is a sectional view taken along the lines 3—3 of Figure 1 thereof,

Figure 4 is an enlarged detail, and

Figure 5 is an enlarged detail of the pivotal T-square head.

I have used the character 10 to designate generally a drafting board having the sides 11 and 12. One of the T-squares of my device is indicated by the character 13, and the head of the T-square by the character 14. The member 13 is provided with a bevelled edge 15 having suitable indicia thereon for measuring and the like. The T-square member 13 also includes the raised strip 16 which is supported by the member 17, and the strip enters the head 14 at 18. The T-square member 13 also includes the lengthened groove 19, which groove is adapted to receive the slidable scale 20. The scale 20 also carries suitable markings along the edge thereof, starting at a convenient zero point and progressing in fractions of an inch or in any other suitable manner. I further provide small holes 21 at either end of the sliding scale 20 so that a point can be inserted therein for convenient movement thereof. The groove 19 extends throughout the length of the member as shown.

A further T-square member 22 is received between the main body 13 of the other T-square and the strip 16, and is slidably movable at right angles thereto. The T-square 22 also includes a groove 23, which groove receives a further scale 24, which is slidable and movable therein. It will be noted that the grooves receiving the small scale slides are so made that the slides cannot be displaced therefrom (see Figures 2 and 3). The slide 24 also includes the small openings 25 at either end for the purpose above mentioned. The T-square 22 has strips 26 and 27 (see Figures 1 and 3) attached at the inner and outer ends so that the base member 22 itself will be positioned at the same level throughout. The T-square 22 includes the head 28, which head terminates at the division 29, and a further portion of the head 30 is pivotally secured to the head 29 by means of the hinge 31, so that the portion 30 can be swung downwardly if desired. The reason for this construction is that when the inner edge such as 32 is brought up against the left hand side of the drafting board 10, and in case the head 14 of the T-square 13 would be in the lower left hand corner as shown in Figure 1, this would eliminate the portion 30 from abutting against the head 14, since the portion 30 would be turned downwardly, and suitable lines could then be drawn in the lower left hand corner without restriction.

To retain the head 28 and the portion 30 rigidly when such collapsing is not necessary, I provide the small spring element 33 which is pivoted at 24. This element is held in the position shown by the solid lines in Figure 5 in ordinary use, but when it is desired to swing the member 30 downwardly, the member 33 is pivoted to the dotted position.

Each T-square also includes a small portion such as at 34 with a separate scale for margins. The end of each T-square includes the small openings 35 so that if it is desired to firmly secure one of the T-square members to the board, small thumb tacks such as 36 can be placed therein and into the board, thus providing a firm foundation, so that one T-square will not become displaced during movement of the other.

As shown in Figure 1, the horizontal T-square will be rigidly attached to the board without fear of distortive movement. It will be seen from this structure that lines can be drawn at right angles to each other, and that any one of the T-squares can be used as a base, and points set off from the edge thereof by simply moving the slidable

scales **20** or **24**. I find this especially suitable in many types of drafting work and also in composition or lay out work for printing establishments. The zero point of either scale can be placed at the edge of one of the T-squares, and the next or several points set without the necessity of mental addition of complex fractions and the like. Also this device provides means for securing measurements directly without the necessity of additional scales, etc. Many other advantages apparent from the construction will be seen, which render the device extremely useful for the purposes intended.

It will now be seen that I have provided a T-square device which is readily adjustable, and which provides means for using two T-squares at right angles to each other for various necessary purposes as well as obtaining measurements along the same.

It will also be seen that I have provided means for fixing either of the movable members rigidly to prevent displacement, and that I have provided means for positioning the T-squares close to each other without interference.

It will also be seen that I have provided all of the above mentioned constructions in a structure of great simplicity which can be manufactured at a very reasonable cost.

Some changes may be made in the construction and arrangement of the parts of my invention without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims any modified forms of structure or use of mechanical equivalents, which may be reasonably included within their scope.

I claim as my invention:

1. A drafting tool comprising a main T-square including a strip spaced therefrom, a further T-square received between the strip and the main T-square, said further T-square arranged at right angles to the main T-square and adapted to slide between said strip and said main T-square, measuring scales slidably received within each T-square for measuring distances along the same.

2. A drafting tool comprising a main T-square including a strip spaced therefrom, a further T-square received between the strip and the main T-square, said further T-square arranged at right angles to the main T-square and adapted to slide between said strip and said main T-square, measuring scales slidably received within each T-square for measuring distances along the same, said further T-square including a hinged head portion adapted to swing downwardly from the head.

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