April 12, 1927.

A. M. RASMUSEN

1,624,280

T-SQUARE

Filed March 16, 1925

Fig. 1.

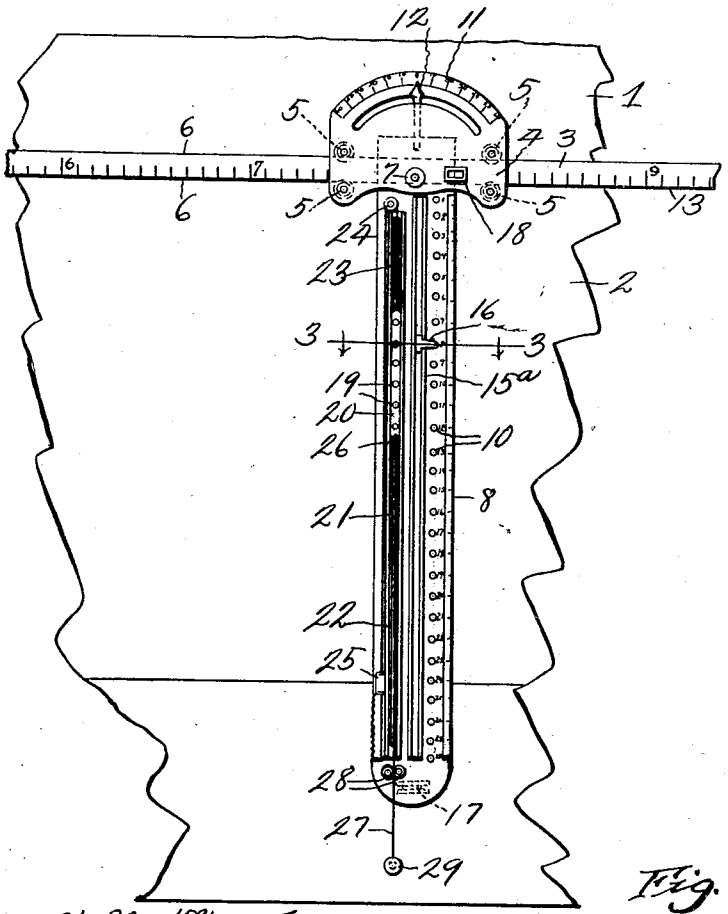


Fig. 2.

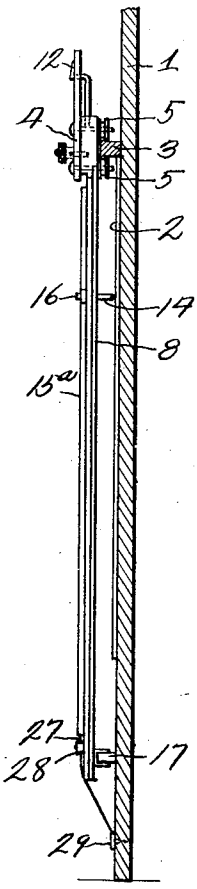


Fig. 3.

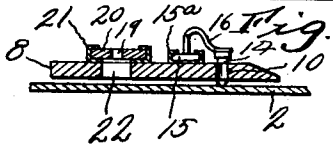
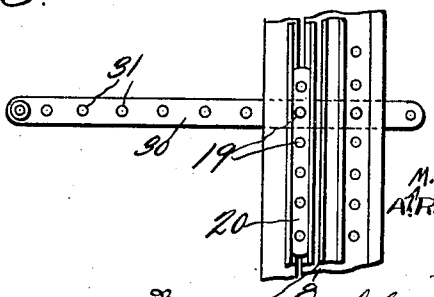


Fig. 4.



Inventor

A. M. Rasmusen

By Philip A. H. Small

Attorney

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UNITED STATES PATENT OFFICE.

ANDREW M. RASMUSEN, OF MONTROSE, COLORADO.

T SQUARE.

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The invention relates to T-squares and has for its object to provide a device of this character particularly adapted for use by sign painters and which T-square is provided with means whereby a plurality of parallel lines may be drawn on a sheet of material and vertical lines, thereby allowing the sheet of material to be properly lined and quickly lined for painting lettering thereon.

A further object is to provide the T-square with means whereby arcs and circles may be drawn and various angles.

A further object is to provide a T-square adapted to be supported in a vertical position on a wall or vertically disposed board and provided with a traveler longitudinally mounted and movable on a horizontally disposed guide rod and provided with a downwardly extending pivoted blade which may be adjusted to various angles. Also to provide the blade with a plurality of spaced apertures for the reception of marking elements and spring members for cooperating with the marking elements for pressing the same against the sheet of paper on the wall during the longitudinal movement of the T-square.

A further object is to provide the blade with a longitudinal slot having guides on opposite sides thereof in which an apertured plate is slidably mounted, and which apertured plate is adapted to receive in any number of apertures thereof a pencil point, and when moved upwardly and downwardly during a longitudinal movement of the T-square, one or a plurality of lines may be formed having compound bends. Also to provide counterweight means in connection with slide for facilitating the operation thereof and line and pulley means cooperating with the slide for controlling the movement of the slide during the pivotal movement of the blade of the T-square, or the T-square with one end of the line anchored to the stationary support or wall.

With the above and other objects in view the invention resides in the combination and arrangement of parts as hereinafter set forth, shown in the drawing, described and claimed, it being understood that changes in the precise embodiment of the invention may be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawing:—

Figure 1 is a view in elevation of the T-square showing the same supported on a wall.

Figure 2 is a vertical transverse sectional view through the wall showing the T-square in side elevation.

Figure 3 is a horizontal sectional view through the T-square blade taken on line 3—3 of Figure 1.

Figure 4 is a detail view of a portion of the T-square showing a circle drawing attachment carried thereby.

Referring to the drawing, the numeral 1 designates a wall and 2 a sheet of material carried by the wall and on which lines are to be drawn for use as guides while lettering on the sheet of material. Secured to the wall is a horizontally disposed guide bar 3, on which is longitudinally movable the T-square head 4, which T-square head is provided with grooved rollers 5, which engage the opposite flanges 6 carried by the bar 3. Pivotally connected to the head 4 at 7 is a downwardly extending blade 8 having one of its edges provided with graduations 9 in the same plane with a plurality of apertures 10 in the blade, and by means of which graduations the positions of horizontal lines to be drawn on the sheet of material 2 may be quickly ascertained. The head 4 is provided with a degree scale 11, with which degree scale an indicating pointer 12 carried by the upper end of the blade 8 cooperates. Therefore it will be seen that the blade 8 may be accurately positioned at various angles in relation to the bar 3, where it is desired to draw a line. The bar 3 is also provided with graduations 13 by means of which graduations the blade 8 may be placed in proper spaced relations on successive movement thereof for accurately spacing lines between which letters may be painted. It will be noted that the lines above referred to are vertical ones. When it is desired to draw horizontal lines, a pencil end 14 is placed in any of the apertures 10 of the blade 8, and after which the slide 15 carried by the vertically disposed channel 16 is moved to a point adjacent the pencil end 14 and its spring arm 16 is placed in

engagement with the outer end of the pencil end 14 and exerts an inward pressure on said pencil end, therefore it will be seen that when the T-square as a whole is moved longitudinally on the bar 3, the pencil end 14 will be held in close engagement with the sheet of material 2, therefore a clear distinct line will be drawn on the sheet of material in a horizontal position. It is to be understood that as many pencil ends 14 may be used as desired, and the channel 15a may have disposed therein as many slides 15 as desired according to the number of pencil ends used, however for purposes of illustration only one slide 15 is shown. The inner side of the lower end of the blade 8 is provided with a roller 17 which engages the wall 1 and maintains the blade in spaced parallel positions to the sheet of material 2 which is being lined. Where vertical lines are drawn along the scaled edge of the blade, it is obvious that the blade must be properly and accurately positioned in relation to the scale 13 of the bar 3, and to facilitate this operation the head 4 is provided with a sight opening 18 through which the upper end of the edge of the blade may be observed as well as the graduations 13.

It is obvious that arcs can be drawn by placing a pencil point in any of the apertures 10 and swinging the blade 8 on its pivotal point 7. However when it is desired to make a line of a wavy type having compound bends therein, this can be accomplished by placing a pencil point in any of the plurality of apertures 19 in the pencil slide 20, which pencil slide is longitudinally movable in the guide channel 21 carried by the blade 8 and moved over a longitudinally disposed slot 22 in the blade. It will be seen that when a pencil point is placed through any of the apertures 19, a vertical upward and downward movement of the slide 20 simultaneous with the longitudinal movement of the T-square as a whole, will cause the pencil point to make a wavy line on the sheet of paper 2. Pencil receiving slide 20 is normally held in raised position by means of a wire 23 connected to its upper end, and which wire extends upwardly over the pulley 24, and thence downwardly to the outer side of the channel 21, and has connected thereto a weight 25, which weight raises the slide 20. Connected at 26 to the lower end of the slide 20 is a downwardly extending wire 27 which extends between adjacent rollers 28 carried by the lower end of the blade, therefore it will be seen that when the lower end of the wire 27 is anchored on a tack 29 to the wall 2, and the blade 8 is swung to either side, the pencil receiving member 20 will be forced downwardly angularly thereby making one of the sides of a triangle, and by providing the weight 25 the pencil receiving slide 20 will be raised to inoperative or raised position and will be maintained in proper position at all times, no matter whether the slide is being used for marking purposes or not.

From the above it will be seen that a trolley carried T-square is provided which is particularly adapted for use by sign painters and the like for laying out work, and it will also be seen that horizontal and vertical lines may be drawn with the device and a plurality of horizontal lines may be drawn at the same time, thereby materially saving time, and at the same time allowing the sign painter to quickly lay out the work. Also means is provided where circles and lines at various angles may be drawn.

Referring to Figure 4 in which is shown a circle drawing bar 30, said bar is provided with a plurality of apertures 31, in which a pencil point may be placed, and which bar 30 may be pivotally connected to the T-square by placing a pin or pencil point through one of the apertures 19 of the slide 20, and which apertures 19 register with one of the apertures 31, at which time the slide may be arcuately moved for drawing a circle.

The invention having been set forth what is claimed as new and useful is:—

1. A T-square comprising a vertically disposed support, a horizontally disposed scaled bar carried by said support, a T-square head longitudinally movable on the scaled bar, a downwardly extending blade pivotally connected to the head and provided with a scale and a plurality of apertures adjacent one of its edges, a vertically disposed channel on said blade, a plate slidably mounted in said channel, a spring arm carried by said plate and positioned whereby it will overlie any of the apertures in the blade to urge a marking element therethrough, and a roller carried by the lower end of the blade and engaging the support.

2. A T-square comprising a horizontally disposed scaled guide bar, a traveler mounted on said guide bar and longitudinally movable thereon, a blade pivotally connected to the traveler, a pointer carried by the blade and cooperating with a scale on the traveler, one side of said blade being provided with a plurality of apertures for the reception of a marking element, a vertically movable marking element holding arm carried by the blade adjacent the plurality of apertures and engaging a marking element in one of said apertures, a pencil point receiving slide carried by the blade and slidably mounted on the blade in a vertically disposed slot, means for normally forcing said pencil receiving slide upwardly and means connected to said pencil receiving slide and forming means whereby said slide may be

forced downwardly, and a roller carried by the lower end of the blade and engaging a support for maintaining the blade spaced from the support.

3. The combination with a vertically disposed T-square blade, said blade being pivotally and transversely movable, of a pencil receiving slide vertically movable on the blade in a slot therein, a roller carried by the upper end of the blade, a cable connected to said slide and extending upwardly over the roller and thence downwardly, a weight connected to said cable and normally forcing the slide upwardly, adjacent rollers carried by the lower end of the blade, a cable connected to the lower end of the slide and extending downwardly, said cable extending between the adjacent rollers carried by the lower end of the blade and adapted to have its end anchored to a fixed support.

In testimony whereof I have signed my name to this specification.

ANDREW M. RASMUSEN.