March 22, 1938. M. D. NISSENBAUM 2,111,871

MULTIUSE TOOL

Filed Sept. 20, 1937

Fig. 1.

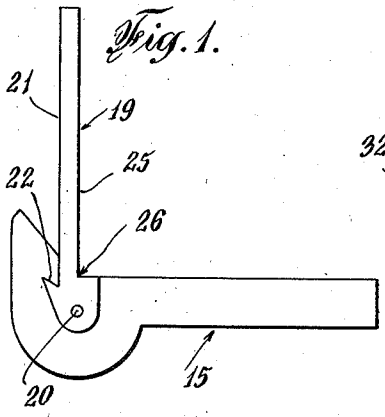


Fig. 2.

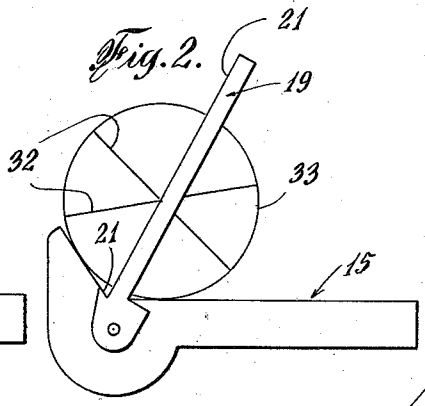


Fig. 3.

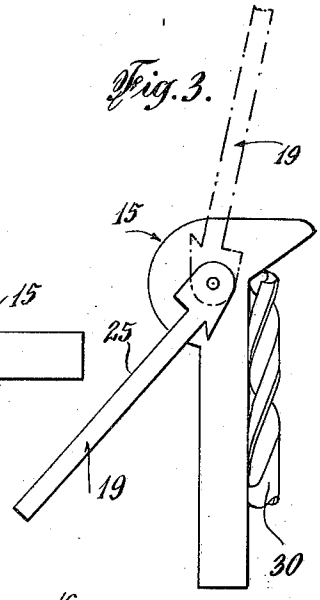


Fig. 4.

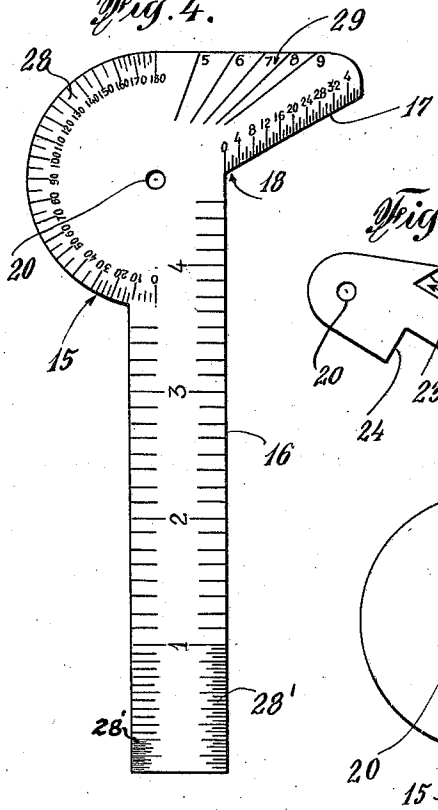
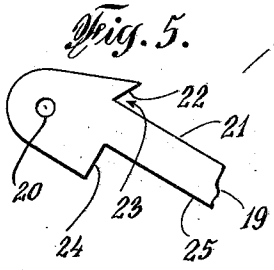


Fig. 5.



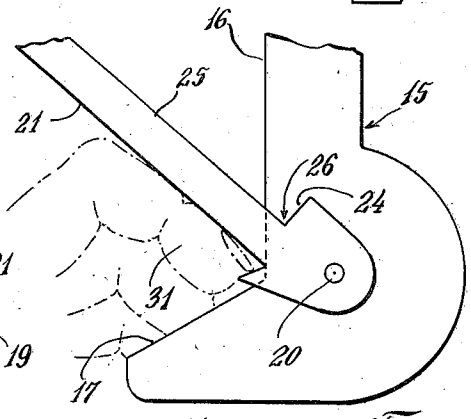


Fig. 6.

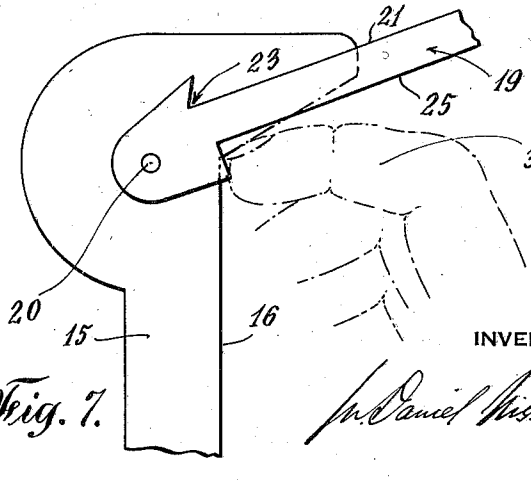


Fig. 7.

INVENTOR

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UNITED STATES PATENT OFFICE

2,111,871

MULTIUSE TOOL

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Application September 20, 1937, Serial No. 164,713

5 Claims. (Cl. 33—93)

My present invention relates to a multi-use tool, and more particularly to the type which involves angles and angle measurements.

The principal object of this invention is to provide a novel and improved tool of the type mentioned which is conveniently foldable for carrying purposes, and whose components may be easily set in various predetermined relationships by the sense of touch, and of course, by sight or by utilization of both senses as a check up, whereby the tool may be used as a square at one setting, and as a finder of the center of circles, at another setting. In addition, if desired, the said tool can also be used as a protractor, a circle divider for the construction of equal sectors, regular polygons and polygrams, and as a drill point gauge, and rule.

Other objects will become manifest as this disclosure proceeds.

In the accompanying drawing, forming part of this application, similar characters of reference indicate corresponding parts in all the views.

Fig. 1 shows an embodiment of my present invention with its components set in position whereby the tool is a square.

Fig. 2 shows the tool in adjustment for use to find the center of circles.

Fig. 3 shows the tool as same may be used as a drill point gauge, as a protractor, and as a central angle indicator.

Fig. 4 shows an embodiment of the body portion of the tool.

Fig. 5 is a fragmentary view showing the movable arm component of the tool.

Fig. 6 is a pictorial representation showing how by the sense of touch, the tool components are adjusted to their required relationship, for use as a finder of the center of circles.

Fig. 7 is a pictorial representation showing how by the sense of touch, the tool components are adjusted to their required relationship, for use as a square.

In the drawing, the numeral 15 designates generally a flat body member having at its right hand side, a pair of edges 16 and 17 in angular relation, forming an obtuse angled vertex 18. A flat arm member 19, superimposed on the body member 15, is at one end pivotally mounted on said body member about the axis 20. Near said axis, the arm member 19, at its right hand side, has a pair of edges 21 and 22, in angular relation, forming an acute angled vertex 23, and at its left hand side, has a pair of edges 24 and 25, in angular relation, forming a right angled vertex 26. The vertex 23 is exactly half the vertex 18. The respective distances between the axis 20, and each of the vertices 18 and 23, are equal. Also, the respective distances between the axis 20 and the lines of each of the edges 16 and 24, are equal.

Preferably, the vertex 18 is 121 degrees, so that the instrument may be used as a drill point gauge, in particular for twist drills 30, as illustrated in Fig. 3. As is usual, graduations 27 along edge 17 are provided as an aid for such purpose. Also, the axis 20 is of advantage to be on the line of edge 25, so that the instrument may be used as a protractor, which common use is illustrated in Fig. 3; the graduations 28, being the proper scale for such purpose, when coincident with edge 25. It is also advisable that edges 21 and 25 be parallel, and that ruler scales 28' be provided on the body member 15. The graduations of scale 29, when coincident with edge 25, indicate the central angle to divide a circle into the indicated number of equal parts for construction of regular polygons and polygrams.

In particular, this instrument is intended to be used as a square, shown in Fig. 1, in which respect, attention is called to the illustration of Fig. 7, and also as a means to locate the centers of circles as in Fig. 2, in which latter respect, attention is called to the illustration of Fig. 6. It is evident, that with a finger 31, in either vertex 23 or 26, the arm 19 can be shifted to true position so that edge 22 coincides with edge 17, or so that edge 24 coincides with edge 16. The feel of the finger affords sufficient means for accurate settings. The intersection of lines 32 marked across the circle 33 along edge 21 of the arm 19 in each instance, is the center of said circle.

This invention is capable of numerous forms and various applications without departing from the essential features herein disclosed. It is therefore intended and desired that the specific embodiments shown herein shall be deemed illustrative and not restrictive, and that the patent shall cover whatever features of patentable novelty exist in the invention disclosed; reference being had to the following claims rather than to the specific description herein to indicate the scope of this invention.

I claim:

1. In a tool of the character described, a flat body member having a pair of straight edges forming a vertex, and a flat arm member superimposed and pivotally mounted to the body member, having a pair of straight edges forming a

vertex exactly half of the size of the vertex on the body member; the distances from the axis of the pivotal connection of the members and each vertex being equal.

2. In a tool of the character described, a flat body member having a straight edge and a flat arm member superimposed and pivotally mounted to the body member, having a pair of straight edges forming a vertex of a predtermined degree; the distances from the axis of the pivotal connection of the members and the respective lines of the straight edge on the body member and of one of the straight edges on the arm member being equal.

3. A device as in claim 2, wherein the predetermined angle equals ninety degrees.

4. In a tool of the character described, a flat body member having at one side a pair of straight edges forming a vertex and a flat arm member superimposed and pivotally connected to the body member, having at its analogous side a pair of straight edges forming a vertex exactly half of the size of the vertex on the body member and on its other side a pair of straight edges forming a vertex of ninety degrees; the distances from the vertex on the body member and the first mentioned vertex on the arm member being equal, and the distances between the axis of the pivotal connection of the members and the respective lines of a straight edge on the body member and of a straight edge of the second mentioned vertex of the arm member being equal.

5. A device as in claim 4, wherein a straight edge forming the vertex on one side of the arm member is parallel to a straight edge forming the vertex on the other side of said arm member.

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