July 19, 1960 O. PETERSON 2,945,301

MULTI-PURPOSE TOOL

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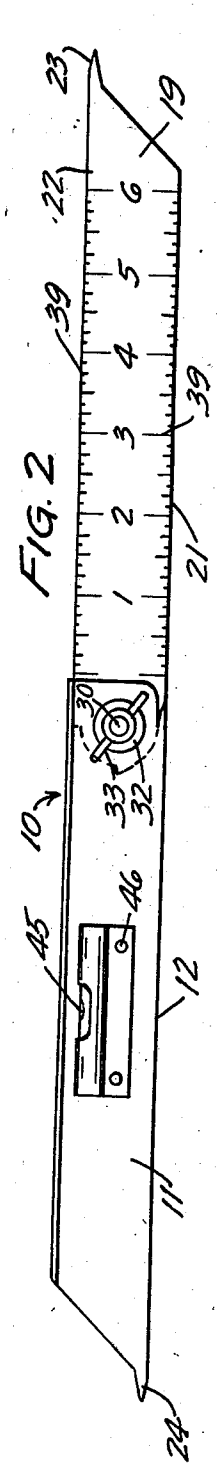


FIG. 2

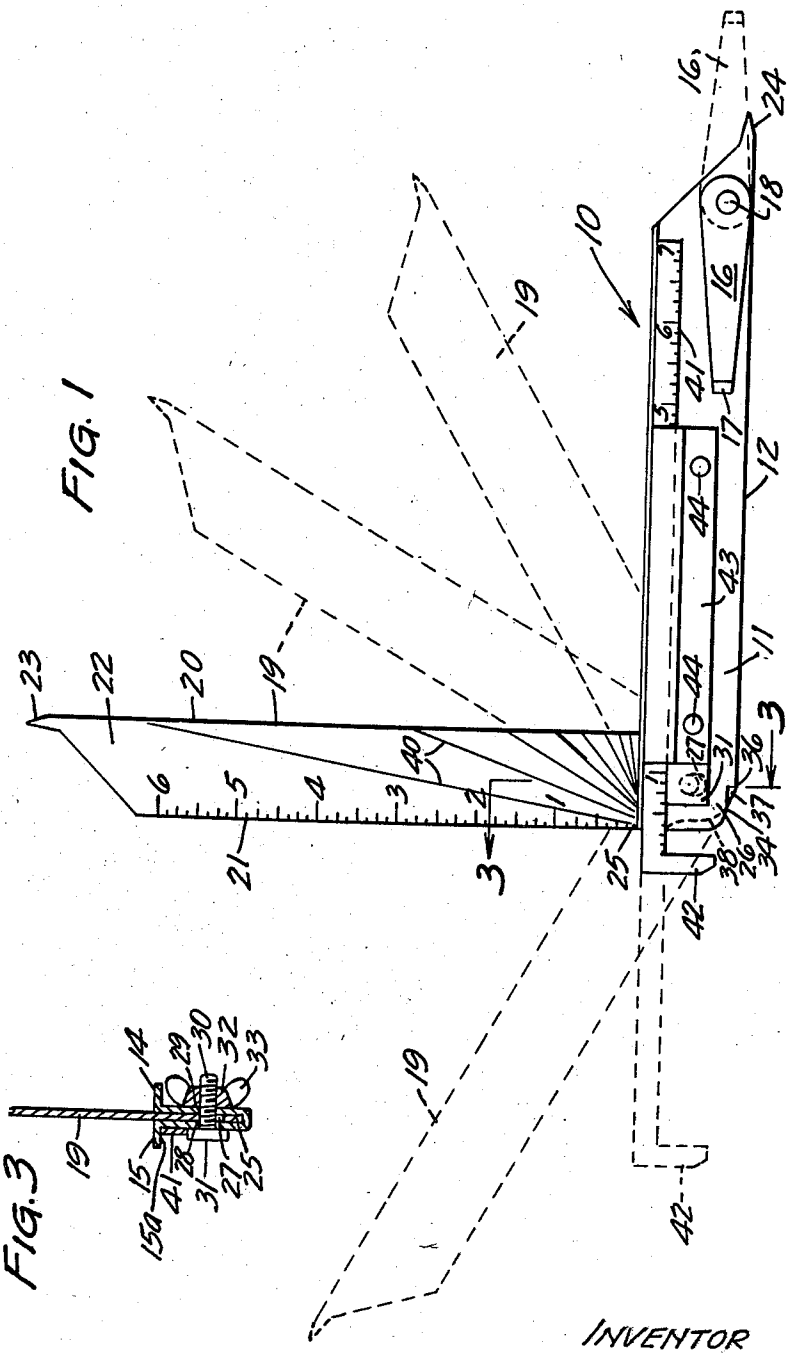


FIG. 1



FIG. 3

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# MULTI-PURPOSE TOOL

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1 Claim. (Cl. 33—1)

This invention relates to a multi-purpose bladed tool for performing a number of functions commonly necessary during the course of work by a skilled craftsman.

An object of my invention is to provide a new and improved multi-purpose tool of simple and inexpensive construction and operation and which is capable of performing a number of different functions.

Another object of my invention is the provision of a novel multi-purpose tool wherein the several parts thereof are ingeniously constructed and related to each other in such a manner as to facilitate an accomplishment of a multiplicity of functions with only a minimum of parts.

A further object of my invention is the provision of a novel and improved multi-purpose tool which may be used as a divider, a screw driver, a caliper rule, a grade meter, a bevel square, a level, a plumb, a rule, and a square.

These and other objects and advantages of my invention will more fully appear from the following description made in connection with the accompanying drawings wherein like reference characters refer to the same or similar parts throughout the several views and in which:

Fig. 1 is an elevation view of one side of the invention;

Fig. 2 is an elevation view of the other side of the invention and showing the blade, partly broken away, in a different position than that shown in Fig. 1; and

Fig. 3 is a detail section view taken on a plane as indicated substantially at 3—3 in Fig. 1.

One form of the present invention is shown in the drawings and is described herein.

The multi-purpose tool is indicated in general by numeral **10** and includes a body member **11** which is constructed of a piece of rather heavy gauge sheet metal which is folded or bent back upon itself along one side **12** so as to define a blade-receiving slot **13** which is open at the upper side of the body member and which is closed at the lower side **12** of the body member. The edge portions **14** and **15** of the body member are bent outwardly at the upper side to define a pair of flanges disposed at right angles to the main portion of the body member so as to define surface areas which may engage a workpiece so as to orient the body member **11** in a position normal to the workpiece edge. The surfaces of the edge portions or flanges **14** and **15** are disposed parallel to the closed side **12** of the body member.

A screwdriver blade **16**, having a screw-engaging edge **17**, is swingably mounted on the body member **11** by means of a pivot-forming rivet **18** which projects through only one thickness of the body member **11** and does not project into the blade-receiving slot **13**.

A measuring and straight edge blade **19** has parallel inner and outer edges **20** and **21** and also has an outer end portion **22** which is tapered to a point **23** to cooperate with the tapered and pointed outer end portion **24** of the body member **11** for use as a divider. The inner end portion **25** of blade **19** projects into the blade-receiving slot **13** adjacent the inner end **26** of the body member **11**. The inner end portion **25** of blade **19** has an aperture or



opening **27** therein. The body member **11** has aligned apertures **28** and **29** therein which receive a pivot-forming king bolt **30** which also extends through the aperture **27** in the blade **19**. It will be noted that the aperture **27** is slightly larger than the bolt **30** for purposes hereinafter more fully pointed out, and the aperture **27** is preferably slightly elongated like a slot oriented in the longitudinal direction of the blade. The bolt **30** has a square head **31** bearing against the outer surface of body member **11** and a thumb nut **32** is secured on the other end of bolt **30** and also in engagement with the other outer surface of the body member **11**. The thumb nut **32** has an operating lever **33** affixed thereto to facilitate ready and easy manual turning of the nut **32**.

The inner end portion **26** of body member **11** is notched as at **34** through the end of the body member and through the closed side **12** thereof to define a shoulder surface **36**.

The inner end portion **25** of the blade **19** also has a notch formed therein to define an abutment surface **37** which may be disposed in engagement with the shoulder surface **36** so as to hold the blade **19** at right angles with respect to the sides of the body member **11**. The elongated or oversized aperture **27** in the blade **19** permits limited longitudinal shifting of the blade with respect to the pivot so as to move the abutment surface **37** out of engagement with the shoulder surface **36** and the blade **19** will thereby be permitted to swing to positions wherein obtuse angles are defined with respect to the body member.

The inner end edge **38** of the blade **19** is curved to permit the blade **19** to be swung into parallel relation with respect to the sides of the body member **11** and so as to permit the outer edge **21** to be disposed in precise alignment with the side **12** of the body member. It will be noted here that the opposite edge portions of the blade **19** are provided with distance-indicating indicia **39** so as to be adapted for use in measuring distances. One side of the blade **19** is also provided with arcuately spaced angle markers or indicia **40** which, when extending along the upper side of the body member, indicate that the blade **19** is disposed at a certain angle with respect to the body member.

A caliper-mounting bar **41** lies against the outer surface of the body member at one side thereof and also lies against the lower surface **15***a* of flange **15** to be guided by the surfaces for linear movement in a direction parallel to the sides of the body member **11**. The bar **41** has a caliper head **42** formed integrally thereof which is adapted to be spaced from the inner end edge **26***a* of the body member for use as a caliper. It will be noted that the bar **41** is also guided by one side of the bolt head **31** so as to be prevented from moving in a direction transversely of the bar. A bar holder **43** is secured as by screws **44** to body member **11** and the holder **43** may be constructed of sheet metal to maintain the bar **41** in guiding relationship with the outer surface of the body member and the lower surface **15***a* of flange **15**.

A level gauge **45** is secured to the other outer surface of body member **11** as by screws **46** and in the proper position for indicating a level condition when either the upper or lower sides of the body member **11** are positioned in level condition.

It will be understood that when the blade **19** is disposed at right angles to the body member, with the surfaces **36** and **37** in engagement with each other, the tool **10** may be used as a square or may be employed as a plumb when the outer edge **21** bears against an upright surface for checking the vertical orientation of such a surface. The blade may be swung to any of a plurality of angle positions with respect to the body member, whereupon, the tool **10** may be used as a bevel square. When the blade is disposed at an acute angle with the body

member **11**, the tool **10** can be employed as a divider, or may be used in connection with the level gauge **45** for use as a grade meter to check the inclination of roof rafters or the like.

When the blade is swung completely into the slot **13**, the screw driver **16** may be swung outwardly to function as a screw driver. When the blade **19** is disposed within the slot **13**, the caliper head may be extended out from the body member and used to determine diameter of an object or the like. It should further be noted that because of the construction of the present invention, certain combinative functions are obtainable. For instance, the blade may be positioned at right angles to the body member and held in this position by the surfaces **36** and **37**. If a bracket or framing for mounting a fixture in horizontal position and suspended below an inclined support is to be set up, the outer edge **21** will be positioned in plumb relationship by the indication produced by the level gauge **45** and vertical distances may be measured along the outer edge **21** of the blade. While the measurements are being taken, the horizontal measurements may be simultaneously taken by extending the caliper bar outwardly from the end of the body member **11** so that simultaneously, the vertical and horizontal distances can be obtained for creating a fixture-mounting bracket attachable in suspended relationship from an inclined support.

It should be also noted in Fig. 2 that when the blade is oriented in parallel relation with the body member, the side **12** and edge **21** may be employed as an elongate continuous straight edge.

It will, of course, be understood that various changes may be made in the form, detail, arrangement and proportion of the parts without departing from the scope of my invention which consists of the matter described herein and set forth in the appended claim.

What I claim is:

A multi-purpose tool comprising a sheet metal body member bent back upon itself to define a blade-receiving slot, said body member having an open side and a closed side and having out-turned flanges at said open side and in a plane lying normal to the blade-receiving slot and said body member also having a notch through one end and intersecting the closed side to define a shoulder surface, a measuring and straight edge blade extending at right angles to the sides of the body member and having an apertured inner end extending into the slot, a pivot bolt on the body member adjacent the notch therein and extending through the aperture in the inner end of the blade, said aperture and pivot bolt being of such relative size as to allow limited longitudinal movement of the blade, the inner end of the blade having a rounded end edge with a notch therein defining an abutment surface engaging the shoulder surface of the body member and holding the blade at right angles with respect to the sides of the body member, the longitudinal shifting of the blade permitting disengagement of said abutment and shoulder surfaces to permit swinging of the blade into parallel relation with the sides of the body member, the spacings between the outer edge of the blade and the pivot bolt and between the closed side of the body and the pivot bolt being equal to facilitate alignment of said outer edge with the closed side, the inner end of the blade having a curvature to permit alignment of the outer edge of the blade with said closed side of the body member, to thereby define a continuous straight edge along the blade and body member the pivot bolt having a thumb nut on one end thereof to clamp the body member against the blade and thereby hold the blade in a predetermined position, the pivot bolt having a head with a flat surface spaced from one of the flanges, an elongated bar lying against the outer surface of the body member and disposed between the flat surface of the bolt head and the lower surface of the adjacent flange and being guided in longitudinal reciprocating movement thereby, said bar having a caliper head on the end thereof and disposed in spaced and opposed relation with one end of the body member, means retaining the bar against the body member, and the outer ends of the blade and body member being tapered to points to permit the tool to be used as a divider.



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