

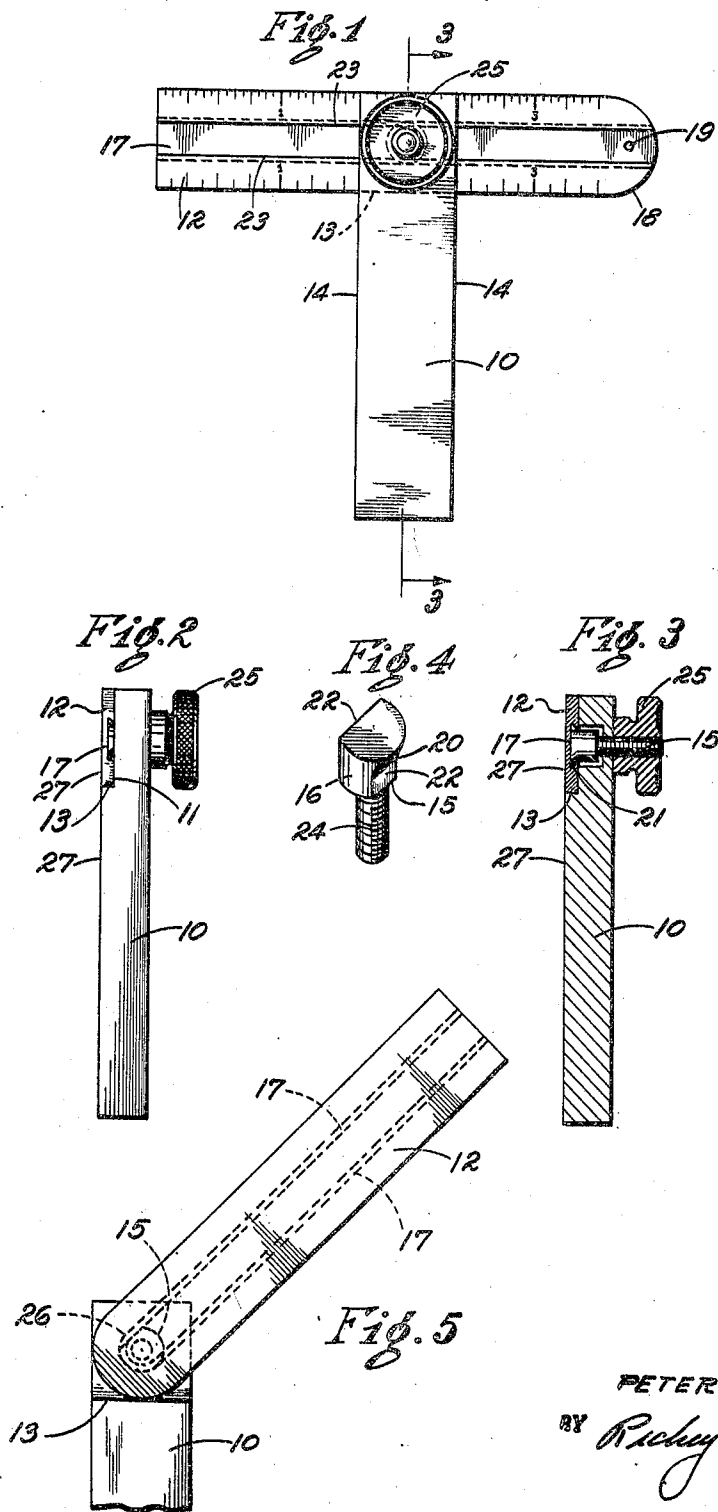
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TRY-SQUARE

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TRY SQUARE

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5 Claims. (Cl. 33—102)

This invention relates to improvements in try-squares of the type used by tool and die makers.

The primary object of the invention is to provide a square having one side of the stock or head disposed in shouldered relation with the blade and the opposed side thereof flush with the outer face of the blade.

Another object of the invention is to provide a supporting structure for a longitudinally adjustable blade which is designed to perform the dual function of locking the blade upon the head and squaring the blade relative thereto.

Another object of the invention is to arrange the clamping screw and blade in contiguous relation with each other so that contemporaneous adjustments thereof can be effected with one hand.

A still further object of the invention is to provide an instrument formed with one face of the head and blade disposed in a common plane and formed to facilitate the use of the tool either as a square or bevel.

Other objects and advantages more or less ancillary to the foregoing and the manner in which all the various objects are realized will appear in the following description, which considered in connection with the accompanying drawing, sets forth the preferred embodiment of the invention.

Referring to the drawing:

Fig. 1 is a front elevational view of the square embodying the present invention;

Fig. 2 is a side elevational view thereof;

Fig. 3 is a vertical section of the square, the section being taken on a plane indicated by the line 3—3 in Fig. 1;

Fig. 4 is a view in perspective of the locking screw; and

Fig. 5 is an elevational view of the reverse side of the instrument illustrated in Fig. 1, the blade in the figure being of a modified form and being adjusted to show the use of the instrument as a bevel.

Referring first to Figs. 1 and 2, the improved instrument comprises a head 10 formed with an undercut step 11 in the end portion of one face thereof which is machined to a depth equal to the thickness of the blade 12 and of a length equal to the width thereof. In forming the step 11 the stock is accurately machined so that the ledge or shoulder 13 defined thereby is at right angles with the side walls 14 of the head. The step 11 is drilled and counterbored for the reception of a draw bolt 15 which is formed with a cylindrical head 16, proportioned for snug slid-

ing engagement within the counterbore. The blade 12 is formed with a longitudinal dovetail groove 17 and an arcuate end portion 18 having a pin 19 therein arranged for abutting engagement with the head of the bolt 15 to maintain maximum surface engagement between the blade and the step 11 when the tool is adjusted for use as a bevel.

The head 16 of the draw bolt is machined to provide a lip 20 tapered inwardly for engagement with the inclined flanges 21 of the dovetail groove 17. The head is further formed with parallel flat faces 22, the body of the head intermediate the faces 22 being proportioned for engagement with the upper edges 23 of the dovetail groove. The draw bolt is further constructed with a threaded shank 24 for the reception of a thumb nut 25 for locking the blade in seated engagement with the step 11.

In the embodiment illustrated in Fig. 5 the dovetail groove 17 terminates in the undercut end wall 26 which serves the function of the stop pin 19.

It will be recognized that as the nut 25 is tightened against the head the parallel faces or lands 22 will prevent the rotation of the draw bolt within the groove 17; that the tapered lip 18 on the bolt will cause the blade to be drawn inwardly against the step 11 and downwardly against the shoulder 13, and that the blade will thus be drawn into seated engagement with the square shoulder 13.

It will be noted that the outer face of the blade and the contiguous face of the head are disposed in a common plane so that the instrument may be used in layout work to scribe, or measure right angles upon a plane surface or burned over and used as a square in the conventional manner. The instrument may likewise be used as a bevel when the layout entails the problem of transferring or measuring angles upon a work piece having a flat surface. The tool may be further used to advantage in layouts where it is necessary to scribe a continuous line on two faces of the work and maintain the line in squared relation with one of the faces; for example, the face 14 of the tool when adjusted for use as a square may be pressed against the vertical wall of a casting of cubical form, the lower edge of the blade 12 being positioned for engagement with the top thereof. A continuous line may now be drawn upon the top and side walls of the casting by drawing the scribe along the flush faces 27—27 of the blade and handle.

Although the foregoing description is neces-

sarily of a detailed character, in order that the invention may be completely set forth, it is to be understood that the specific terminology is not intended to be restrictive or confining, and that various rearrangements of parts and modifications of detail may be resorted to without departing from the scope or spirit of the invention as herein claimed.

I claim:

1. A try-square comprising a head having an undercut step in the end of one face thereof defining a ledge disposed at right angles to the sides of the head, a blade in said step engaged with said ledge, the outer face of the blade being disposed in a common plane with the face of the head, said blade having a dovetail groove therein, a draw bolt in said head and a tapered lip on the end of said bolt engaged within said dovetail groove for drawing the blade inwardly against the head and downwardly against said ledge.

2. A try-square comprising a head, a blade and a draw bolt, said head having a rectangular step in the end thereof of a depth equal to the thickness of said blade, said blade having a longitudinal dovetail groove therein, a head on said draw bolt formed with a flat face engaged with the edge of the outer flange defining said groove and a tapered lip on said draw bolt head engaged with the inclined face of the inner flange defining said dovetail groove.

3. A try-square comprising a head having a depressed step in one face thereof, a square shoulder defined by said step, a blade having a dovetail groove therein mounted in said depressed step with the inner edge thereof engaged with said shoulder, the outer face of said blade being flush with the face of the head, having the step therein, a draw bolt mounted in the dovetail

groove in said blade and extended through said head, a nut on said draw bolt, means on the draw bolt to restrain rotative movement thereof and means on the draw bolt to force the blade into intimate engagement with said shoulder when said nut is tightened.

4. A try-square comprising a blade, a head having a step in the end of one face thereof equal in depth to the thickness of said blade and equal in length to the width of the blade, said blade being mounted in said step and having a dovetail groove in a face thereof, a draw bolt in said head, a cylindrical enlargement thereon, flat faces on said cylindrical enlargement disposed in parallel relation with each other, the dimension of the portion of the bolt between said faces being equal to the groove opening in the face of the blade, a tapered lip overhanging one of said flat faces and engaged within said dovetail groove, said head having a counterbore therein for the reception and support of said cylindrical enlargement.

5. A square comprising a blade, a head having the end portion of one face thereof cut away to a depth equal to the thickness of said blade, a square shoulder in the head defined by the cut away portion thereof, one end of the blade being of semi-circular configuration, said blade having a longitudinal dovetail groove therein terminating adjacent the semi-circular end thereof, a draw bolt in said head, a tapered lip therein engaged within said groove and a nut on said bolt to facilitate the impingement of said blade against said shoulder and the securing of the blade upon the head in radial adjustment about the bolt.

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