

W. H. COOPER.

Try-Squares.

No. 142,557.

Patented September 9, 1873.

Fig. 1.

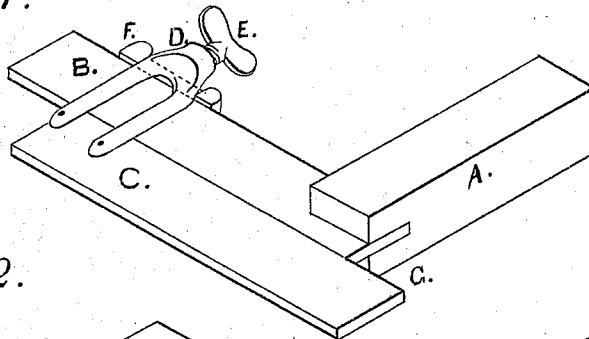
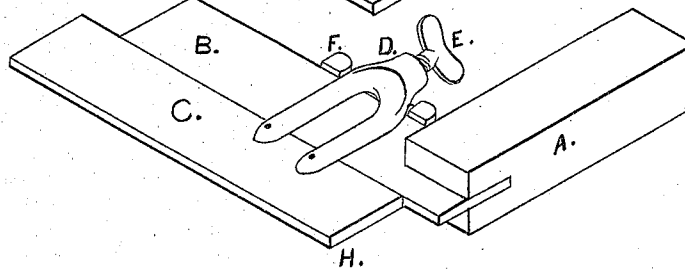


Fig. 2.



WITNESSES.

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WILLIAM H. COOPER, OF LOWELL, MASSACHUSETTS.

IMPROVEMENT IN TRY-SQUARES.

Specification forming part of Letters Patent No. **142,557**, dated September 9, 1873; application filed June 9, 1873.

To all whom it may concern:

Be it known that I, WILLIAM H. COOPER, of Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented certain Improvements in Squares, of which the following is a specification:

My invention relates, principally, to the combination with a square of a supplementary blade, as and for the purpose hereinafter described.

The accompanying drawings represent my invention.

Figure 1 is a perspective view of a try-square, having attached to its blade a supplementary blade; also, a yoke supporting a thumb-screw; also, a gib to receive the thrust of said screw. Fig. 2 is a perspective view of the same, the yoke being attached to a different part of the blade.

A is the beam of a try-square. B is the blade of the same. C is a plate, which should be of the same thickness as the blade B, and has parallel sides and right angles, and may be in size and shape the same as said plate B. To this plate or supplementary blade C, by rivets or otherwise, is attached the U-shaped piece or yoke D. The arms of the yoke D are slit or sawed through to let the blade B through them, as shown in the drawings. In the middle of the yoke is a thumb-screw, E, the thrust of which screw is received upon the gib or piece of metal, F, which has a straight-edge resting upon the edge of the blade B, to protect said blade from being marred by said screw.

The principal use of the supplementary blade C is to form with the square an adjustable square, which shall have the advantages of a set of squares with blades of different lengths. It has other uses, however. Thus, when the supplementary blade is in the position shown in either of the figures, the square would in-

dicate whether two flat surfaces not in the same plane were parallel to each other, the end of the blade C resting upon one of said surfaces, and the back of the beam A resting upon the other surface. The square, as shown in Fig. 1, would also show whether the side of a groove was perpendicular to a plane surface outside of said groove, and this where the said groove is too shallow to receive the blade of an ordinary square. The square shown in Fig. 2 will indicate whether the internal angle of two plane surfaces is a right angle when at the point of intersection of the same there is a molding or other obstacle to the use of an ordinary square. When the supplementary blade C is turned end for end, (as it may be, since both sides of said blade C and yoke D are alike,) and the yoke is placed as near as possible to the left end of the blade B, said blade B is in effect so extended that it is possible to ascertain whether two plane surfaces which are at some distance apart are perpendicular to each other.

Various other applications of my invention may be readily discovered by any practical mechanic.

The yoke D may be in the middle or at the end of the supplementary blade C; better at the end, however, as it may readily be changed end for end by loosening the thumb-screw, when the blade C will slide on the blade B.

Instead of the thumb-screw E, cams or eccentrics may be used.

I claim as my invention—

The combination of the supplementary blade C, provided with the yoke D and thumb-screw E, with a square, A B, as and for the purpose herein described.

WILLIAM H. COOPER.

Witnesses:

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