

M. COUGHLIN,  
TRY-SQUARE,  
APPLICATION FILED MAY 5, 1914.

1,151,925.

Patented Aug. 31, 1915.

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Fig. 1.

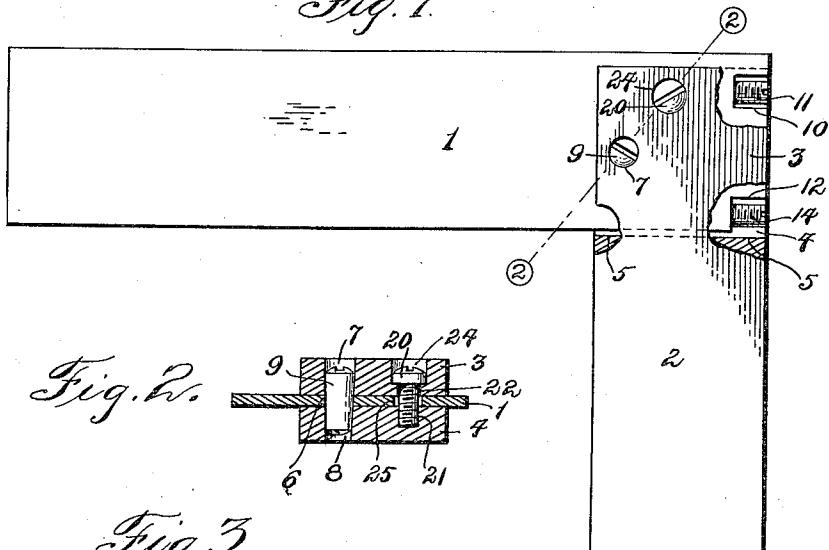
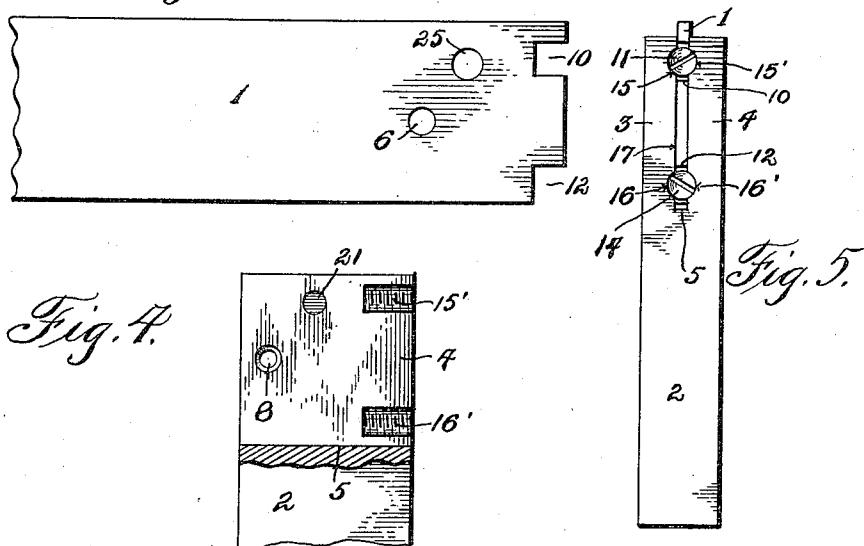


Fig. 2.

Fig. 3.



### Witnesses

Frank Smith.

O. M. Lovell.

Inventor  
Michael Coughlin  
By Walter W. Baltimore

### Inventor

Attorney

# UNITED STATES PATENT OFFICE.

MICHAEL COUGHLIN, OF PHILADELPHIA, PENNSYLVANIA.

## TRY-SQUARE.

1,151,925.

Specification of Letters Patent. Patented Aug. 31, 1915.

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To all whom it may concern:

Be it known that I, MICHAEL COUGHLIN, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Try-Squares, of which the following is a specification.

The object of the invention is to provide a square with means for adjustment whereby, when the square is found to be out of true, it may be reset to the proper angle. The invention may be applied to instruments, other than squares, for gaging angles.

Referring to the accompanying drawing, forming a part of this specification, and wherein like characters of reference designate corresponding parts throughout the several views: Figure 1 is a view in side elevation of a square, with parts broken away and shown in section to reveal underlying parts, Fig. 2 is a sectional view taken through Fig. 1 on the line 2—2, Fig. 3 is a side elevation of a portion of the blade removed, Fig. 4 is a detail view of the upper end of the head, with one of the furcations removed, and Fig. 5 is a view in end elevation of the square.

In the drawing, reference character 1 designates the blade and 2 the head which are designed to have a predetermined angular relation, and are both preferably constructed of metal. The head 2 is provided at its upper end with furcations 3 and 4 terminating in shoulder 5 where they join the body portion proper of the head 2. When the blade is in place in the head, it fitting between the two furcations 3 and 4, the lower edge of said blade is spaced from said shoulder 5 to permit of the desired adjustment of the blade.

The blade is provided with an opening 6 which, when the square is assembled, alines with openings 7 and 8 in the furcations 3 and 4 respectively, said openings 6, 7 and 8 constituting a tapered aperture for the reception of a taper-pin 9 upon which the blade pivots in the head in accomplishing the hereinafter described adjustment. The end of the blade is provided with a socket or cut-out portion 10 to receive and against the end wall of which bears an adjusting screw 11, and the lower corner of the same end of the blade is cut-out to afford a some-

what similar socket 12 to receive and against the end wall of which bears an adjusting screw 14. The furcation 3 is provided in its interior face with upper and lower threaded half sockets 15 and 16 respectively, while the furcation 4 has similar sockets 15' and 16', and the adjusting screw 11 threads into the half sockets 15 and 15' while the adjusting screw 14 threads into the half sockets 16 and 16', the said screws being located within the channel 17, see Fig. 5, between the furcations 3 and 4. It will be observed that the adjusting screws and the pivot pin 9 bear a triangular relation, with the adjusting screws above and below the line of pivot of the blade, and that these screws and pin are as far removed from each other as possible to afford the greatest amount of leverage for the purpose of adjustment.

When the blade 1 has been inserted between the furcations 3 and 4 and the taper pin 9 inserted, the upper adjusting screw 11 is inserted and set until the blade 1 and head 2 conform to the angle of another true square employed as a templet, and then the lower adjusting screw 14 is inserted and set, whereupon the square will be found to be true if the one employed as a templet is true. By the same means, *i. e.* the adjusting screws, the square may be varied from the normal angle, or if the blade or head become bent, they may again be restored to their normal angular relation by manipulation of the adjusting screws, it being understood that the said screws bearing against the end walls of the sockets 10 and 12 cause a swinging of the blade upon the taper pin 9 as a pivot.

To lock the parts in their adjusted position, a set screw 20 is provided, and the stem thereof threads into a threaded socket 21 in the furcation 4, the aperture 22 provided in the furcation 3 being unthreaded, as well as the countersink 24 for the head of said screw 20. This set screw passes through an aperture 25 in the blade, said aperture being larger than the diameter of the threaded stem of the set screw 20 to permit limited swinging of the blade upon its pivot pin 9 during adjustment thereof by the adjusting screws 11 and 12. When the set screw 20 is driven home, the two furcations 3 and 4 are pinched together upon the blade 1 thereby positively locking the same against dis-

turbance of the effected adjustment. In addition to the furcations pinching the blade, they likewise pinch the adjusting screws 11 and 14 effectually locking the same against displacement.

Obviously, the head and blade may be separated to occupy less space in the tool chest or pocket, and for convenience in shipping.

10 What is claimed:

1. A square, comprising a blade, a head having furcations, means pivoting the blade between and to the furcations, and adjusting screws threaded in and located between

15 the furcations to vary the angular relation of the blade and head.

2. A square, comprising a separable blade and head, the head having furcations and their adjacent faces provided with complementary threaded half-sockets, adjusting screws in said sockets and engaged with the same edge of the blade to vary the angular relation of the blade and head, and a pivotal connection between the head and blade.

25 3. A square, comprising a separable blade and head, the head having furcations and their adjacent faces provided with complementary threaded half-sockets, adjusting screws threaded in said sockets and located

40 between the furcations and engaged with the same edge of the blade to vary the angular relation between the blade and head, and a pivotal connection between the blade

and head located at a point intermediate the adjusting screws.

35 4. A square, comprising a blade and head, the head being bifurcated to provide spaced furcations at the upper end thereof, a taper-pin connecting the blade and head pivotally between the furcations, the head end of the 40 blade having cut-out portions to one side and above and below the pivotal point, adjusting screws in said cut-out portions and having opposite side portions threaded in fractional sockets formed in opposite portions of adjacent walls of the furcations, 45 said screws being axially parallel, and a set screw threaded in one furcation and passing through the other and the blade for drawing the furcations together to pinch the blade 50 and adjusting screws.

5. A square, comprising a blade and head pivotally connected, adjusting screws for swinging the blade in opposite directions upon its pivotal connection, and furcations 55 on the head between which the blade is mounted, and means for clamping the furcations upon said blade and upon the adjusting screws to prevent displacement thereof.

In testimony whereof I affix my signature in presence of two witnesses.

MICHAEL COUGHLIN.

Witnesses:

WARD GILHAM,  
THOMAS S. LANARD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."