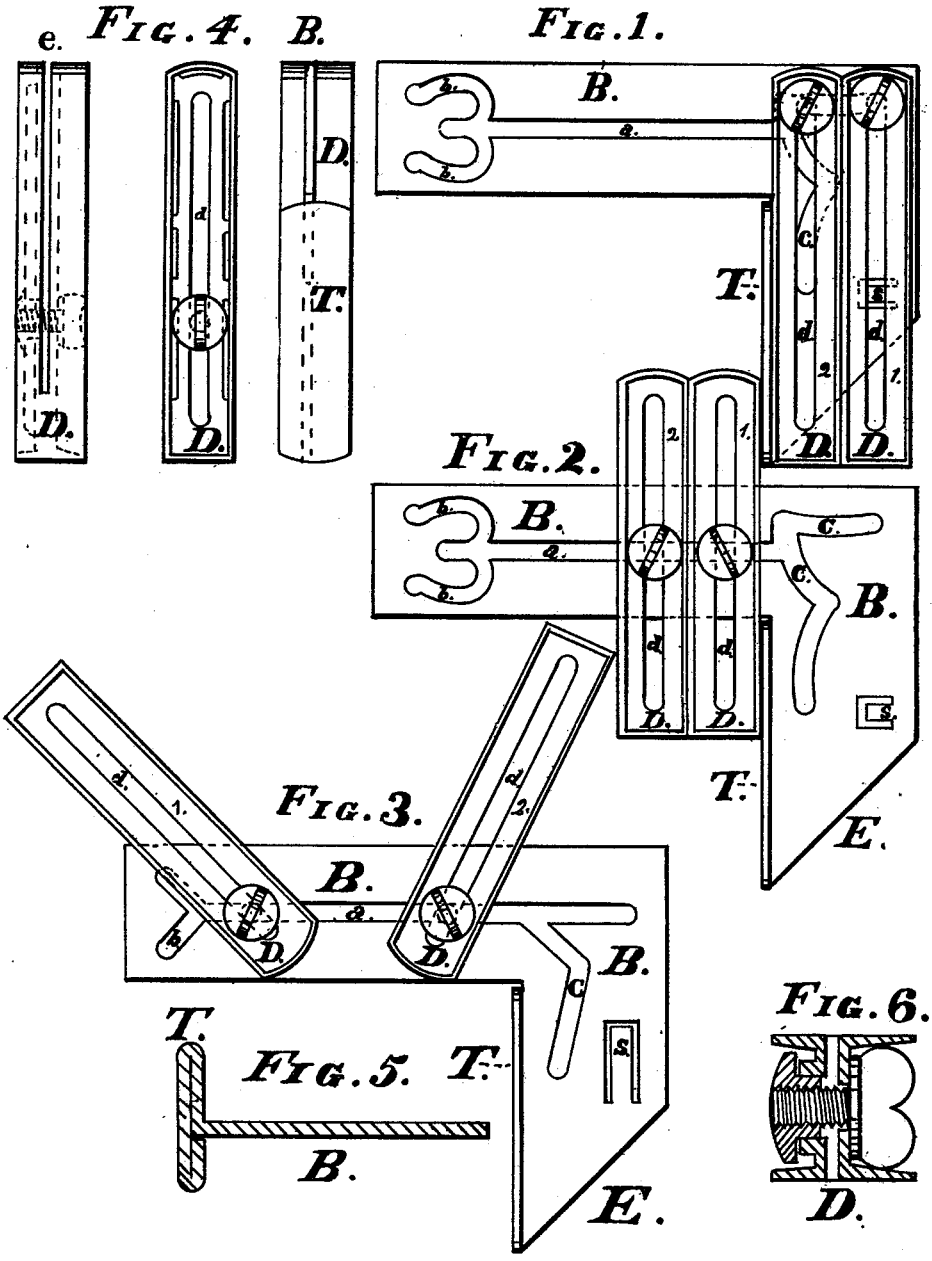
E. H. EATON.

Try-Square, Bevel, and Miter.

No. 204,428. Patented June 4, 1878.



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ELIJAH H. EATON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN TRY-SQUARE, BEVEL, AND MITER.

Specification forming part of Letters Patent No. **204,428**, dated June 4, 1878; application filed May 6, 1878.

To all whom it may concern:

Be it known that I, ELIJAH H. EATON, of the city of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Adjustable Try, Miter, and T Square and Bevel, of which the following is a specification:

The invention relates to squares in which the stock or stocks are made movable and adjustable; and has for its object the construction of a square which can be used as a try-square and bevel, that may be set to work two bevels at the same time. It can be adjusted so as to be used as a T and miter square.

The invention consists in combining with two movable and adjustable slotted stocks a slotted blade, which blade in itself forms a try-square and a miter-square, as will be hereinafter described, referring to the drawings making a part of this specification, in which—

Figure 1 is a view of my improved square when it is used simply as a try-square. Fig. 2 is a view when used as a T and miter square. Fig. 3 is a view of my improved square with the movable stocks set on the blade, that it may be used as a bevel working two angles, a try and miter square. Fig. 4 is a view of one of the movable stocks. Fig. 5 is a section of the stock-shoulder and blade. Fig. 6 is a section of one of the movable stocks. Figs. 5 and 6 are shown on twice the scale of the other figures.

Similar letters in the drawings refer to like parts.

The construction of my improved square is as follows: B is the blade, made of sheet-steel. On this blade I form a stock-shoulder, T, which I make by folding and lapping the sheet-steel, as shown in section, Fig. 5. In the blade B, I cut or punch a long slot, *a*. At each end of this slot I cut two diverging slots, *b b* and *c c*. *s* is a spring, formed by punching out around three sides of the spring, as shown in the drawings. After turning up the shoulder T, punching out the slot and spring *s*, the blade B is then tempered, when it is ground, polished, and trued up square, with the end E filed at an angle of forty-five degrees.

The stocks D D are made of metal. I prefer malleable iron. These stocks are made with raised ribs, forming a recess on each side, one recess for the wing-headed screw and the opposite for the nut, as shown in section, Fig. 6. The stock has a slot, *d*, cast nearly its full length.

By examining Fig. 6, it will be seen that the slot on the side for the nut is made wide, so as to admit the nut in which it slides, and prevents the nut from turning when setting the stocks on blade B. The stock D is also cast with a slot, *e*, open at one end, as shown in Fig. 4. This slot *e* fits the blade B.

It will be noticed that the wing-head of the screw and nut do not project above the ribs, but are flush. This allows the stocks to lie flat, and the square may be handled with much better advantage than when the screws or nuts project above the stocks, as has been the case heretofore.

The manner of adjusting and using my improved square and bevel is as follows.

Fig. 1 shows my square with the stocks fixed on blade B in such a manner that it forms a handy try-square.

In moving the stocks from the position shown in Fig. 1, the screws in the stocks are loosened and the spring *s* is pressed down by the thumb-nail, and that stock No. 1 is drawn out at the bottom, when the other stock, No. 2, is slightly drawn across the blade B, sufficient to allow the screw to drop down the slot *c*, when the first stock may be turned over on the top of blade B and the screw placed into the slot *a*, and then the other stock may be raised, placing the screw of that stock in the slot *a*; and the stocks may be set on the blade at such angles as desired, and the tool may be used as a bevel working two angles, as shown in Fig. 3, and at the same time my improved square may be used as a try and miter square.

When it is desired to move the stocks a complete revolution, the screw of the No. 1 stock is slid into the lower slot and the screw of No. 2 stock is slid into the upper slot *b*, when the No. 1 stock may be raised and its screw slid back into slot *a*; then No. 2 stock may be turned down and its screw slid back into slot *a*, thus making a complete revolution of the stocks D D on the blade B, and they may be set as shown in Fig. 2. The tool may be then used as a T, try, and miter square.

When forming the square into a T square,

if desired, only one of the stocks may be turned on blade B; but in order to use the miter, both stocks should be turned over, as is shown in Fig. 2.

I am aware that a single slotted stock has been used on a slotted blade. This I do not claim; but

I claim—

1. The right-angle or try-square B, in combination with the fixed rib or shoulder T, when the same is formed from a single piece of sheet-steel by folding and lapping, as shown and described.

2. The slotted right-angle or try-square B, having a shoulder, T, in combination with the adjustable slotted stocks D D, as shown and described, and for the purpose specified.

3. In a right-angle square, a central slot, *a*, in combination with two diverging slots, *b b*, at one end and two slots, *c c*, at the opposite end, and slotted stocks D D, as shown and described, and for the purpose specified.

4. The spring *s*, in combination with a movable slotted stock, D, as shown and described, and for the purpose specified.

5. A metallic stock constructed with projecting flanges, forming recesses for the head and nut of the adjusting-screws, in combination with a slot, *e*, for the blade B, and a slot, *d*, for the thumb-screw, as shown and described, and for the purpose specified.

ELIJAH H. EATON.

Witnesses:
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