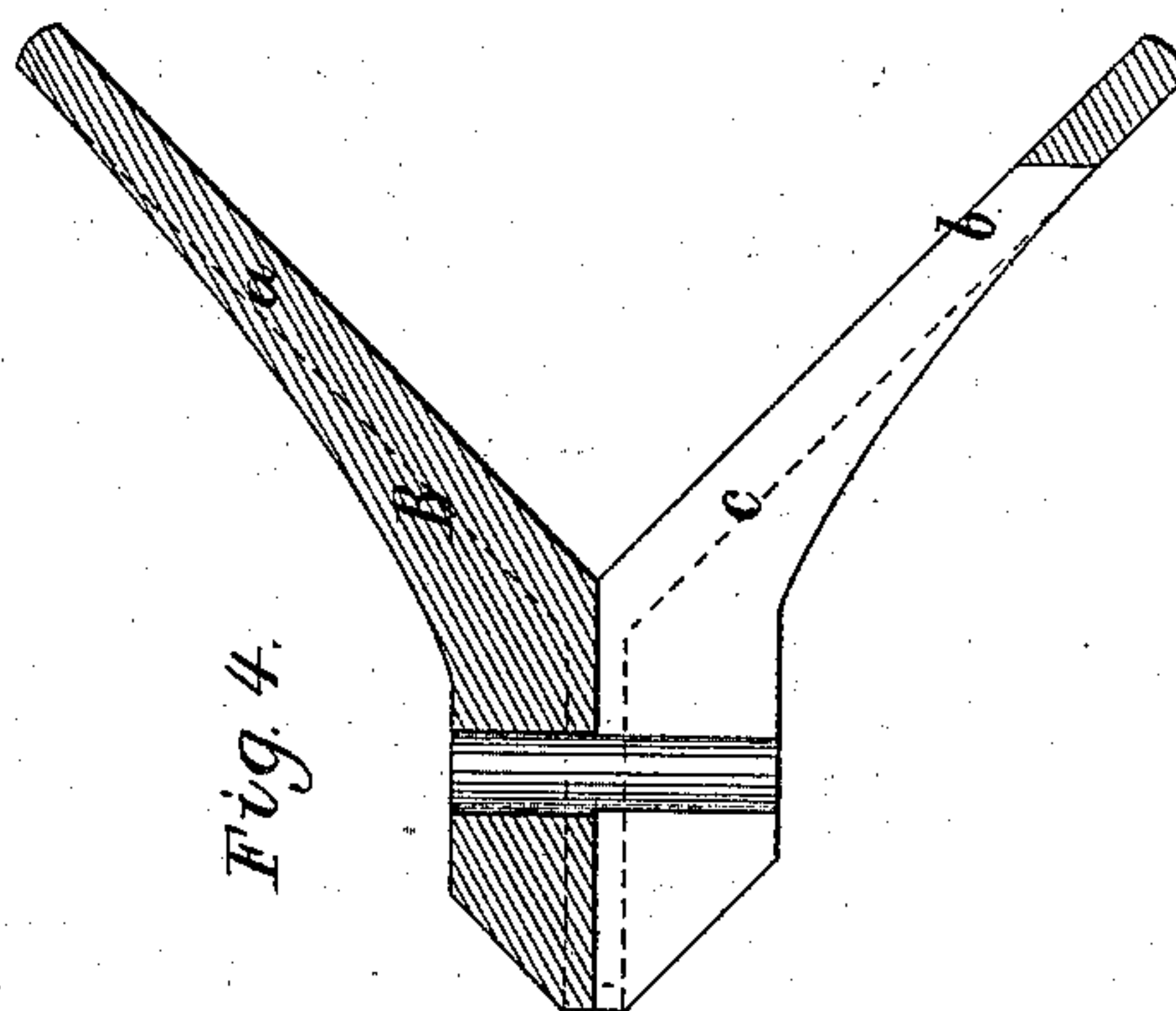
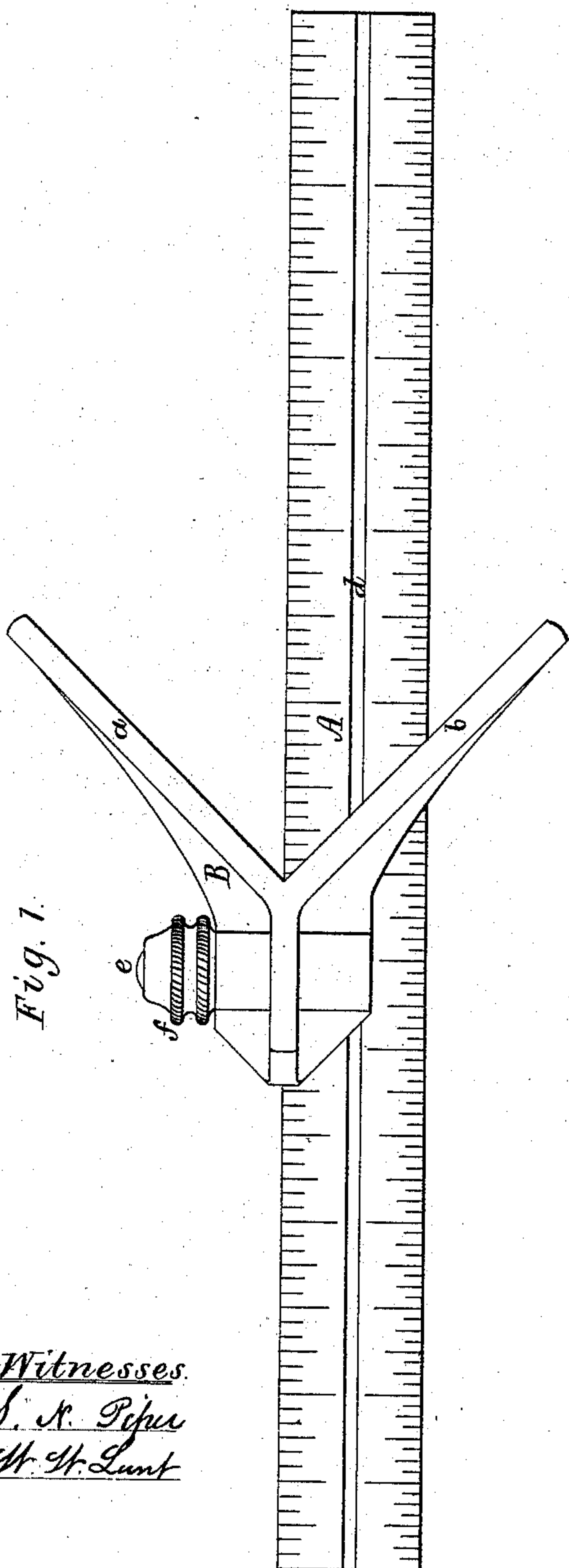
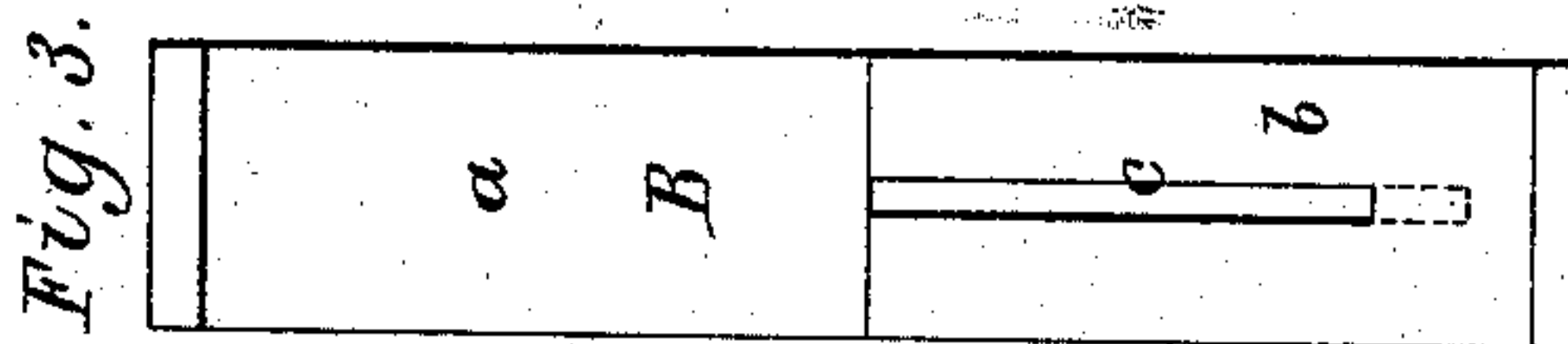
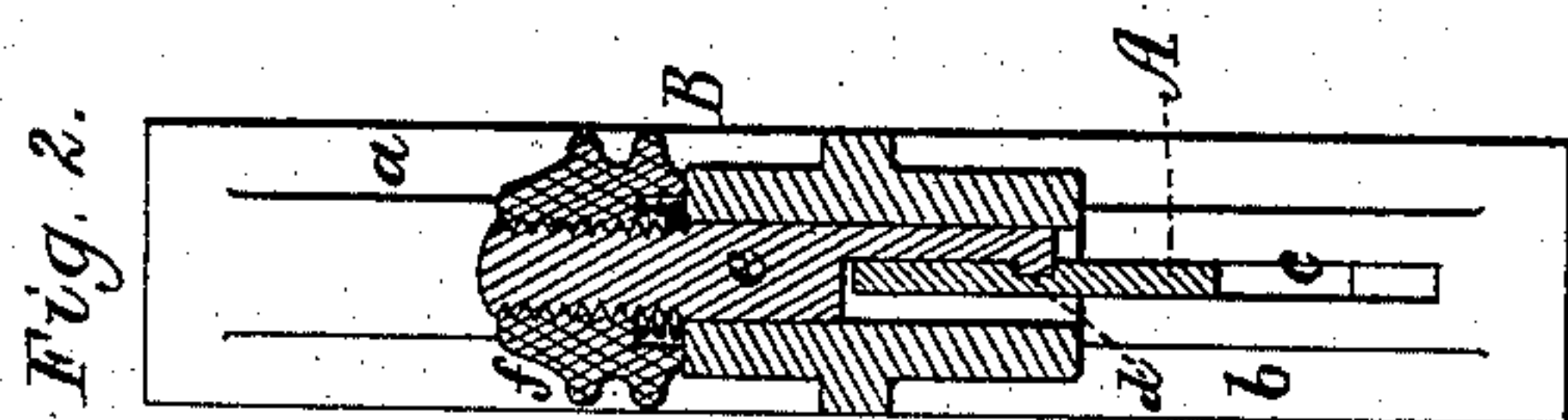


(No Model.)

L. S. STARRETT.  
Try-Square.

No. 229,283.

Patented June 29, 1880.



Witnesses  
L. N. Pope  
W. H. Lunt

Inventor.  
Laroy S. Starrett.  
by attorney.  
R. H. Eddy



# UNITED STATES PATENT OFFICE.

LAROE S. STARRETT, OF ATHOL, MASSACHUSETTS.

## TRY-SQUARE.

SPECIFICATION forming part of Letters Patent No. 229,283, dated June 29, 1880.

Application filed March 29, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, LAROE S. STARRETT, of Athol, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Try-Squares; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a side view, and Fig. 2 a transverse section, of a try-square having its head or stock provided with my improvement, the said section being taken through the clamping-screw and nut, to be hereinafter described. Fig. 3 is an inner-edge view, and Fig. 4 a longitudinal section, of the stock or head.

The try-square hereinafter described is not only to be used as an ordinary try-square, but can be employed for determining the center of a circle. It is composed of a ruler or slide-bar, A, and a slotted stock or head, B, the latter being applied to the said ruler and provided with a clamping-nut and screw for fastening it in position thereon.

My improvement relates specially to the head or stock and its arrangement with the ruler or slide-bar and clamp-screw and nut.

In carrying out my said improvement I construct or provide the head with two arms, *a b*, of equal length, rigidly connected, and arranged with their inner surfaces straight and at a right angle to each other, and I form in the head and through one of the arms, midway between its opposite edges, a slot, *c*, to receive the ruler or slide-bar, such slot being arranged so as to cause the upper edge of the ruler or slide-bar when against the upper edge of the slot to stand at an angle of forty-five degrees with the inner face of each of the two arms.

The ruler has a groove, *d*, made in one side of it and extending longitudinally through it, such groove being to receive the bent or turned-in end of a clamp-screw, *e*, arranged in the head or stock in manner as represented, such clamp-screw being provided with a nut, *f*, arranged as shown.

From the above it will be seen that the head can be moved lengthwise upon the side bar, and may be clamped thereto, and that the arms of the head project in opposite directions from the upper edge of the bar; also, that the slot for receiving the bar is made midway between

the two opposite edges of the lower arm of the head, whereby the said arm is caused to extend at an equal distance from each side of the bar.

The advantages of this movable head, made as described, may be thus enumerated: It can, at will, be used at or near either end of the rule or slide-bar, and with the rule may be employed to find the center of a circle or that of the end of a cylinder, which may be accomplished by placing the inner faces of the arms against the circumference and drawing a straight line along the upper edge of the rule and across, or partially across, the end or circle, and afterward placing the head in like manner against other parts of the circumference and drawing another line in the same way to intersect the first line. The point of crossing of the two lines will indicate the center sought.

As the head extends in opposite directions beyond the rule or slide-bar, the head may be used either side uppermost; or, after a line may have been drawn as described across a circle, the head may be turned over and another line be drawn in like manner. Should one of such lines be at an angle to the other the true diametric or centering line will be midway between them.

Furthermore, the instrument so constructed may be used as a try-square, which may be done by placing the ends of its arms against the surface from which it may be desirable to draw a line at right angles. So the instrument may be used to ascertain whether two surfaces are at a right angle to each other, all of which will be readily understood by persons skilled in using try-squares.

I claim—

1. The head not only provided with arms of equal length, and being rigidly connected with each other, or in one piece with the body of such head, and arranged with their inner faces at a right angle, but having in its body and through one of such arms, and midway, or essentially so, between its opposite edges, a slot to receive a rule or slide-bar, such slot terminating at one end of it at the vertex of the angle of the two arms, and being made through an arm of solid stock, to give a working-face that will allow either side to be laid down, all being substantially as set forth.

2. The try-square head having its arms rigidly connected and a slot made through one of them, and with reference to the other, in manner as set forth, in an arm of solid stock, 5 in combination with a slide-bar arranged in the said slot and grooved lengthwise, as shown, and with a clamping-screw and nut adapted to the said bar and head, all being substantially as specified.
- 10 3. The head not only provided with two arms arranged at a right angle to each other, and rigidly connected to or in one piece with the body of the said head, but having in it and one of such arms, and midway between the opposite edges of the latter, and extending, as 15 shown, from the vertex of the angle of such arms, a slot to receive a slide-bar, such slot being made through an arm of solid stock, to give a working-face that will allow either side to be laid down, all being substantially as set 20 forth.

LAROY S. STARRETT.

Witnesses:

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