

H. K. JONES.
Making Carpenter's Squares.

No. 91,449.

Patented June 15, 1869.

Fig. 1.

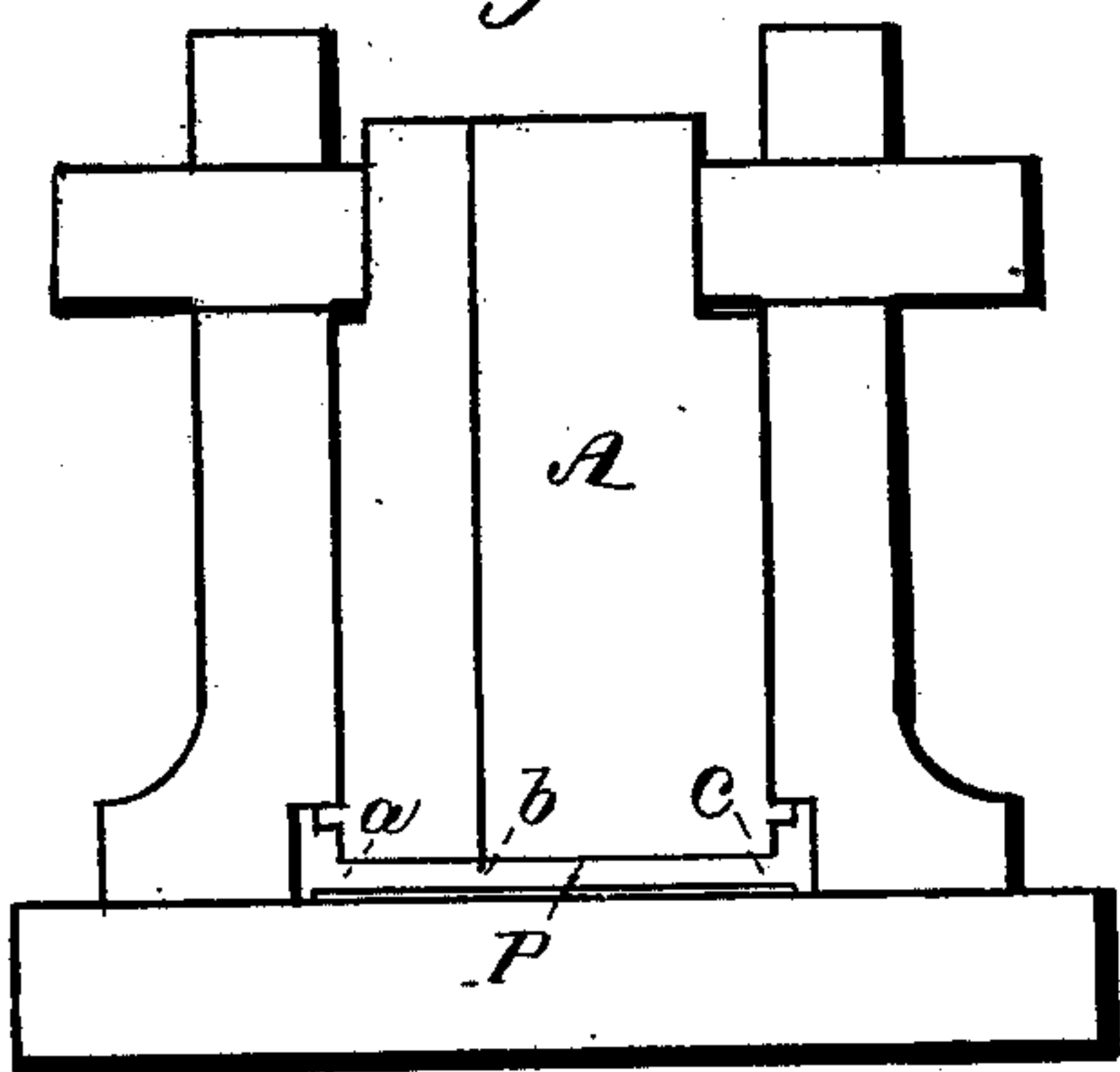


Fig. 2.

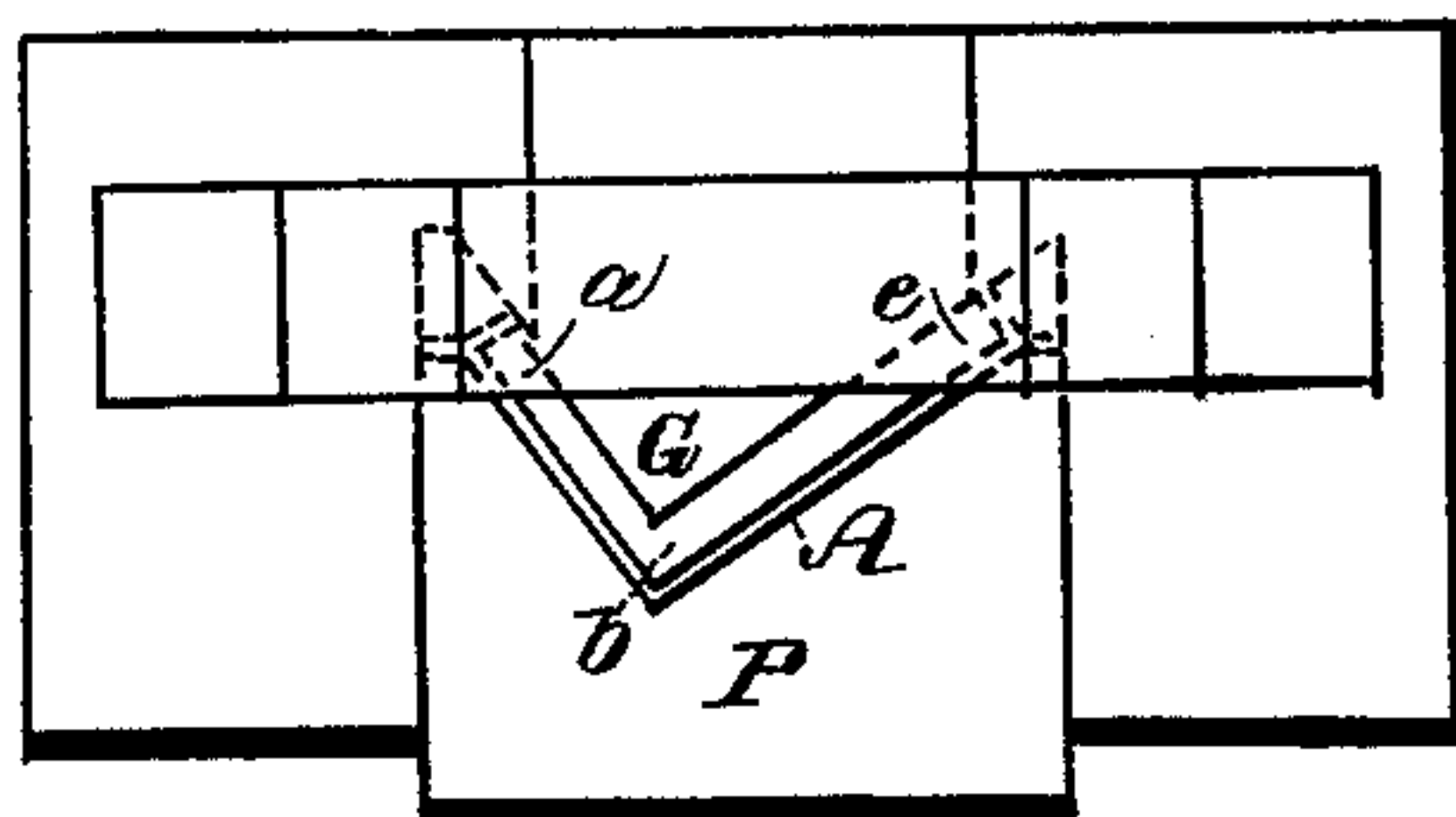


Fig. 3.

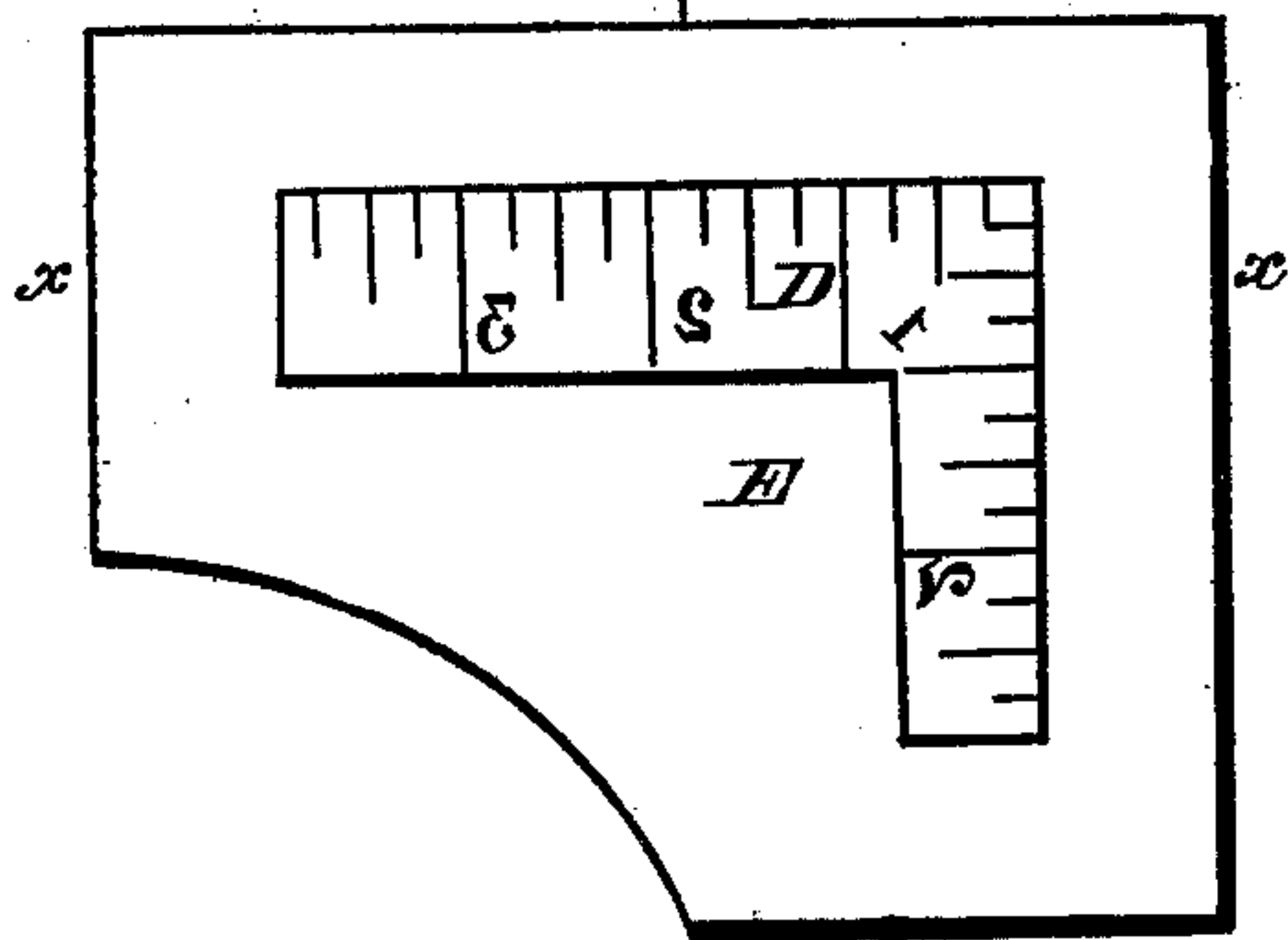
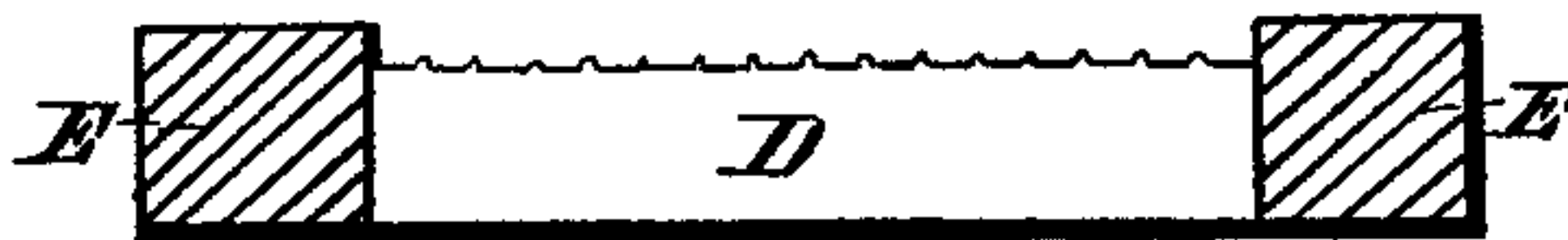


Fig. 4.



Witnesses.

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HORACE K. JONES, OF KENSINGTON, CONNECTICUT.

Letters Patent No. 91,449, dated June 15, 1869.

IMPROVED METHOD OF MAKING CARPENTERS' SQUARES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, HORACE K. JONES, of Kensington, in the county of Hartford, and State of Connecticut, have invented certain new and useful Improvements in the Method of Making Carpenters' Squares; and I do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

Figure 1 represents a front view of a punch for cutting square-blanks out of a solid plate.

Figure 2 shows a plan or top view of the same.

Figure 3 shows a plan of a die for marking the graduated lines and figures upon the square.

Figure 4 is a section on the line xx of fig. 3.

The object of my invention is to make a stronger and cheaper square, for carpenters' and masons' use, than is at present manufactured by the ordinary method.

The common method of making carpenters' squares at present practised, is to cut the body, or longer blade, and the tongue, or shorter blade, from separate strips of steel or iron, and weld them together to form the angle.

In the finer quality of squares, before being welded together, the two blades are rolled down, so as to taper in thickness from the angle to the ends. The square is then ground upon an ordinary grindstone, and graduated by engraving the lines upon it and stamping the figures in their proper places.

My improved method makes a solid square, without welding, by cutting the squares out whole from a solid plate, by means of a right-angled cutting-punch, as shown at A, in figs. 1 and 2, with cutting-edges, $a\ b$ and $b\ c$, which cut off the square-blanks successively from the plate P.

This plate is advanced under the punch a sufficient distance, each time that the cutter descends, to shear off the exact width it is designed to make the square.

For the purpose of regulating this width, a gauge, G, is placed back of the punch, at the proper distance.

The position of the sides $a\ b$ and $b\ c$, with regard to the direction that the plate moves under the punch, fixes the relative widths of the two blades, the tongue being made narrower than the body.

The plate P may be an ordinary rolled plate of sheet-steel or iron, and the squares punched out of uniform thickness, and then rolled down taper in the ordinary manner; or the plate P can be rolled bevelled, so as to be of greater thickness in the part forming the angle of the square, and tapering off toward the edges, so that the blanks, when cut out, shall have the proper thickness, without any additional rolling.

By my improved method, the squares are ground upon the flat side of a revolving grindstone, being passed repeatedly over it while held in a suitable frame. This is done to insure the surface being ground to a plane, in order that it may properly take the lines and figures of the graduation.

The lines and figures are made upon a die, D, in raised ridges, of suitable form to cut into the metal of the square.

The die, which may be made up of more than one piece, is fitted into a recess in the block E, figs. 3 and 4, which has a slot cut through it of exactly the size of the die. The edges of this slot come sufficiently above the face of the die to permit the thickness of the square to enter into the slot, so that the ends and edges of the square are retained in position, and the metal prevented from expanding under the pressure applied to the die, and thereby altering the length of the graduations or of the blades. The great pressure required to force the lines of the die into the metal of the square, renders this support of the edges necessary.

With the better class of squares, generally made of steel, when the blades are rolled taper after being punched out, the grinding of the face of the square to a flat surface is necessary, to remove any irregularities, before being stamped by the graduated die. But when the plate is rolled to the desired taper before cutting out the square, and also in the common kinds of iron squares, that are not tapered after being cut out of the flat plates, the graduation can be done before the grinding, as the surface of the plate is sufficiently plain to receive it.

The squares are finally polished by any convenient and common means.

Claims.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The method herein described of graduating squares by means of a die, sunk into a recess in a block, to preserve the shape of the square.

2. As an improved method of making squares, cutting the blank out whole from the plate, grinding it upon a revolving grindstone, and stamping the graduations upon it, by means of a recessed die, for preserving the shape of the edges, substantially as herein described.

3. The particular form, herein described and shown, of the plate from which the blanks are cut.

In witness whereof, I hereto set my hand, this 30th day of December, 1868.

HORACE K. JONES.

Witnesses:

MARY A. HASTINGS,
JAMES WOODRUFF.