

K. STEEN.

Improvement in Adjustable Squares.

No. 114,986.

Patented May 16, 1871.

Figure 1.

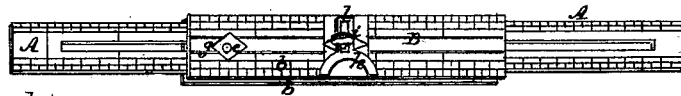


Fig. 2.

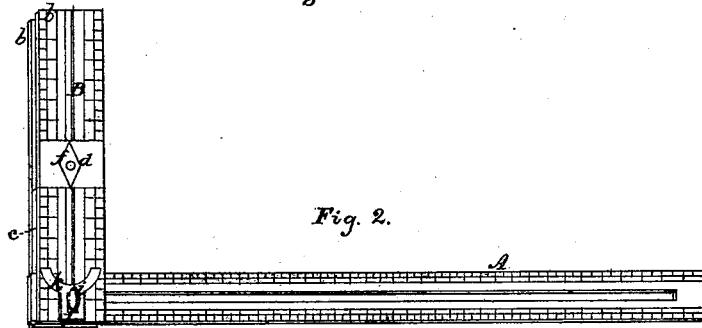


Fig. 3.

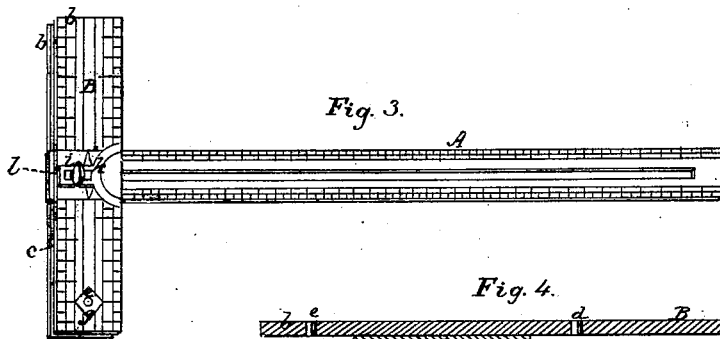


Fig. 4.

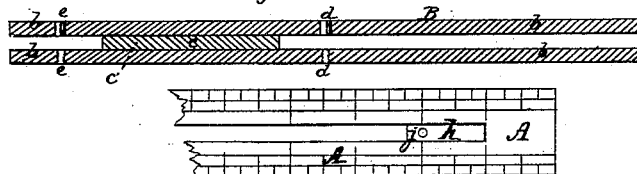
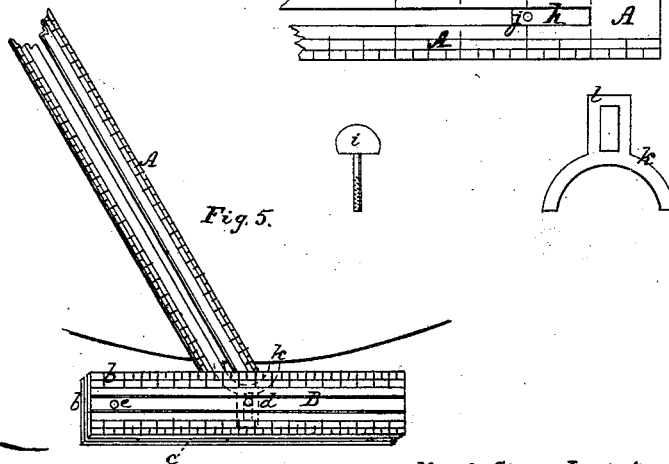


Fig. 5.



Witnesses:

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KNUD STEEN, OF ROCHESTER, NEW YORK.

Letters Patent No. 114,986, dated May 16, 1871.

IMPROVEMENT IN ADJUSTABLE SQUARES.

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

I, KNUD STEEN, of Rochester, in the county of Monroe and State of New York, have invented a new and improved Rule and Squares Combined, of which the following is a description.

My invention consists in so arranging a slotted rule in a slotted cross-piece that the rule can be adjusted in the middle or at the end of the cross-piece at any desired length, the cross-piece being so arranged that the same can be slid over and parallel with the rule to either make a compactly-folding instrument, to be used as rule, square, T-square, or similar instruments; also, in a semicircular central sliding-bow attachment, which serves for a bearing for the T-square or rule when the latter is to be used on any oblong or round table or other thing on which to draw, as, for instance, contours, &c.

In the accompanying drawing—

Figure 1 is a perspective view of my improved instrument when folded;

Figure 2 is a similar view of the same when used as a square;

Figure 3 is a similar view when used as a T-square; and

Figure 4, a similar view of the several parts detached.

Figure 5 is a plan view showing its adaptation as a T-square to round or oblong tables, boards, &c.

A in the drawing represents the slotted rule provided with inch marks and their divisions.

B is the cross-piece, consisting of two plates, *b b*, connected to each other by a small strip, *c*, between these plates, and extending a short distance between the center of plates B and one of its ends, leaving the space between the plates all free but for the narrow strip *c* in such a manner that, when the rule A and cross-piece B are in parallel positions, as shown in fig. 1, and the edge of the rule bears against strip *c*, the openings *d e* in the plates *b b* are in vertical line with the slot of the rule A.

The openings *d e* pass through metal plates *f g*, which are let into the wood so that their surface is even with that of the cross-piece B; and the openings *d* are in its center, while the openings *e* are near that one of its ends which carries strip *c*, sufficient room being left between the centers of the openings *d e* and the ends of the strip *c* to allow the rule to be turned

either parallel with or at right angles to the cross piece.

h is a little bearing-piece, which fits and freely slides in the slot of the rule and readily turns around the shank of thumb-screw *i*, the opening *j*, with which it is at one end provided, being larger than the shank.

On the upper side of cross-piece B lies a metal bow, *h*, of any suitable size, having a slotted rear extension, *l*, through which the thumb-screw *i* passes.

This thumb-screw holds all the parts together by passing through them, as shown and described, and screwing into the openings *d e* of the lower plate *b* of cross-piece B, which openings are provided with screw-threads for that purpose, and are smaller than the corresponding plain openings in the upper plate *b*.

The instrument may of course be made of wood or metal, and of any desired size; and the special advantages that I claim for the same are the convenience of handling and carrying the same as it folds up, as shown in fig 1; also, its ready adaptability to different purposes, as by changing the rule from the center to the end a common square may be converted into a T-square without much trouble; and, finally, its adaptability to table, boards, &c., of round or oblong shape, when used as a T-square in drawing contours, &c., by reason of the bow *h*, which affords a secure bearing at two points, while a square cross-piece only would afford it at one point, as clearly shown in fig. 5.

The metal bow *h* can of course be used with any kind of T-square, as the slots in the rule and cross-piece are not essential to the operation of bow *h*.

Having thus described my invention,

What I claim is—

1. A combined folding-rule, square, and T-square, consisting of the slotted rule A, bearing-piece *h*, cross-piece B constructed of plates *b b*, and provided with openings *d e*, strip *c*, and thumb-screw *i*, all combined and arranged substantially as described.

2. In combination with the slotted rule A and divided cross-head B and bearing-piece *h*, the adjustable bow-piece *h*, arranged to operate substantially as and for the purpose described.

KNUD STEEN.

Witnesses:

WM. M. BATES,
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