No. 824,966. PATENTED JULY 3, 1906.

E. WERNER.

DRAWING BOARD.

APPLICATION FILED MAY 18, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

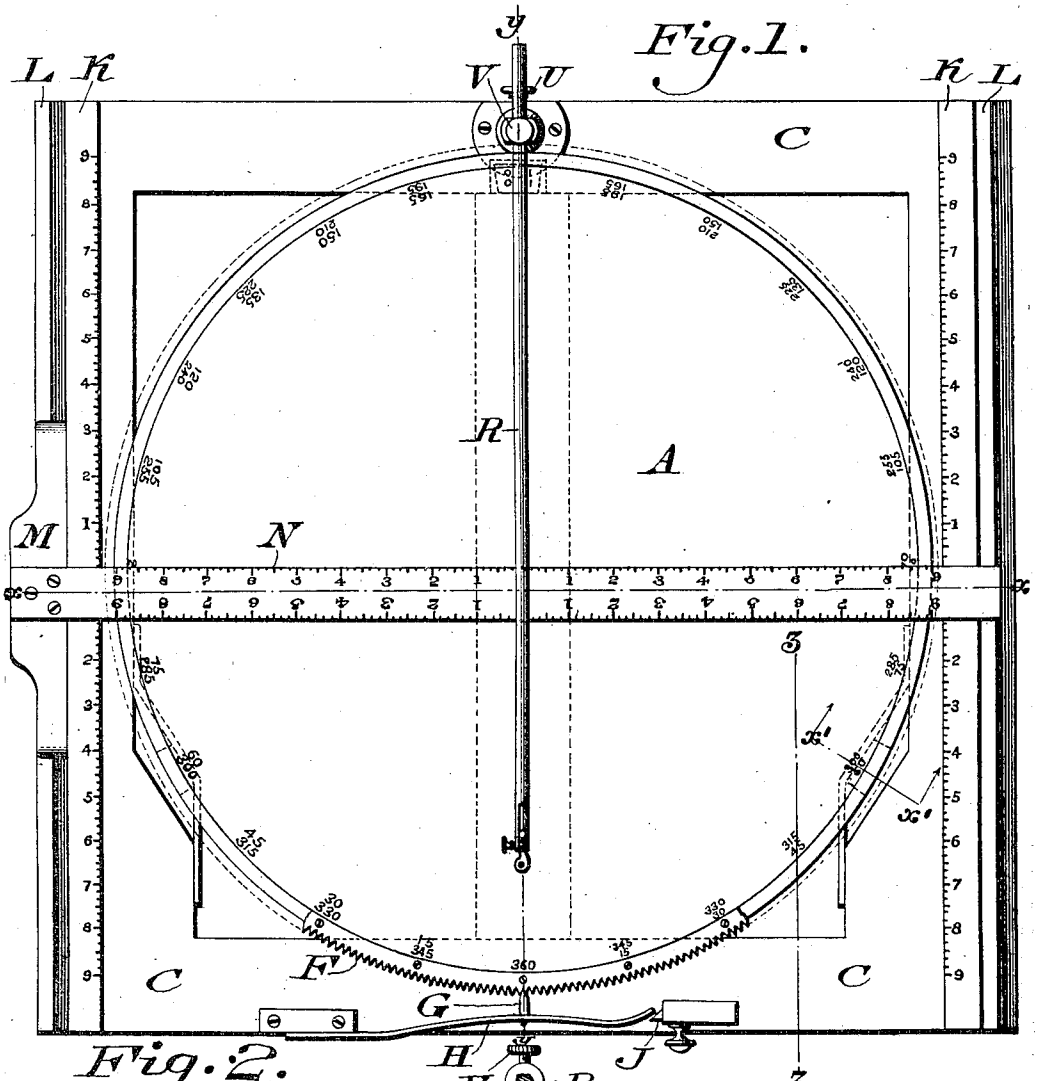


Fig. 2.

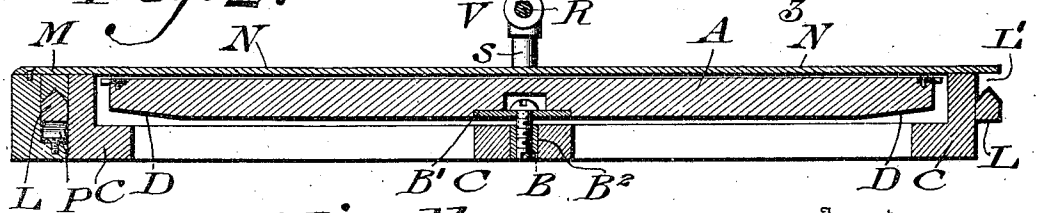
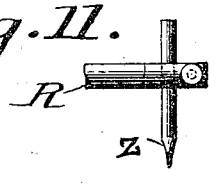


Fig. 11.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

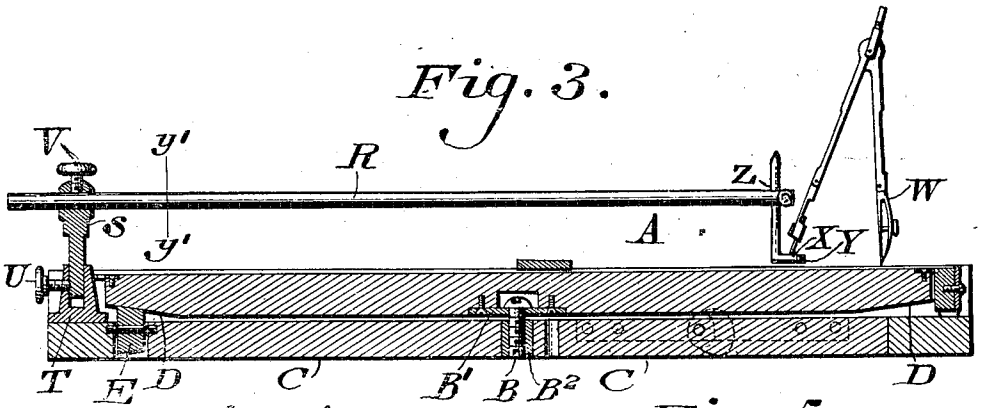


Fig. 4.

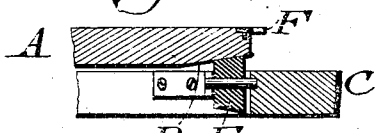


Fig. 5.

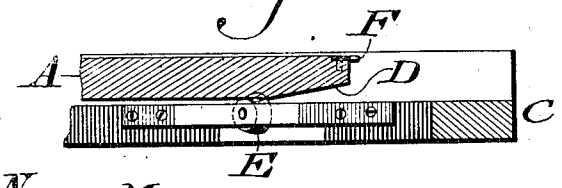


Fig. 8.

Fig. 6.

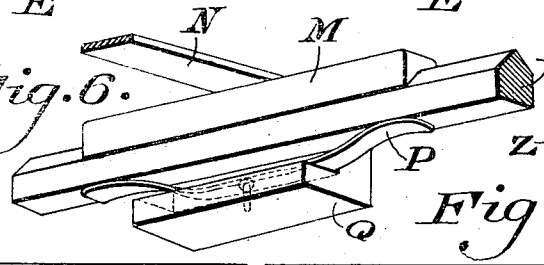


Fig. 7.

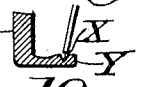


Fig. 9.

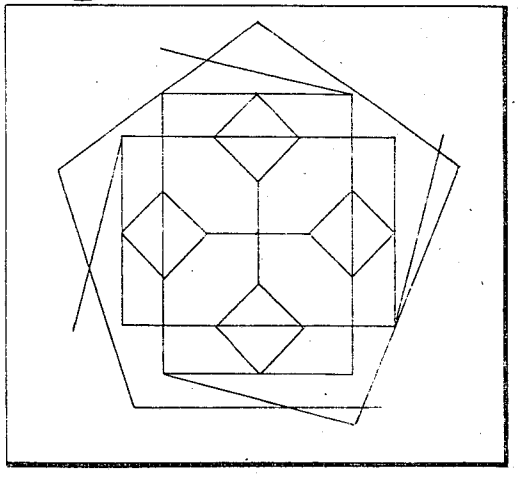
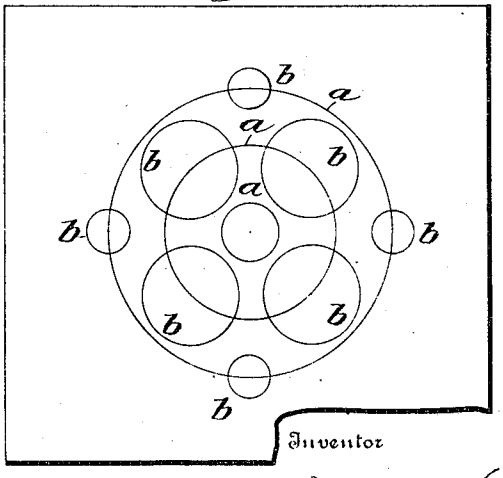


Fig. 10.



Witnesses

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UNITED STATES PATENT OFFICE.

EMIL WERNER, OF PHILADELPHIA, PENNSYLVANIA.

DRAWING-BOARD.

No. 824,966. Specification of Letters Patent. Patented July 3, 1906.

Application filed May 18, 1905. Serial No. 260,996.

To all whom it may concern:

Be it known that I, EMIL WERNER, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Drawing-Board, of which the following is a specification.

My invention consists of a drawing-board adapted to be rotated and a square placed over the face of said board adapted to be changed in position on said face, so that designs or patterns of various geometrical figures may be projected and delineated on paper or other material placed on said board, as will be hereinafter more particularly set forth.

Figure 1 represents a plan view of a drawing-board embodying my invention. Fig. 2 represents a vertical section thereof on line $x\ x$, Fig. 1. Fig. 3 represents a vertical section on line $y\ y$, Fig. 1. Figs. 4 and 5 represent vertical sections of detached portions, respectively, on line $z\ z$ and $x'\ x'$, Fig. 1. Fig. 6 represents a perspective view, on an enlarged scale, of the means employed for movably retaining the square employed in position. Fig. 7 represents a vertical section, on an enlarged scale, of the means employed for supporting a drawing pen or pencil. Fig. 8 represents a section on line $y'\ y'$, Fig. 3, on an enlarged scale. Figs. 9 and 10 are diagrams of some of the work produced. Fig. 11 represents a side elevation of a detached portion on an enlarged scale.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates a circular drawing-board, the same being centrally mounted by the pivot B on the base or frame C. The peripheral portion of the under side of said board A is beveled, as at D, the same being adapted to rotate on the friction-rollers E, which are properly mounted on the frame C, whereby the board is properly sustained on its peripheral portion and steadied in its operation.

The periphery of the board has thereon the toothed rim F, presenting the three hundred and sixty degrees of a circle, and either of the same is adapted to be engaged by the detent G, which is connected with and carried by the spring H, the latter being secured at one end of the frame C, and has its other end adapted to be engaged by the latch J, which is also secured to said frame C, so as to hold the detent G from the rim F, thus permitting rotation of the board A, it being noticed that when the spring is drawn out it bears against the inclined nose of the bolt of said latch J, thus forcing back said bolt. Then when the spring clears said nose the bolt shoots out to its normal position and then engages with the inner side of said spring, thus controlling the latter, whereby the detent is held disengaged from the rim F. When the board has been turned to the required extent, the latch J is withdrawn, whereby the detent G, owing to the spring H, is forced into contact with the relative tooth of said rim F, when the board will be firmly held at rest.

On the sides of the frame C are the graduated rules K, which are tangential to the periphery of the board A. Extending parallel with the rules K are the tongues L, which are secured to the frame C and have engaged therewith the head M of a T-square N, it being noticed that said head has a groove to receive said tongue, as most clearly shown in Fig. 2, whereby the square may be moved true on the frame C and steadied in its motions.

In order to retain the square in said tongues L, I employ the spring P, which is secured to the limb Q, which depends from said head M (see Fig. 6) and has its ends bearing against the under side of either of the tongues L, thus retaining said head in position on said tongue, while permitting free sliding motions of the head, and consequently of the T-square, over the board.

A sheet or piece of paper or other material is placed on the board A beneath the square N and the latter shifted up or down to a place for starting a drawing or delineation of a geometric figure, a design, a pattern, &c. The mark is made on the sheet to the required extent along the limb of the square, as a ruler, when the board is rotated so as to bring another portion of the sheet up to said drawing or delineation, when another mark is made on the sheet, and so the board may be rotated and the square shifted while the marking continues, and thus an angular figure, &c., may be completed, an example of which is shown in Fig. 9, where several other designs as produced are illustrated.

In order to delineate or mark off circular forms, which are shown in Fig. 10, as at a, I employ the arm R, which is sustained over the drawing-board and T-square by means of the post S, secured to the socket T, the latter rising from the frame C and having the screw U for holding said post in vertically-adjusted

position, said post also being provided with a screw V, which is adapted to engage the outer end of the arm R, and thus hold the latter in longitudinally-adjusted position. The free end of said arm is adapted to have connected therewith a pencil or pen, the same contacting with the sheet on the board, so that by adjusting the arm R relatively to the diameter of the circle to be drawn and rotating the board A said circles may be delineated. Other circles may be drawn on the paper by means of a circle-describing instrument, as the pencil or pen W, one leg of which is adapted to pivotally rest on a recess X in the foot Y on the scribing-pin Z, the latter being reversibly secured to the free end of the arm R. Said instrument may describe and delineate circles *b*, as will be seen on reference to Fig. 10. The scribing-point of the pin Z may be placed below, as in Fig. 11, while in Fig. 3 the foot Y is below for the purpose hereinbefore stated. In order to prevent improper rotation of the arm R on the point S, the face of said arm is flattened, as at R′, so that the screw V may be firmly engaged with the same, the effect of which is evident.

While I have shown the rules, such as K, on the frame C at each side of the board A, it is evident that the T-square N may be placed on either side of the device and operated from the same, if so desired; but one of said rules and tongues may be dispensed with, they, however, being preferred, as the square may be readily shifted from one side to the other, for purposes requiring the same, and entirely removed.

As means for retaining the pivot B of the board A in position, the same is passed through the plate freely within the board B′ on the under side of the board A, its head being above said plate, and the shank of said pivot is threaded and engages with a threaded sleeve B^2 on the frame C, it being noticed that said pivot has a slit or nick in its lower end, so that by means of a proper implement said pivot may be rotated from below, so as to adjust the same and provide the proper friction on the head of the same.

Referring to the right-hand side of Fig. 2, the tongue L is below the top of the side of the board, forming the shoulder L′, against which may be placed and on which may be moved the head of an ordinary T-square without being engaged with said tongue, as shown at the left-hand side of said figure.

Various changes may be made in the details of construction shown without departing from the general spirit of my invention, and I do not, therefore, desire to be limited in each case to the same.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A rotatable drawing-board, a base therefor, a plate on the under side of said board, a threaded sleeve in the base, and a screw having its head freely confined in a recess in the under side of the board and above the plate, said screw being engaged in said sleeve and its lower end having a slit to permit of its being turned from below to regulate the friction on the head of the same and the ease of rotation of said board.

2. A rotatable drawing-board having teeth on its periphery in accordance with degrees of a circle, a detent for engaging any of said teeth to lock the board, a resilient carrier for said detent, and a movable device movable in the direction of the length of said carrier to engage the end of said carrier upon either side to hold the detent in or out of engagement with said teeth.

3. A drawing-board, a tongue at the side thereof adapted for engagement of a grooved T-square, the said tongue being below the top of said board forming a shoulder at said side for engagement of the head of an ordinary square and a grooved T-square having a portion underlying said tongue.

4. A drawing-board, a support therefor, a tongue at the side of said support, a square, a pendent limb on said square underlying said tongue, and a pressure device interposed between said limb and tongue.

5. A drawing-board, a support, an arm on said support adapted to overhang said board and a vertically-adjustable piece connectible with said arm, said piece having at one end a pin for scribing, the other end being provided with a foot having a seat thereon for the leg of a circle-describing instrument.

EMIL WERNER.

Witnesses:
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S. R. CARR.