Oct. 18, 1932. W. DREIFUSS 1,883,628

DRAWING BOARD

Filed June 16, 1930 2 Sheets-Sheet 1

Fig. 1.

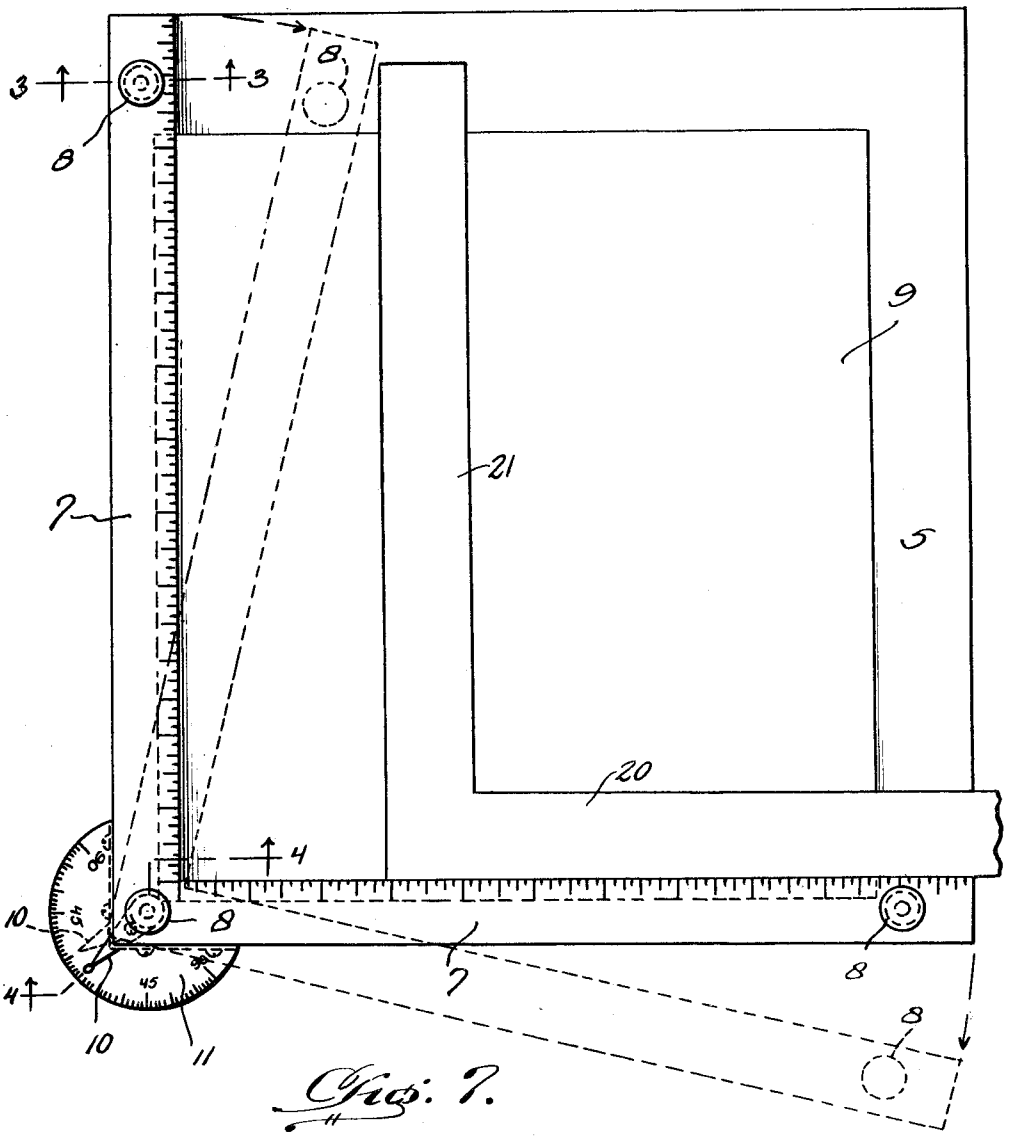
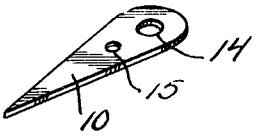


Fig. 2.



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Fig. 2.

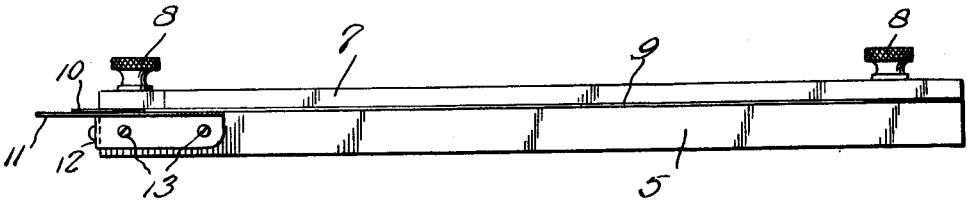


Fig. 3.

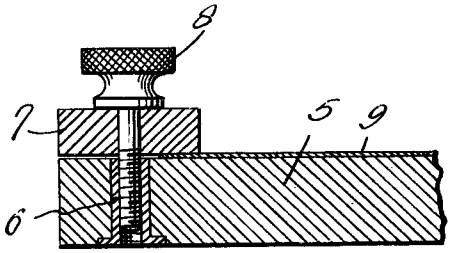


Fig. 4.

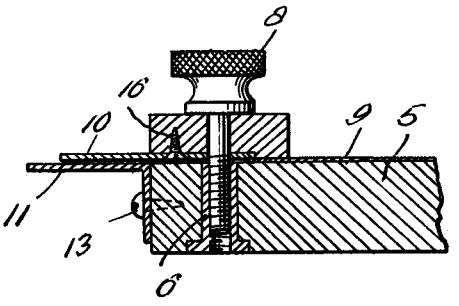


Fig. 5.

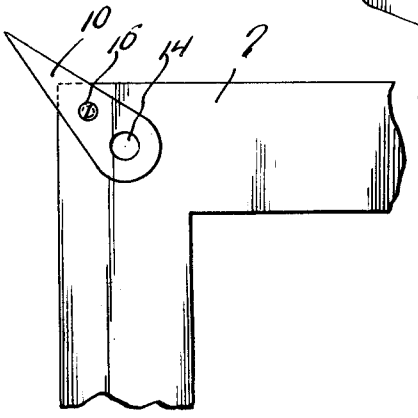
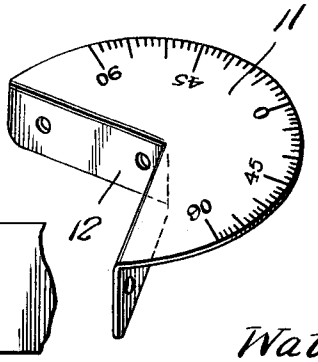


Fig. 6.



Watter Dreifuss,
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Patented Oct. 18, 1932 1,883,628

UNITED STATES PATENT OFFICE

WALTER DREIFUSS, OF NILES CENTER, ILLINOIS

DRAWING BOARD

Application filed June 16, 1930. Serial No. 460,001.

This invention relates to drawing boards or the like, and has for one of its objects the provision of improved means for fastening a sheet of drawing papers on the board proper without the use of thumb tacks.

A particular object of the invention is the provision of a drawing board with raised straightedges which are relatively fixed with respect to the board at a predetermined angle to each other, and a corresponding long legged L-shaped drawing device, which is loose and freely-movable, having its legs fixed at the same predetermined angle.

Another object of the invention is the provision of a long legged L-square or the like in combination with a drawing board having raised straightedges at right-angles to each other.

A further object of the invention is to provide a drawing board or the like with means affording raised straightedges along adjacent sides or edges of the board proper so as to permit the drawing of vertical and horizontal lines with the aid of an ordinary triangle or the like and without the use of a cumbersome T square.

A still further object of the invention is to provide a drawing board including a board proper, a right-angled bar or strip pivoted at the juncture of its arms on the board proper at one corner of the latter to swing in a plane parallel with the surface of the board, and means to secure said right-angles strip in any position of pivotal adjustment thereof, whereby either arm of said strip may be used as a protractor arm in drawing lines at an angle.

Other objects will appear as the nature of the invention is better understood, and the same consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawings, and claimed.

In the drawings:

Figure 1 is a top plan view of a drawing board embodying the present invention.

Figure 2 is an edge elevation thereof, looking upwardly in Figure 1.

Figure 3 is an enlarged fragmentary section on line 3—3 of Figure 1.

Figure 4 is an enlarged fragmentary section on line 4—4 of Figure 1.

Figure 5 is a bottom plan view of the corner or intermediate portion of the right-angled strip; and

Figures 6 and 7 are enlarged perspective views of the protractor dial and pointer, respectively.

Referring more in detail to the drawings, 5 indicates the drawing board proper which has vertical openings at one corner and spaced from said corner at adjacent sides in which nut members 6 are respectively fitted. A right-angled strip 7 is disposed on the board proper 5 so that its arms extend along said adjacent sides of the same, and headed bolts 8 freely extend through the strip 7 at the juncture of its arms and through said arms near their free ends and have threaded engagement in the respective nut members 6. The arms of the strip 7 are thus arranged so as to engage adjacent edges of a sheet of drawing paper 9 for securely clamping the latter to the board proper 5 when the bolts 8 are tightened.

It will be noted that the arms of the strip 7 having inner straight edges which are raised above the surface of the board proper 5 so as to enable the use of an ordinary triangle or the like in drawing horizontal or vertical lines. Further, by removing the bolts 8 in the ends of the arms of strip 7, the latter may be swung about the bolt 8 at the corner of the board in a plane parallel with the surface of the board, thus positioning either arm of the strip 7 on the board proper at any desired angle. The strip 7 may be secured in such position by tightening the corner bolt, thereby permitting proper use of either arm of the strip 7 as a protractor arm in drawing lines at an angle. To facilitate positioning of the desired arm of strip 7 at any desired angle, a pointer 10 may be secured to the under side of the strip 7 at the juncture of the arms of the latter and so as to project outwardly for cooperation with the graduations of an arcuate series provided on a protractor dial 11 secured on the adjacent corner of the board 5. The graduations on the dial 11 progress in opposite directions

from a central zero point to furnish a reading when using either arm of the strip 7. The dial 11 has a depending right angle flange 12 on its inner edge through which screws 13 may be passed to secure the dial to the board 5. The pointer 10 may have an opening 14 through which the adjacent clamping bolt 8 freely passes, and a further opening 15 through which a screw 16 is passed to secure the pointer to the strip 7. The bolt 8 and screw 15 cause the pointer to swing with the strip 7. When the strip 7 is used as a protractor, thumb tacks may be temporarily used to aid in holding the drawing papers in place.

Obviously, the board 5 may be the top of a drawing table or school desk, or a blackboard, thereby providing for use of the invention with such tables, desks or blackboards, as well as with the ordinary form of drawing board as shown. Further, the right-angled strip 7 may be permanently or detachably secured to the board 5 in any suitable way for use simply as a guide in drawing horizontal and vertical lines, in which case the strip 7 will not be mounted to swing or to act as a paper clamping means, the paper being merely arranged on the board within the angle or against the inner edges of the arms of the strip 7. To facilitate drawing of the lines at the proper places, the arms of strip 7 may be graduated in inches and fractions thereof as at 17.

The two straightedges 7 together form an L-square which is fixed to the drawing board. A second and a free L-square 20 may be employed in using the board by sliding either leg of the free L-square upon the straight edges of the fixed L-square. When the free L-square is moved upwards in the drawing against the vertical straightedge 7 the horizontal leg of the free L-square may be used for making horizontal lines. In a like manner the free L-square may be manipulated to use the other leg for making verticle lines. The free L-square therefore may be placed to produce a horizontal or a verticle straightedge at any part of the drawing area and triangles may be used on either of these base lines in the usual manner.

It will be noted that the free L-square has one leg 21, shown as the vertical leg which is substantially as long as the vertical drawing space on the board, so as to extend ordinarily beyond the top edge of the sheet 9 as shown. The leg 21 is shown in length substantially as long as the drawing space on the board measured from either of the straightedges 7. Thus as the L-square is moved on the straightedge 7 the leg 21 provides means for drawing vertical lines at practically any location of the sheet. By sliding such an L-square on the two straightedges of corresponding angularity a draftsman can draw vertical and horizontal lines at any place on his drawing sheet by a simple movement of one instrument, namely the L-square. Heretofore, such lines have been drawn by combined motions of a common drawing right triangle, and the cumbersome T-square, or by twisting or rotating some other form of drawing instrument. The L-square herewith shown need only be shifted without any rotational movement.

An important feature of the drawing outfit is the provision of a free L-square which is large compared with the usual size of triangles and the like that are used with drawing boards. The legs of the L-square, for best results, should extend at least to the edges of the drawing sheet which are remote from the straightedge when the L-square is in sliding relation to the straightedges. In general for best results, when the L-square is nested in the corner of the straightedges, the legs should extend substantially to the edges of the board which are unobstructed by straightedges, and opposite to the straightedges which are secured to the board.

What I claim as new is:

1. The combination with a drawing board proper, of a right-angled strip pivoted at the juncture of its arms on said board at one corner of the latter to swing in a plane parallel with the surface of said board, and means to secure said right-angled strip in any position of pivotal adjustment thereof.

2. The combination with a drawing board, of a right-angled strip pivoted at the juncture of its arms on said board at one corner of the latter to swing in a plane parallel with the surface of said board, and means to secure said right-angled strip in any position of pivotal adjustment thereof, a pointer secured to the right-angled strip at the juncture of its arms, and a protractor dial secured to said corner of the board for cooperation with said pointer.

3. The combination with a drawing board, of a right-angled strip arranged on the upper surface of said board having its straight edge arms extending along adjacent edges thereof, and means releasably securing said strip upon said board for clamping adjacent edges of a sheet of drawing paper to said board, said last named means embodying nut members carried by said board and clamping screws passing through said strip and having threaded engagement in said nut members, one of said clamping screws passing through said strip at the juncture of its arms and pivotally mounting said strip on the board for swinging adjustment in a plane parallel with the surface of the board, the remaining clamping screws being removable to permit such swinging adjustment of said strip.

4. A drawing outfit comprising in combination a plane drawing board, a loose, freely movable L-square, and two straightedges at right angles to each other secured to the board and extending above the surface of the board

upon either of which edges the free L-square may be freely moved.

5. A drawing outfit comprising in combination a plane drawing board, two angle-forming straightedges secured to the board in position to contain material upon which to draw within the angle formed, said straightedges projecting above the drawing surface of the board, and a loose and freely movable two legged drawing angle comparable to an L-square adapted to be moved slidingly along either leg of the fixed angle, said drawing angle having its outer sides coincident with the angle of the fixed straightedges.

6. A drawing outfit comprising in combination a plane drawing board, raised straightedges secured at right angles at the bottom edge and at a side edge of the board, and a loose freely movable L-square having a leg substantially as long as the longest drawing space measured from either straightedge.

7. A drawing outfit comprising in combination a plane drawing board, raised straightedges secured at right angles at the bottom edge and at a side edge of the board, a drawing sheet secured to the board in the angle formed by said straightedges, and a loose and freely movable L-square having a leg sufficiently long to project at least to the edge of the sheet most remote from a straightedge when the other leg of the L-square rests slidingly on said straightedge.

In testimony whereof I affix my signature.

WALTER DREIFUSS.