March 24, 1953 F. J. STERLING 2,632,683

PORTABLE DRAFTING BOARD WITH CARRYING CASE

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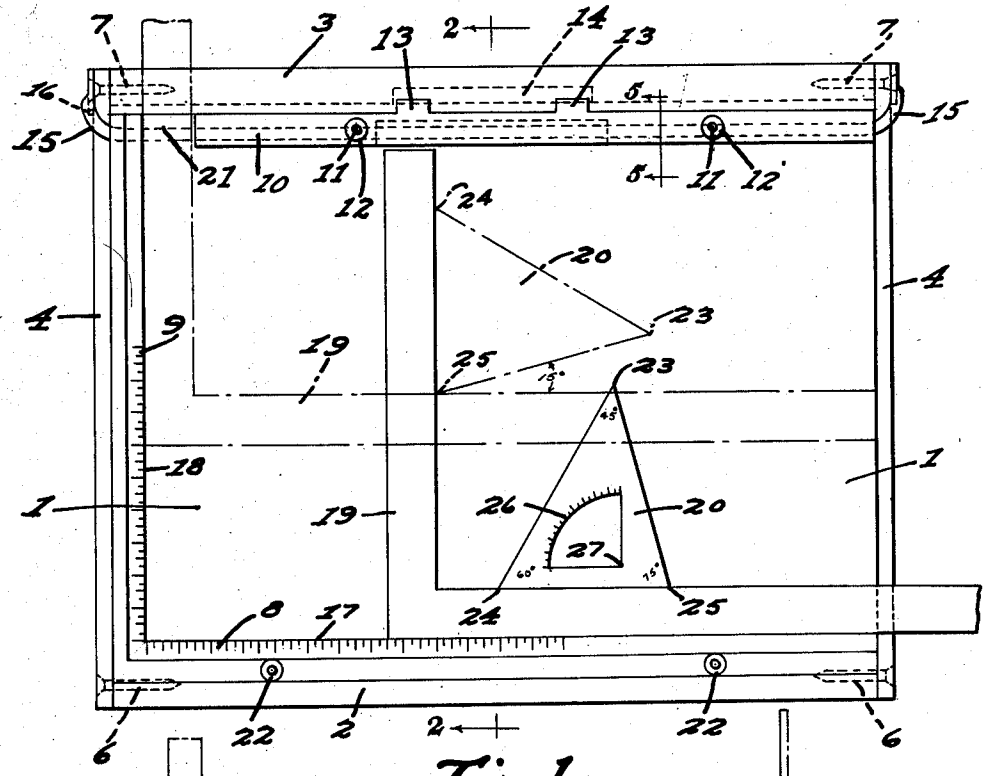


Fig. 1

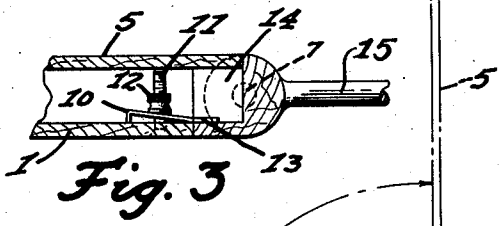


Fig. 3

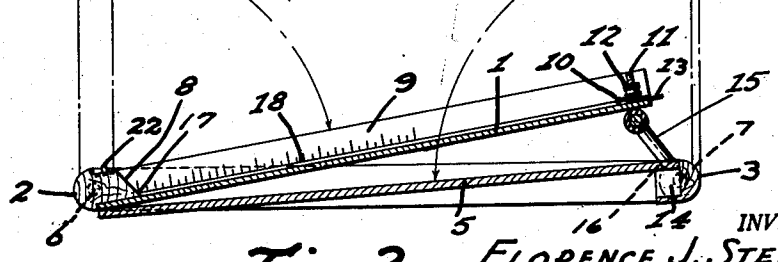


Fig. 2

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PORTABLE DRAFTING BOARD WITH CARRYING CASE

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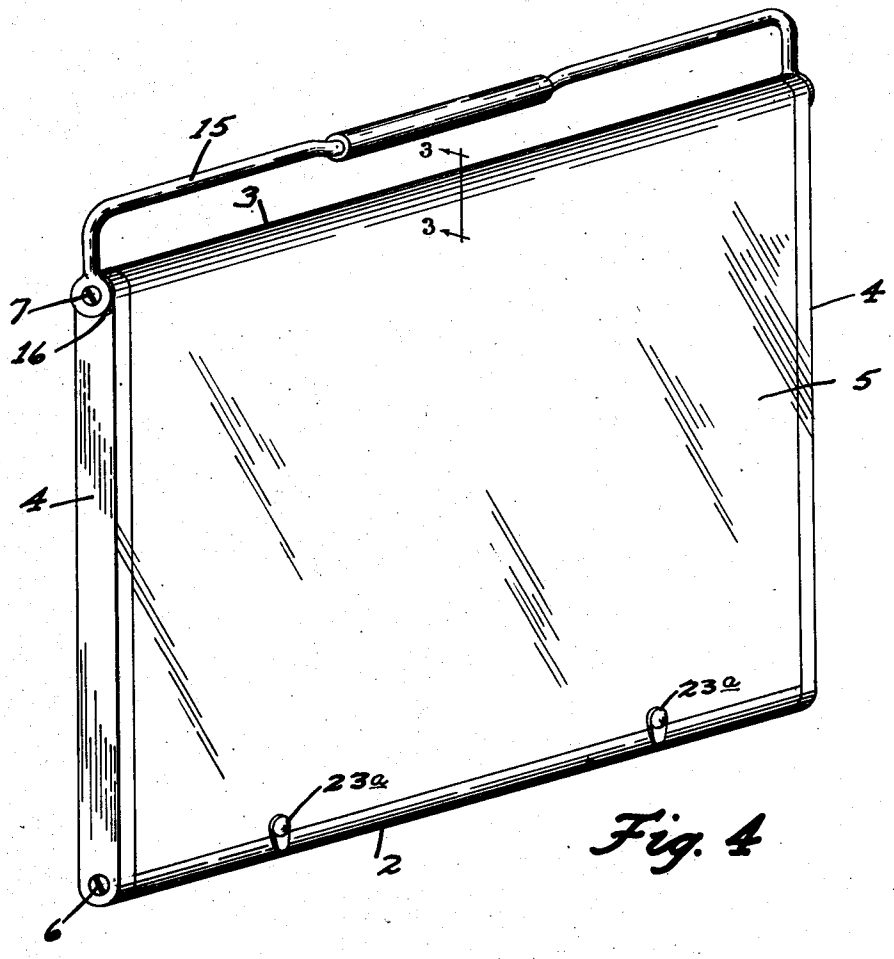
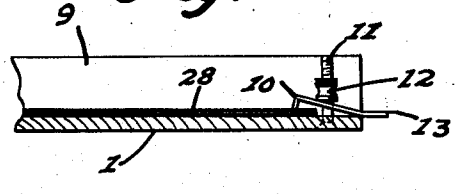


Fig. 4

Fig. 5



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PORTABLE DRAFTING BOARD WITH CARRYING CASE

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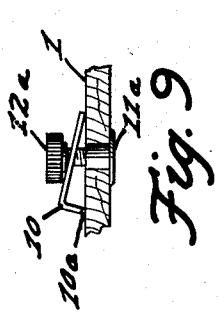


Fig. 9

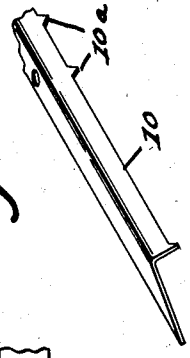


Fig. 10

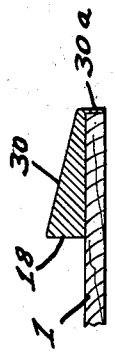


Fig. 7

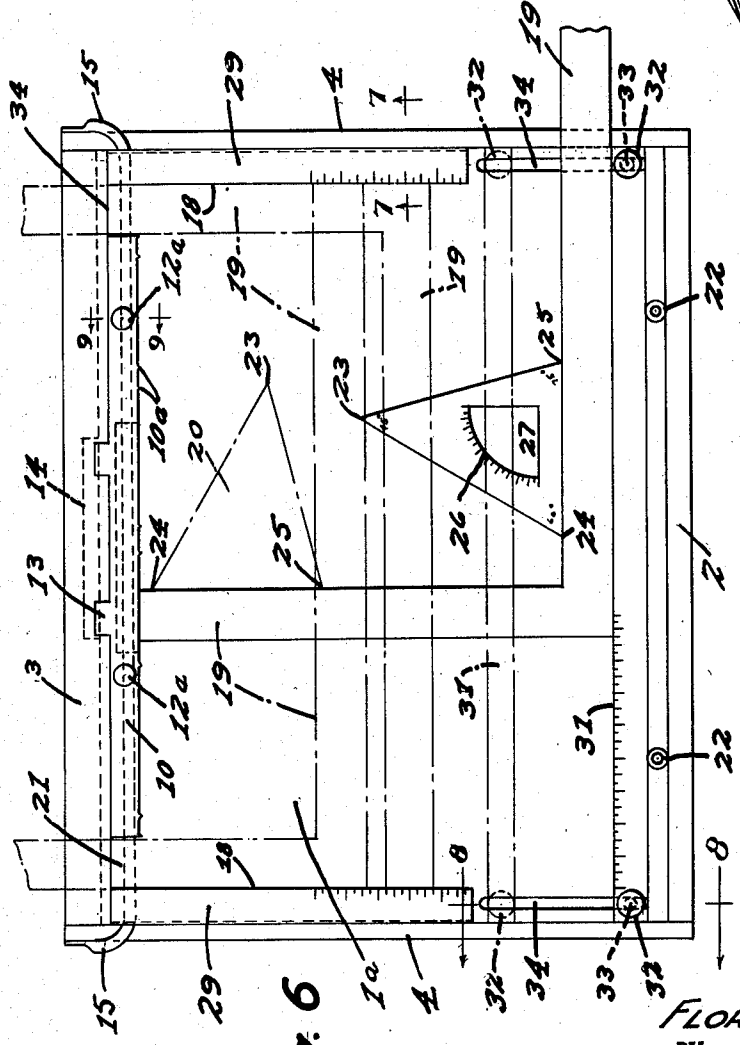


Fig. 6

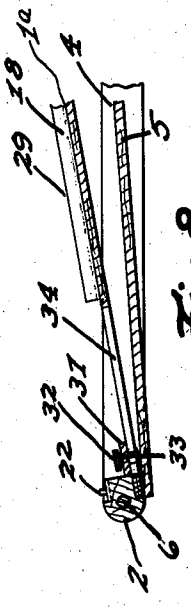


Fig. 8

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PORTABLE DRAFTING BOARD WITH CARRYING CASE

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Application November 15, 1946, Serial No. 709,983

3 Claims. (Cl. 312—231)

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The object of my invention is to provide an improved portable drafting board with carrying case; provide a compact unit which may be easily opened up for use or adjusted to different positions or packed for transportation. It is also an object of my invention to provide novel means for supporting calibrated rules in different desired position on the board and to secure them in desired positions by novel and convenient fastening means. It is also an object of my invention to provide a drafting kit which will accommodate different sizes of sheets of drawing paper.

It is also an object of my invention to provide a novel handle extending all the way across the top of the board and which may be used either as a handle or as a supporting means for supporting the board in a tilted position for more convenient use. It is also an object of my invention to provide the novel combination and arrangement of parts shown in the accompanying drawings.

It is also an object of my invention to provide a modified form of drawing board having short scales on opposite sides.

Figure 1 is a plan view of a practical embodiment of my invention;

Fig. 2 is a section on line 2—2 of Fig. 1;

Fig. 3 is a detail sectional view on line 3—3 of Fig. 4;

Fig. 4 is a perspective view of the carrying case shown closed for carrying;

Fig. 5 is a detail sectional view on line 5—5 of Fig. 1;

Fig. 6 is a plan view of a modified form of the drafting board;

Fig. 7 is a section on line 7—7 of Fig. 6;

Fig. 8 is a section of the modified form of board, tilted;

Fig. 9 is a detail view of member 12; and

Fig. 10 is a detail perspective view of the clamp.

Like numerals designate like parts in each of the views.

Referring to the accompanying drawings, I provide a board 1 of any suitable preferably light weight material, for example "Masonite," having a longitudinal lower frame member or molding 2 and having an upper longitudinal frame member or molding 3 with opposite side or end pieces 4 all secured together to form a rectangular frame. Hinged to and within the rectangular frame is a cover 5 which when closed lies in the same plane with two of the edges of the side pieces 4, as shown in Fig. 4. The board 1 is also hinged to the frame but along the opposite longitudinal edge by means of bolts 6 or the like.

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A clamp 10 functions to hold the drawing paper 28 on the board and is adjustably secured to the board by nuts 12 on bolts 11, said bolts being secured to and extending upwardly from the board. Projections 13 integral with the clamps extend beyond the edge of the board as shown in Figs. 1 and 3. A slot 14 provided in the longitudinal frame member 3 receives the projections 13 of the clamp 10 when the parts are closed or in carrying position.

As shown in Figs. 1 and 4, a handle 15 is swingably mounted by bolts 7 to the side pieces and extends longitudinally for the entire length of the unit. This handle may act as a prop, as shown in Fig. 2, to support the board in an inclined position. A stop 16, indicated in Fig. 2, prevents the handle from going back against the face of cover 5 when the board 1 is set up for use.

A longitudinal scale 8 is integral with frame 2 and a left hand scale 9 is disposed at right angles to and affixed to the base or the board 1 and to the scale 8. A small vertical surface or edge 17 is provided on scale 8 for one arm of an L-shaped square 19 to rest against, as shown in full lines in Fig. 1. Scale 9 has a similar small vertical surface or edge 18 for the other arm of the L-shaped square 19 to rest against, as shown in dot and dash lines in Fig. 1.

A combined triangle and protractor 20, which I term a "protrangle" is shown abutting the inner edge of the L-square and may be disposed either in the position shown in full lines or in other positions, for instance the one indicated in dot and dash lines in Fig. 1. My "protrangle" has an angle 23 of 45°, an angle 24 of 60°, and an angle 25 of 75°. It also has a cut-out portion providing a protractor 26 and a pivot point 27.

I also provide an opening 21 between the end of clamp 10 and the scale 9 to permit the L-square 19 to move upward, as indicated in dot and dash lines in Fig. 1. Referring to Figs. 2 and 4, I provide snap buttons 22 on the lower frame 2 to be engaged by snap sockets 23a on the cover 5 thereby to fasten the cover in the closed position of Fig. 4.

Different thicknesses of drawing paper 28 are held in place by the clamp 10 which may be adjusted relative to the board by means of the adjusting nuts 12. See Figs. 3 and 5. My continuous clamp firmly holds the paper in place and also furnishes a straight edge against which the end of the movable L-square 19 can abut when in use, as will be understood from Fig. 1. To set up the board, assuming that the case is closed and locked as in Fig. 4, the snap buttons are first dis-

engaged and then the cover 5 is swung upwardly to the dot and dash line position shown in Fig. 2. Then the board 1 is swung upwardly to the dot and dash line position in the same figure and is held there while the cover 5 is swung downwardly to the full line position. Then the handle 15 is swung so that it will be engaged by the board 9 when the latter is moved downwardly. The handle then serves as a prop to hold the board in an inclined or tilted position convenient for drafting. With the parts in the position of Fig. 2, if it is desired to make a carrying case, the board 1 is swung upwardly, handle 15 is swung outwardly, the cover 5 is then swung upwardly, the drafting board is moved downwardly and finally the cover is swung down until the snap buttons engage. The unit may now be carried conveniently by the handle 15.

Referring to Fig. 6 showing a modified form I provide scales 29 on opposite ends of the board 1*a* and also provide a clear space for slots 34 which are aligned with the scales 29 and are parallel to each other. A longitudinal scale 31 extends for the length of the board and is secured thereto in adjusted position by means of bolts or thumb screws 32 which pass through the longitudinal scale 31 and through the slots 34. The longitudinal scale 31 coacts with the scales 29 and provides a convenient means for supporting the L-square 19, as clearly shown.

Referring to Fig. 7, I provide a drawing board having a molding 30 which is bevelled and has an integral lip 30*a* at the smaller or outer end, said lip extending downwardly at right angles so that it may extend over the edge of the "Masonite" to protect said edge.

In Fig. 9 there is illustrated a slightly modified form of bolts 11*a* and thumb nuts 12*a* for clamping the paper. The construction is similar to the previous described form and the action is the same.

In Fig. 10 there is illustrated a detail of the paper clamp 10 having points 10*a* to engage or bite into the paper.

What I claim is:

1. In a portable drafting board, the combination of a drafting board, a frame to which the drafting board is hingedly connected, a cover for said board having its outer surface aligned with the frame so as to lie within the confines thereof, a board propping handle member extending the length of the board and swingably mounted on the frame, the cover being movable under the board and the handle likewise being swingable under the board to serve as a prop to hold the board in tilted or inclined position, and a stop on the handle for engaging another member to hold said handle in board-propping position.

2. A portable drafting board and carrying case comprising a substantially rectangular hollow frame having side members and rotatable members connecting opposite ends of said side members, covers for the front and rear of said frame mounted one on each of said rotatable members, and a carrying handle pivotally attached to said frame, said rotatable members and the covers connected thereto being swingable about their pivots until the surfaces of the covers which are normally disposed in remote relation one to the other are in the opposite position adjacent each other and with the handle forming a rest maintaining one of the covers inclined relative to the other and providing an inclined writing surface on the normally interior wall surface of one of said covers.

3. A portable drafting board and carrying case comprising a substantially rectangular hollow frame having side members and rotatable members connecting opposite ends of said side members, and covers for the front and rear of said frame, said covers being rotatable with said rotatable members, said covers and rotatable members being swingable about their pivots until the surfaces of the covers which are normally disposed in remote relation one to the other are in an opposite position adjacent each other, providing a writing surface on the normally interior wall surface of one of said covers.

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