

J. B. WEBB.
Drawing-Board.

No. 159,870.

Patented Feb. 16, 1875.

Fig. 3.

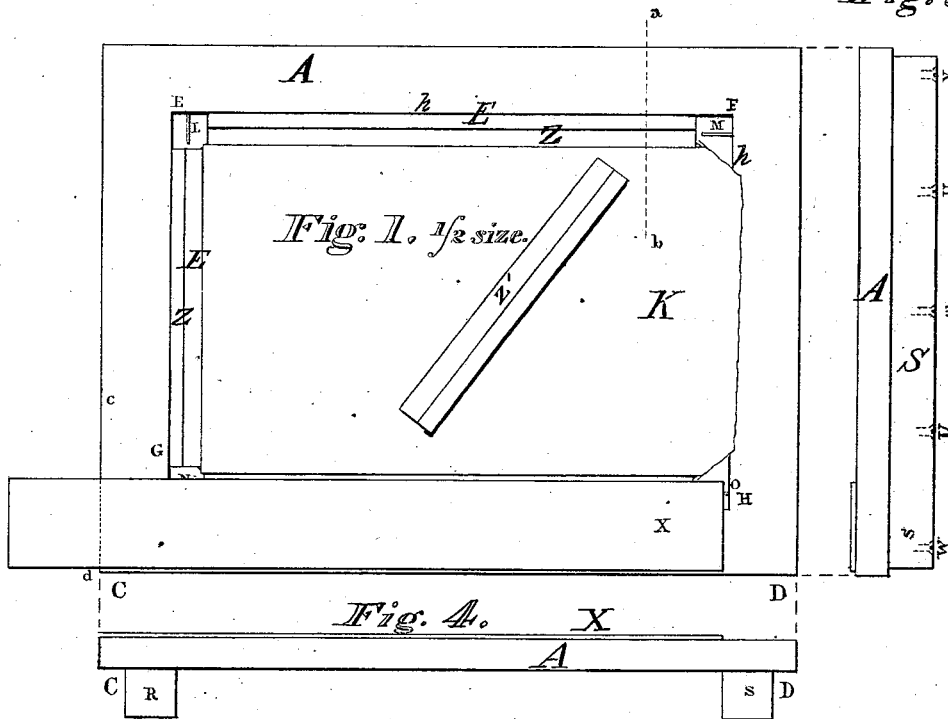
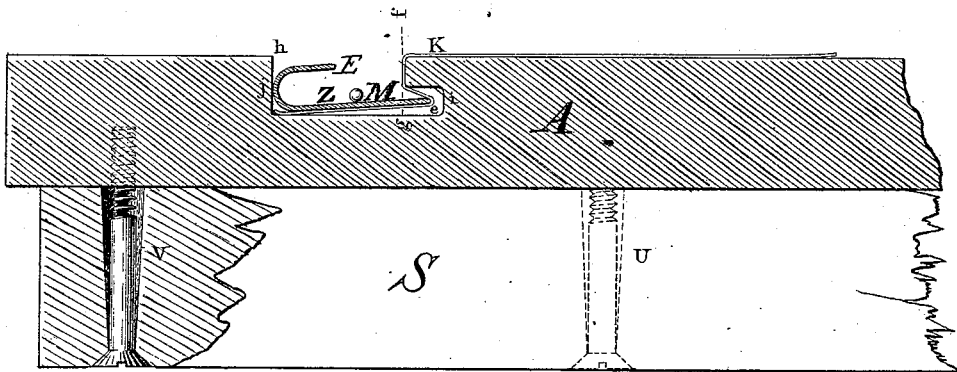


Fig. 2. Double size.



Witnesses:

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UNITED STATES PATENT OFFICE.

J. BURKITT WEBB, OF URBANA, ILLINOIS.

IMPROVEMENT IN DRAWING-BOARDS.

Specification forming part of Letters Patent No. 159,870, dated February 16, 1875; application filed June 23, 1874.

To all whom it may concern:

Be it known that I, J. BURKITT WEBB, of Urbana, in the county of Champaign and State of Illinois, have invented certain Improvements in Drawing-Boards, of which the following is a specification:

The first part of my invention relates to the cheap and simple construction of a drawing-board in such a manner that paper may be well stretched upon it without other appliance than the board itself possesses.

The second part of my invention relates to the cheap and simple construction of drawing-boards in such a manner as to allow the wood to shrink and swell without affecting the usefulness of the board.

Figure 1 is a plan of the board, with side and end views, showing also the drawing-square and paper fastened at three sides. Fig. 2 is enlarged view of the part to the right of the dotted line *a b*, Fig. 1, showing the groove and strips holding the paper in, and also the method of fastening the cleats to the back of the board.

Fig. 1 is the plan of a drawing-board, A. Fig. 3 is a side elevation, and Fig. 4 an end elevation, of the same. The board is made preferably of one piece of wood, or of several strips glued up into one piece. At a suitable distance from the edge is an undercut groove, E E, around the four sides of the board, made to receive the edges of the paper, and four strips, Z, for fastening the same. The preferred shapes for the grooves and strips are shown in cross-section at Z, Fig. 2, with the edge of the paper K in position. L M N O are pieces of wire, under which the ends of the strips may be pushed to prevent their falling out of the grooves. Z', Fig. 1, is the fourth strip lying on the board. Upon the back of the board are cleats R S, to hold it from warping, and the holes for the screws which fasten these cleats are constructed in such a way as to allow the wood to shrink and swell. To accomplish this the central screw T, Fig. 3, fits its hole and is screwed tight, but the other holes, U V, Fig. 3 and Fig. 2, are reamed out larger, and the cleat is made of sufficient thickness to allow the screws to swing or bend in their holes with the change of the wood. This action of the screws, other than the central one, is simply to hold the board flat against the cleats. The surfaces between cleats and

board are also made smooth to diminish the friction; or cloth may be inserted.

The wood being thus left perfectly free to shrink and swell, the board may alter in width, but will remain practically a rectangle. The grain of the wood in the board runs in the direction C D, at right angles to the cleat, so that the side and end edges of the board present, respectively, uniform and unbroken surfaces of side and end grain for the drawing-square to slide against. In Fig. 2 a part of the cleat is broken away to show the screw V in full.

The paper to be stretched is wetted, as usual, (or it can be sufficiently stretched for some uses without wetting,) and the corners cut off. It is then laid on the board and its edges fastened in the grooves by the strips. The forward edge *e*, Fig. 2, of the strip is first used to push the paper downward in the line *f g* to the bottom of the groove, and then the back of the strip is allowed to come against the edge *h*, and the strip is forced forward and downward into its position in the groove. This forces the forward edge of the strip into the undercut *i*, carrying the paper with it and partially stretching it. The drying of the paper, as usual, completes the process. It is not intended that the strip shall fit the groove closely. The paper is held by being made to turn a number of corners as it lies in the groove. The tension of the paper holds the strip back against the outside *h* of the groove, so that usually it will not fall out; but when paper has been long in, or when none is in, and a strip is loose, it may be slipped endwise until its end passes under one of the wires, as M, Figs. 1 and 2.

I make no claim to the clamping of the edges of the paper where it is held from slipping by being pinched between two surfaces or edges, as I think this is not new; but

I claim as my invention—

1. A drawing-board, provided upon its face with undercut grooves E, and with fastening-strips fitting therein, for securing the paper, substantially as described.

2. A drawing-board having supporting or strengthening cleats secured thereto by screws, and enlarged holes arranged in said cleats, in the manner and for the purpose specified.

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