Sept. 15, 1942. A. P. GEIMER 2,295,647

DRAWING BOARD

Filed June 8, 1940

Fig. 1

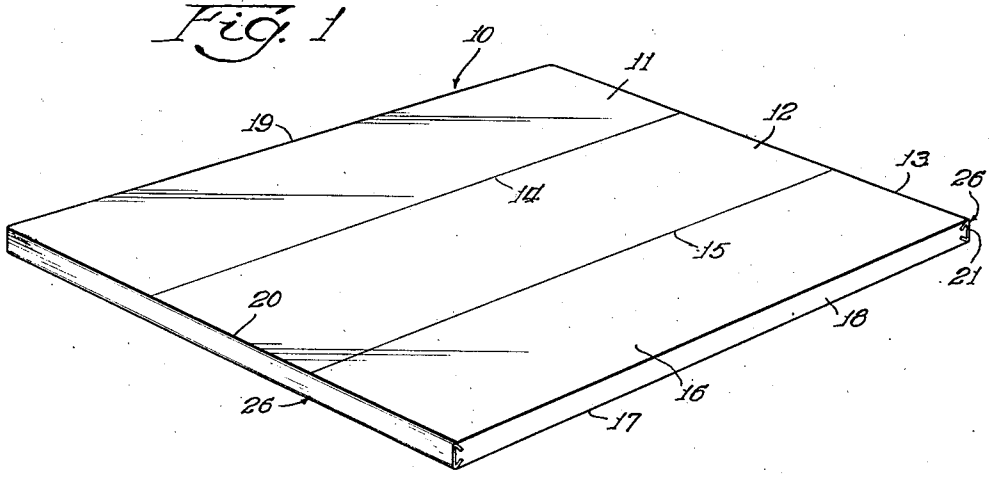


Fig. 2

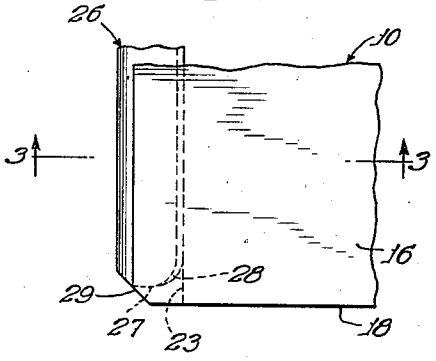


Fig. 4

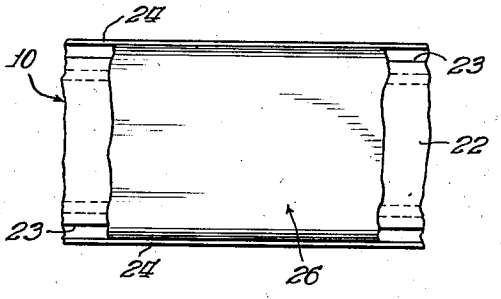
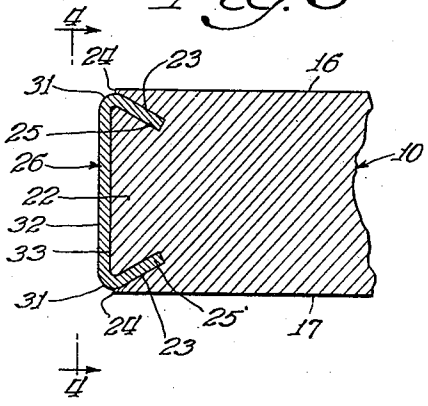


Fig. 3



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DRAWING BOARD

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Application June 8, 1940, Serial No. 339,509

2 Claims. (Cl. 45—131)

This invention relates to drawing boards, more particularly of the type to be used without a special stand or other support therefor, by mechanical draftsmen, engineers, artists and the like.

Among other objects, the invention aims to provide an inexpensive board of this type of improved efficiency and simplified manufacture.

An important aspect of the invention is the provision for use of strips of, say, bass wood, for example, which is relatively inexpensive and which, in accordance with the present invention may be made up into a board having not only enhanced resistance to changing atmospheric conditions that would cause warpage, swelling or shrinking, but furthermore a board in which the ends of the board that are across the grain and joints of the wood are both reinforced and maintained true for drawing purposes.

In accordance with another aspect of the present invention, the end reinforcing and truing means is desirably spaced from the faces of the board so as not to interfere with the use of either face of the board as a drawing surface, and also so as to provide an uninterrupted wood surface, which may receive the usual thumb-tacks even at the extreme lateral extremities of the board.

Other objects and advantages will be apparent from the following description, taken together with the accompanying drawing, in which—

Figure 1 is a perspective view of a drawing board embodying the present invention;

Figure 2 is a fragmentary enlarged plan view showing the left lower corner of the board of Figure 1;

Figure 3 is a fragmentary vertical section on the scale of Figure 2 and on the line 3—3 thereof; and

Figure 4 is a fragmentary end view, for example, taken on the line 4—4 of Figure 3.

Referring in detail to the illustrative construction shown in the drawing, it will be seen that the present improved board comprises a non-metallic board body having along each of its end edges a dove-tail portion intermediate of the upper and lower faces of the body and terminating laterally substantially flush with the lateral extremities of said faces, and a metallic channel member with converging sides telescoping said dove-tail portion substantially throughout said edge.

The board may have a body 10 formed, in this instance, of three elongated strips of wood 11, 12 and 13, the strips 11 and 12 being joined along their longitudinal adjacent edges as at 14 and the strips 12 and 13 being similarly joined as at 15, these joints being made, as is well known and so as to be relatively imperceptible and providing for an upper working face 16 and a lower face 17 of the board, either of which, in this instance, may be used as a drawing surface. It will be understood that the grain of the wood strips 11, 12 and 13 runs with their lengths so that the proximate edge 18 and distant edge 19 of the body 10 may be smooth planed edges.

In accordance with the present invention, the end edges 20 and 21 are finished as next described. At each of the end edges 20 and 21, a dove-tail portion 22 is formed on the body 10 as by the pre-formed oblique slots or saw cuts 23 made in the edge beginning from a point spaced as at 24 from each of the faces 16 and 17, and continuing inwardly of the body in approaching lines to a short distance therein, these two cuts being made throughout the length of the edge. There is then inserted into the cuts 23, the sides 25 of a metallic channel member 26. The channel member 26 is conveniently preformed, desirably of steel lead coated, with its sides 25 inclined toward each other to correspond with the angle of the saw cuts 23, these sides being substantially the depth of the cuts.

The channel member 26 may be advantageously inserted with its sides in the cuts by telescoping action, from, say, the edge 18 of the body, and then driven home until it is located centrally therein as shown, the channel member extending substantially throughout the edge 20 or 21, but just slightly shorter than the edge so as when centrally located to terminate as at 27 a short distance from the ends of the cuts so as to allow for contraction and expansion of the board under varying atmospheric conditions. In order to assist in this telescoping assembly, the ends of the side walls 25 of the channel member 26 are desirably rounded as at 28 so as to avoid a sharp point which might catch on the wood within the cuts, and hinder assembly, and also to provide a camming action between the channel walls and the body which assists in assembly.

After the channel member is assembled with the body as shown, the end corners of the body and corresponding ends of the channel members are desirably conjointly chamfered as at 29 to avoid sharp corners at these points. The channel member thus avoids sharp projections at the corners of the board and when so located becomes a permanent part of the board and can not come out or loosen up, since the interengagement

of the inclined channel parts **25** and the angled saw cuts **23** provides enhanced holding friction and also a slight resilience of the channel sides **25** provides somewhat of a retaining spring action.

So constructed and arranged, the channel members **26** provide cleats which extend across the ends of the board that are across the grain and joints of the wood, so that the body is both reinforced at these end edges and there is also provided a smooth and permanently true edge for drawing purposes with the use of the usual T-square having a head which abuts the end of the board and in this case rides on the steel member **26**. Furthermore, the steel member terminating as it does as at **24, 24** slightly short of the faces **16** and **17** of the board, does not interfere with the full use of these faces as drawing surfaces, and with the use of the usual thumb-tacks to the extreme lateral extremity of the board.

Furthermore, while leaving the working surfaces unobstructed, the rounded upper and lower edge portions of the member **26** as at **31** spaced as they are slightly laterally of the body edge portions **24** provide a protection for these edge portions and avoid any undesirable scratching engagement with the head of the T-square which may be used with the board, while at the same time the exterior **32** of the channel member snugly laps the wedge-shape or dove-tail portion **22** of the board body, these results being advantageously readily effected by terminating the dovetail portion **22** as at **33** substantially flush with the lateral extremities **24** of the body **10**.

The specific form of dove-tail and of channel here shown is illustrative of an engagement of the steel cleat **26** with the wood body **10** advantageously without screws or other attachment means, as will be apparent, and furthermore, of an interengagement of these parts such as will hold the board true while permitting sufficient slippage therebetween for the necessary expansion and contraction of the wood while at the same time preventing warping.

The invention is not limited to details shown for purposes of exemplification, and such changes may be made as fall within the scope of the following claims without departing from the invention.

Having described my invention, I claim:

1. In a drawing board having a non-metallic flat body, that improvement therein which comprises a pair of pre-formed slots extending throughout an edge of the body opening into said edge adjacent the faces of the body respectively and directed obliquely therefrom to form a dovetail portion of the body at said edge, and a metal cleat of channel formation having its side walls directed toward each other to an extent substantially corresponding to the depth and length of the slots, said cleat being assembled with said body by a force fit end to end telescoping action whereby the cleat interlocks with the dove-tail portion and the channel sides resiliently engage the body to retain the parts in assembly, the ends of the channel walls being rounded to provide a camming action between the said walls and the body assisting in said assembly.

2. In a drawing board having a non-metallic flat body, that improvement therein which comprises a pair of pre-formed slots extending throughout an edge of the body opening into said edge adjacent the faces of the body respectively and directed obliquely therefrom to form a dovetail portion of the body at said edge, and a preformed metal cleat of channel formation having its side walls directed toward each other to be received in said slots, said cleat being assembled with said body by a force fit end to end telescoping action whereby the channel sides resiliently engage the body to retain the parts in assembly and to accommodate variations in the body and cleat.

ANTHONY P. GEIMER.