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W. H. LONG

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DRAWING BOARD TOP

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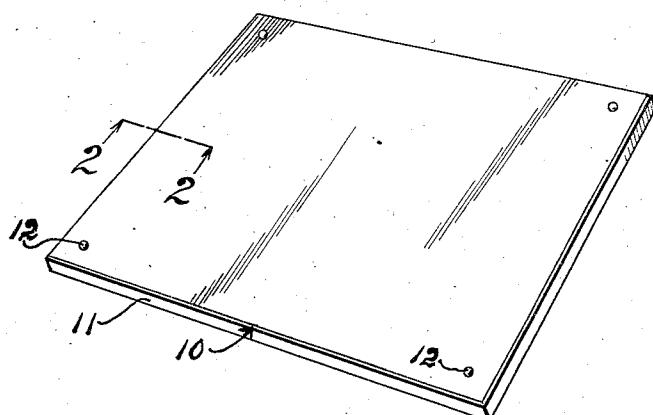


Fig. 1

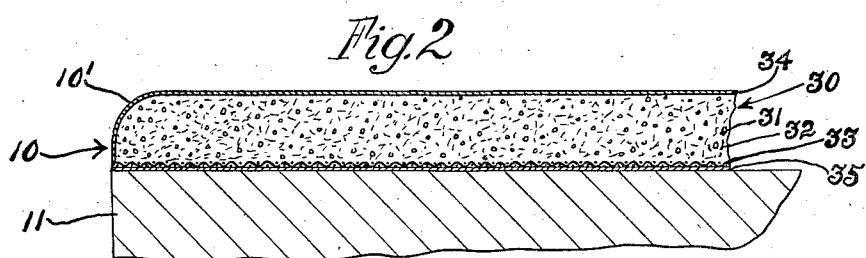


Fig. 2

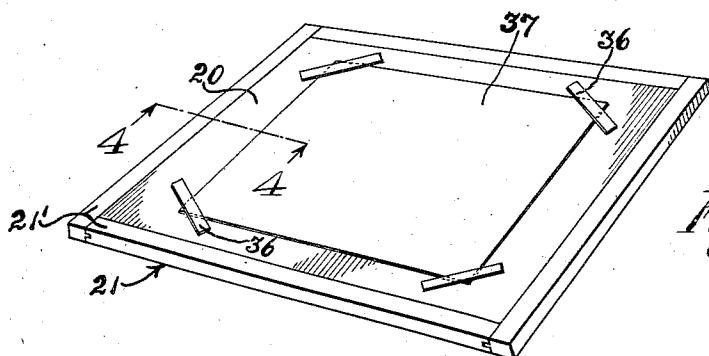


Fig. 3

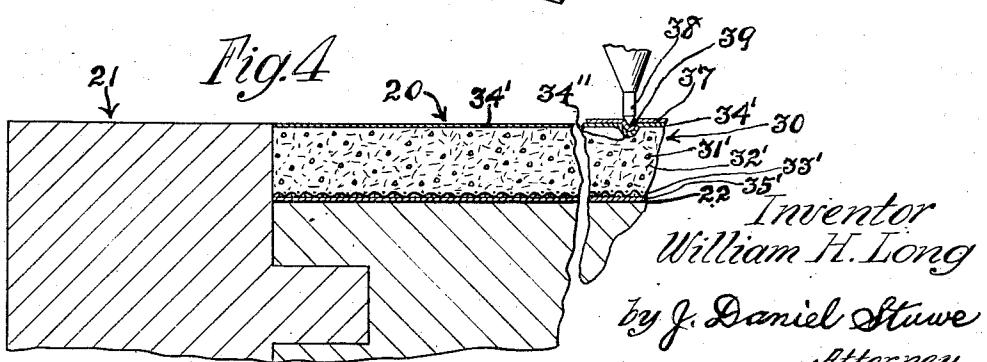


Fig. 4

Inventor  
William H. Long  
by J. Daniel Stuwe  
Attorney.

## UNITED STATES PATENT OFFICE

WILLIAM H. LONG, OF CHICAGO, ILLINOIS

## DRAWING BOARD TOP

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This invention relates to a novel drawing board top.

It is well known in this art that the drawings are generally made by first executing the same in pencil, and then inking in the pencil drawings; since the pencil lines produced on drawing paper placed upon the usual drawing boards are not sharp and will readily spread and smudge, and no clear and distinct blueprints can be produced therefrom; wherefore such pencil drawings are then invariably inked in, thereby requiring a repetition of work, and involving considerable time and labor and expense to produce the finished drawing with sharp lines suitable for making blueprints and photostats with clear cut lines therefrom.

It is the prime object of my present invention to furnish a drawing board with a resilient and yieldable upper face portion or top, whereby so clear and distinct a drawing can be produced by the use of the drawing pencil alone, and by only the one drawing operation, so that blueprints and photostats can be made directly from these pencil drawings with very clear and distinct lines, which are as clear and distinct as the lines in blueprints and photostats made from the usual ink drawings, and which are uniform and even throughout; whereby considerable saving is accomplished in time and labor and expense.

Another object of this invention is to provide a drawing board top which is yieldable to the action of the pencil so that depressed lines or grooves are produced by the pencil in the drawing paper, in order that the pencil lines will be distinct and clear and of uniform strength throughout and will not smudge across the paper, but will be fixedly retained in said grooves for permanent record.

Still another object is to provide such a top which has an upper face portion uniformly yieldable to the action of the pencil, so as to increase the life of the pencil; and which is made of live material to promptly and fully rebound after being depressed, thus always presenting a smooth top surface.

A further object is to provide a drawing board top or upper face means which, besides

being resilient, also has a highly finished top surface which is tough, stain-proof, scratch-proof, and is washable with soap and water.

These and other objects and advantages are attained with this invention, as will become apparent from the following description, taken in connection with the accompanying drawings, in which,

Fig. 1 is a perspective view of a drawing board having my novel upper face means or top mounted thereon.

Fig. 2 is an enlarged vertical sectional view thereof, taken on line 2—2 of Fig. 1.

Fig. 3 is a perspective view showing a drawing board having my resilient top means secured thereon, in the form of an inlay, also illustrating the preferred manner of retaining a sheet of drawing paper thereon with tape means.

Fig. 4 is an enlarged vertical sectional view thereof, taken on line 4—4 of Fig. 3, and illustrating how the pencil depresses the drawing paper into the pliable and resilient surface means of this resilient top.

In the drawings I have illustrated my invention in its preferred form, and have shown two of the different manners of applying it to a drawing board, so as to constitute the active upper face portion or top thereof.

This novel top may be secured upon the drawing board by means of tacking elements, as indicated in Fig. 1, showing my top 10 which is secured on the drawing board 11 by means of tacking elements 12, like thumb tacks or brads. This top may furthermore be secured upon the board by the use of cementing means, as indicated in Figs. 3 and 4, showing the top 20 which is cemented upon the drawing board 21 by the use of cementing means or gluing means 22; whereby the top is completely secured with its entire under-surface on to the board to be fixedly and permanently retained thereon and to become a constituent part thereof.

This novel top may be made of a size to extend substantially over the entire drawing board, so as to provide the complete upper face portion or active top part thereof, as indicated in Figs. 1 and 2; and in this case the upper edge portions 10' are preferably

rounded, to prevent any marring or chipping off of the edge material, by the T-square or the like. This top may also be mounted between the border elements or bands 21' of the drawing board and arranged substantially as an inlay, as indicated in Figs. 3 and 4 of the drawings, and so as to be flush with the top face of said bands or border elements, as best shown in Fig. 4.

10 My novel upper face member or top is made uniformly resilient and so as to provide a live mass which is uniformly yieldable throughout its entire surface area to the action of the drawing pencil used thereon, so as to be slightly depressed thereby and insure a sharp, even and unbroken pencil line which is of uniform strength and thickness throughout. For this purpose I preferably provide a resilient main part or body portion 20 and cover or coat it with suitable coating means which will exclude the air therefrom and prevent deterioration of said body portion; and this coating means on the top face thereof being furthermore made flexible so as to yield along with said body portion under the pressure of the pencil on drawing paper mounted upon my improved top.

15 The substances or ingredients which I have found most desirable for making this body portion or main part 30 of my novel top comprises finely ground cork and wood flour, as indicated at 31 and 32 respectively, in Fig. 2, and which is mixed and bound together with oxidized linseed oil. This mixture is then 25 preferably secured on fabric 33, as burlap, being run thereon as a substantially pasty mass, said fabric providing strength to said body portion. This combined material and burlap is then calendered, thereby pressing the 30 mass of material into the fibres of the burlap, and making the top surface of the mass or body smooth and even.

20 This combination of the body 30 and fabric 33 is then provided with a coating on both 45 the top and the bottom faces and the edges, to fully seal the pores of the material on its outer surfaces. Said coating means preferably comprises lacquer, especially for the top face and edges, as indicated at 34 in the drawing, and this coating is preferably applied by causing the lacquer to flow over the top surface, and to run over the edges. The lacquer is then smoothed off with a scraper.

25 The reinforced body may also be dipped or 55 immersed in the lacquer bath, to completely seal the surfaces of the top member, and more particularly to seal the upper face and the side edges.

30 The lacquer used herefor must be a flexible and durable one, so that it will yield along 60 with the resilient body means, and will be returned thereby to its original smooth and even surface position, when the pressure of the pencil is removed therefrom.

65 The next step in preparing my improved

tops is to paint the burlap on the lower face, for which the usual oil paint 35 is satisfactory, whereby to seal the lower or back face of my novel top member. The paint is less expensive than the lacquer and will suffice for sealing the burlap which covers the lower face and which is secured upon the drawing board.

70 This face member or top for the drawing board is then stored and cured in a suitable room or storage place, being submitted to the ordinary room temperature for about sixty days, whereupon this novel pliable top is ready to be mounted upon a drawing board, to serve as the active upper face member or top thereof.

75 In Fig. 4, as in Fig. 2, the body 30' comprises the ground mixture of cork and wood flour 31' and 32' respectively, which is mixed with linseed oil and secured on the burlap 33', the same being coated with lacquer 34' over the upper surface, and painted beneath with paint 35'. This top is herein shown fixedly secured on the drawing board with cementitious material 22.

80 In order to avoid having my novel top pierced and marred by the use of thumb tacks for holding the drawing paper on this top, I especially advise and recommend the use 85 of adhesive tape, preferably surgeons' adhesive tape, as shown at 36 in Fig. 4, said tape being secured across the corners of the drawing sheet 37 for holding it in position. The adhesive tape is readily removed and a clean 90 surface again provided on my top, since by the use of the lacquer this top surface of my invention is made highly finished and very smooth and tough, it being thereby washable with soap and water to be readily kept clean. This top is furthermore rendered so tough 95 upon its upper surface as to be scratch proof, and is so highly finished and smooth that it is actually stain proof, so as not to absorb or permanently retain ink spots thereon.

100 In Fig. 4 I have further indicated how the live and resilient material of the body portion 30, and likewise the flexibility and yieldability of the lacquer coating on the top surface, will admit of being depressed by the drawing pencil 38, so as to depress the surface lacquer, substantially as shown at 34" in Fig. 4, and 105 to form a depression or groove 39 in the paper 37.

110 The depression 39 in the drawing paper is sufficiently deep and pronounced to cause a deposit of lead from the pencil 38 therein which will be of uniform thickness and strength throughout and will form clean-cut 115 edges along the upper edges of the groove; and which is retained in this deepened groove or trough-like channel in the drawing paper, so that it is held therein and will not smudge or smear across the paper whenever the hand moves across the drawing, as is the case in 120 drawings made on the usual wooden draw-

ing boards. These deep grooves will furthermore retain the lead therein so as to form a permanent record of these pencil drawings, and thereby further obviating the necessity of inking in the drawing over the pencil lines, as is required in the usual drawings as heretofore provided on the generally used drawing boards.

This novel top is furthermore made of a very light color, preferably a white color, so that the details on the drawing paper positioned thereon can be clearly distinguished.

From the above it is apparent that in drawing boards equipped with my novel top, it is only necessary to execute the drawing in pencil and no inking in is required; and that the depressed and grooved pencil lines become very strong and stand out sharply along the edges of these grooves, so that they are not distinguishable from ink lines, in blue prints made herefrom, as has been continuously proven by the repeated trials with my improved and novel top, especially with this finally developed top prepared and constructed as herein disclosed.

I claim as my invention:

1. In a drawing board, a board member having a top thereon comprising a resilient main portion including a combination of ground cork and wood particles bound together with linseed oil, and a covering material for covering the outer surfaces of said main portion, the layer of covering material on the top face of said portion being composed of flexible lacquer, thereby providing a smooth and yieldable upper face which is uniformly resilient throughout.

2. In a drawing board, a board member and a top member mounted thereon, said top member including a main body portion provided of resilient material, a layer of fabric secured to said body portion and whereby it is mounted upon said board member, and a covering layer of lacquer which merges into the material of the body portion and fully closes the pores thereof; whereby a pencil can make a grooved channel in paper mounted thereon, and depress it into said covering layer, so as to make a sharp pencil line of uniform strength within said grooved channel, providing clear-cut edges on said line adapted to provide a permanent record and to enable making clear and distinct blue prints therefrom.

3. In a drawing board, a supporting member of comparatively rigid material and a top member secured thereupon to provide the working upper face portion of the drawing board, said top member comprising a main body portion of ground cork and wood flour combined with linseed oil to provide a live and uniformly resilient mass of material, a layer of reinforcing fabric wherein the lower face of said body portion is merged, a coating of covering material provided over the

outside of said fabric to fully close the pores on said lower face, and a covering layer of flexible material which covers the working face of and merges with said body portion, thereby producing a tough and smooth upper surface which is scratch-proof and stain-proof and washable, also producing a live and yieldable upper face which is of uniform resiliency throughout so that a pencil will make a uniformly even groove in drawing paper positioned thereon and a clear cut pencil line of uniform strength throughout, said top also being of a light color so that details on drawing paper used thereon can be clearly distinguished.

In testimony whereof I have signed this specification.

WILLIAM H. LONG.

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