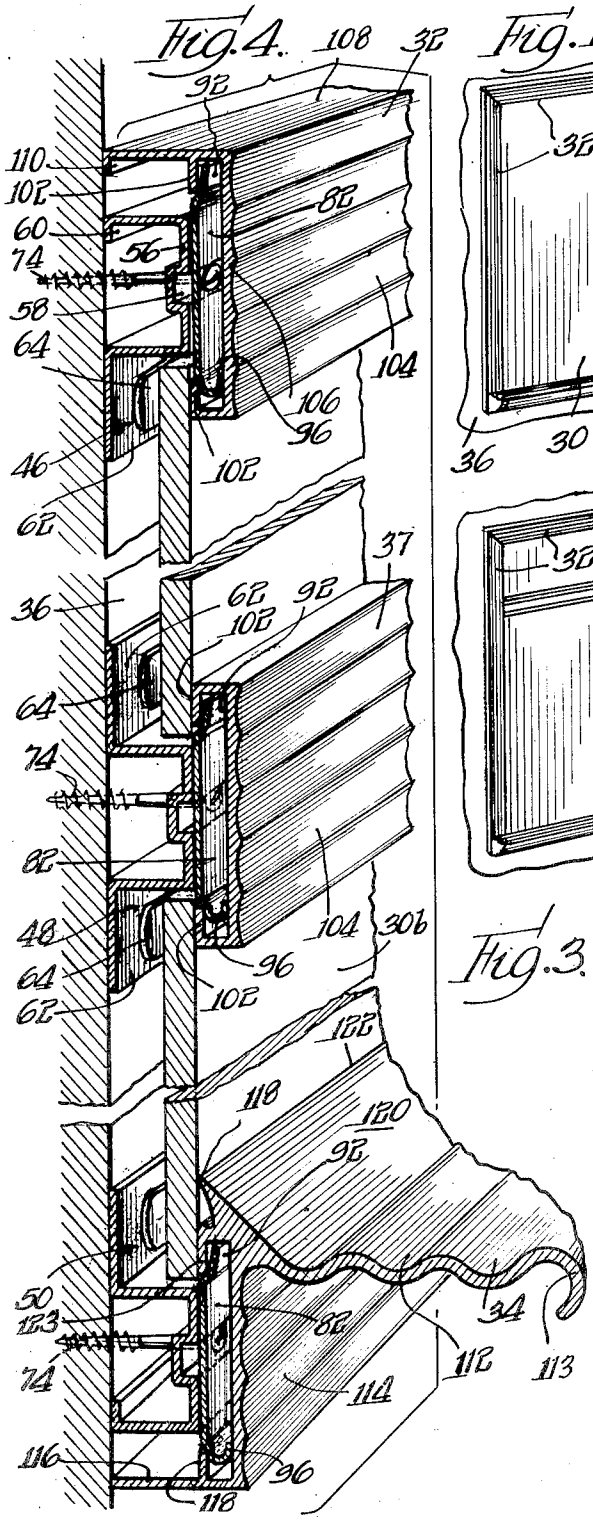
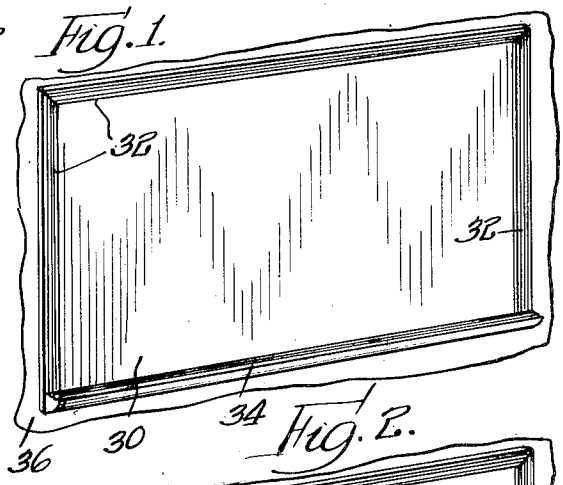
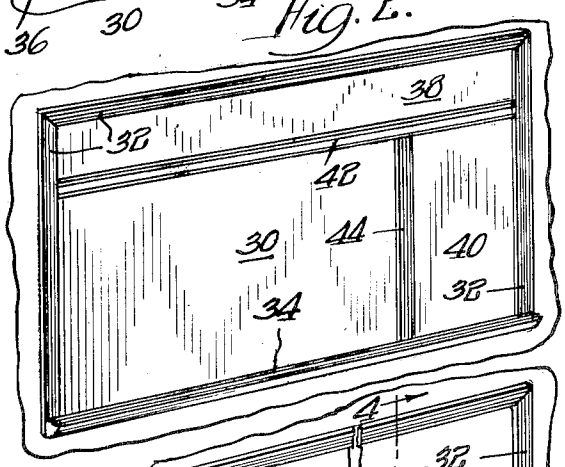
Sept. 15, 1953 L. F. URBAIN 2,651,852

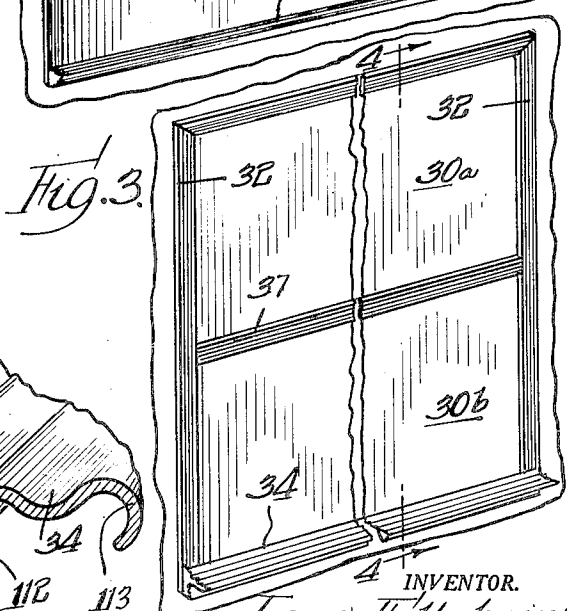
BLACKBOARD SUPPORTING STRUCTURE

Filed Aug. 17, 1949 5 Sheets-Sheet 1









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BLACKBOARD SUPPORTING STRUCTURE

Filed Aug. 17, 1949 5 Sheets-Sheet 2

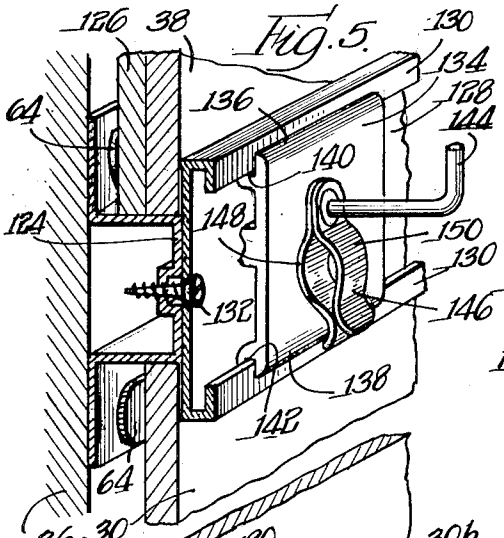


Fig. 5.

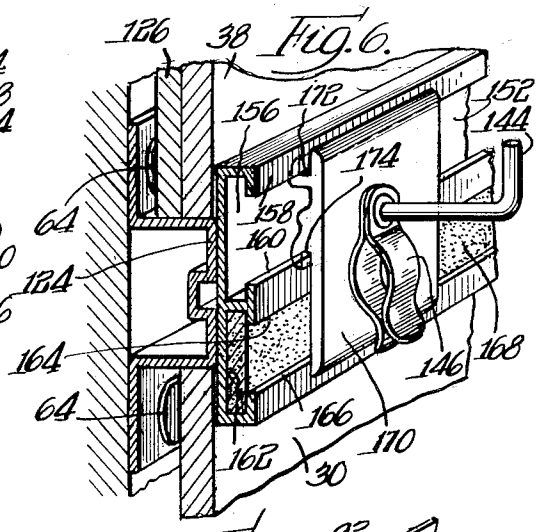


Fig. 6.

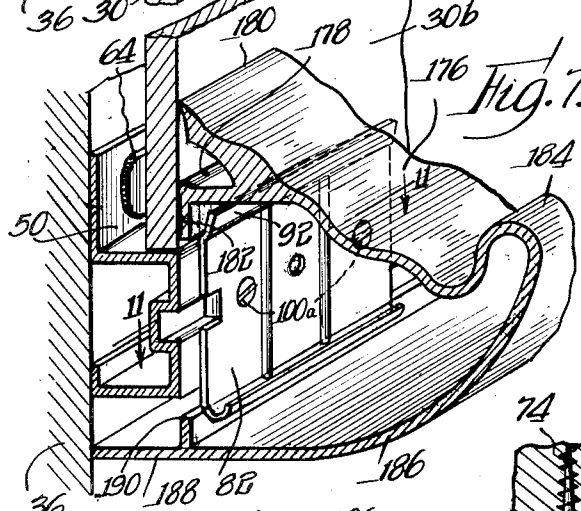


Fig. 7.

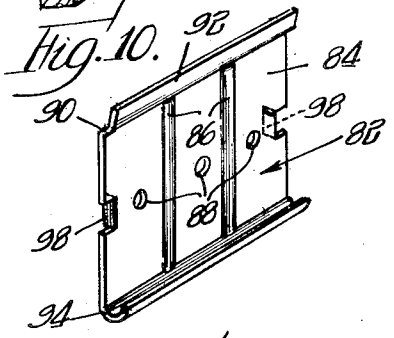


Fig. 10.

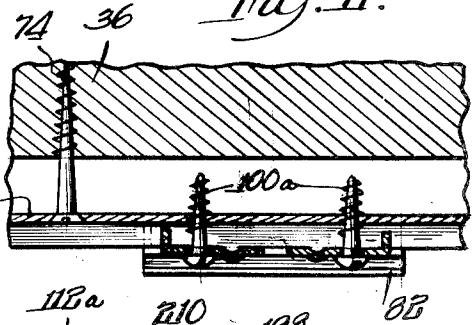


Fig. 11.

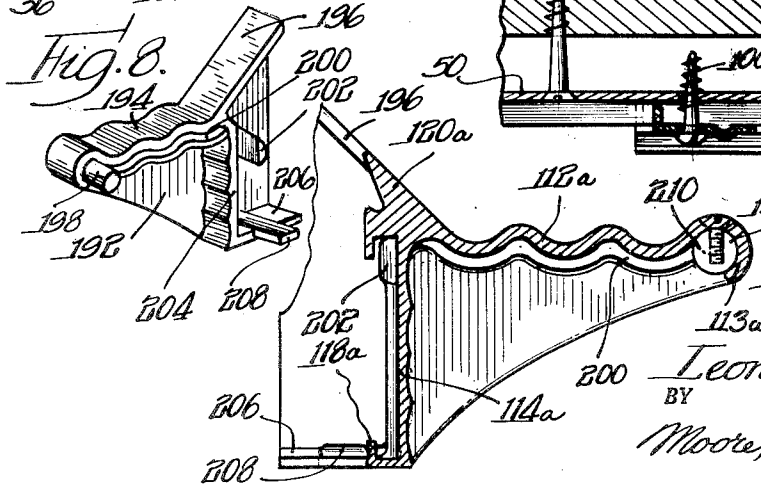


Fig. 8.

Fig. 9.

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BLACKBOARD SUPPORTING STRUCTURE

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Fig. 12.

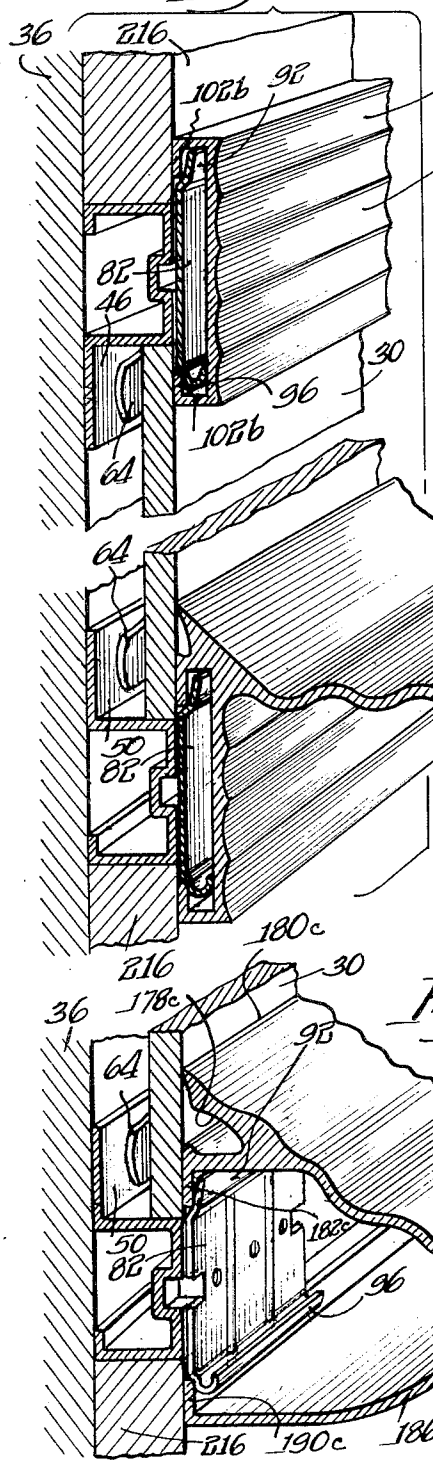


Fig. 13.

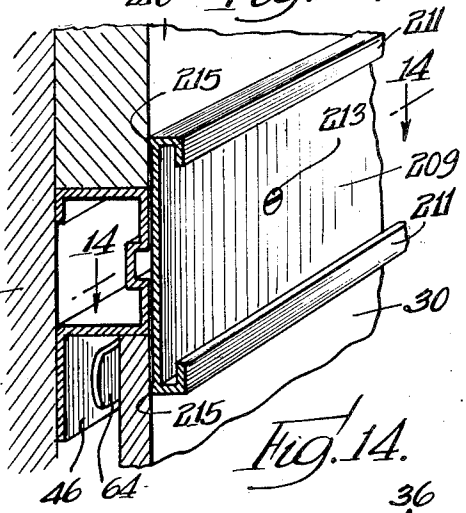


Fig. 14.

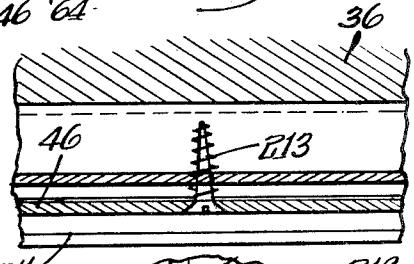


Fig. 16.

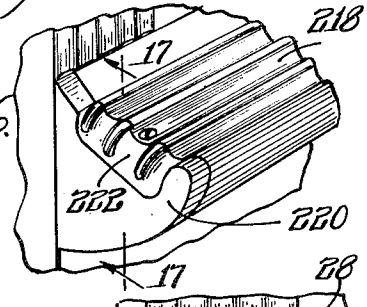
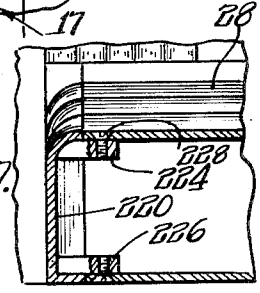


Fig. 15.

Fig. 17.



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BLACKBOARD SUPPORTING STRUCTURE

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Fig. 18.

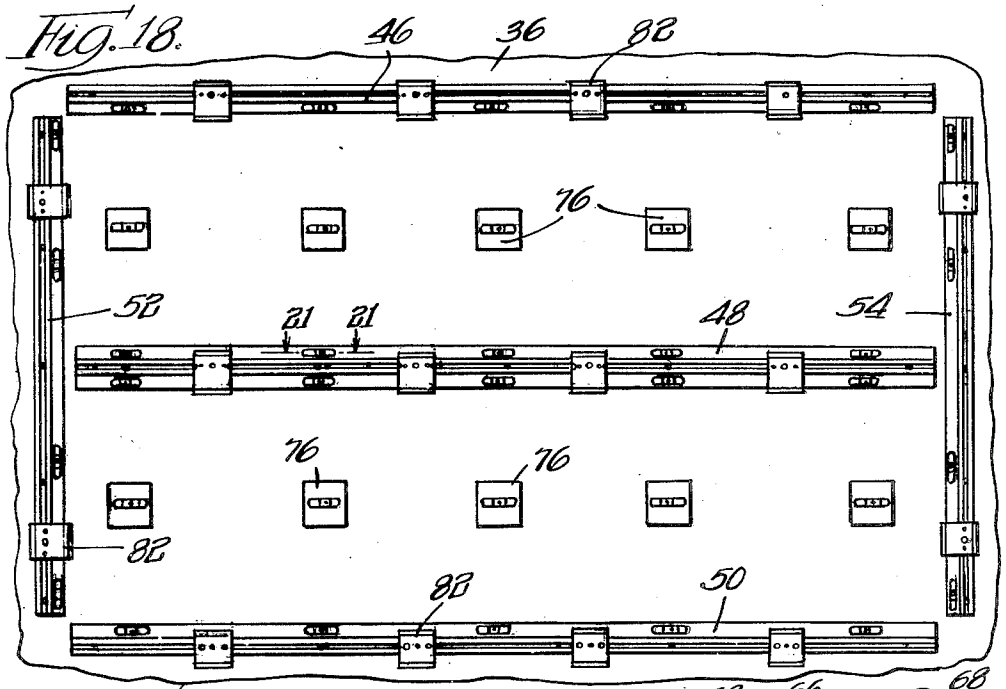


Fig. 19.

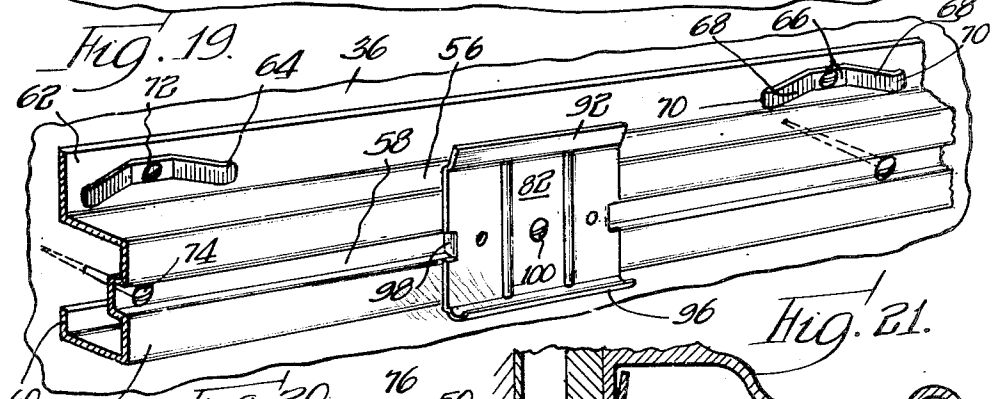


Fig. 20.

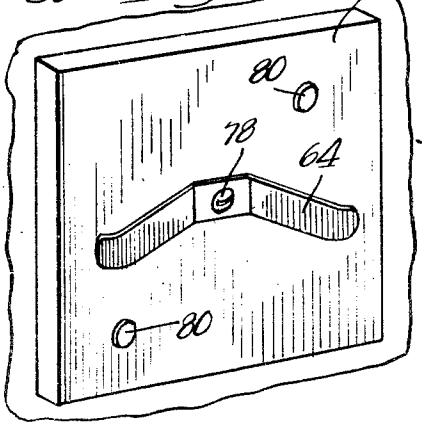
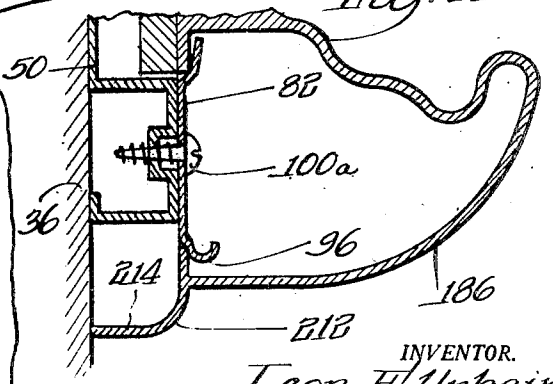


Fig. 21.



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BLACKBOARD SUPPORTING STRUCTURE

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Fig. 22.

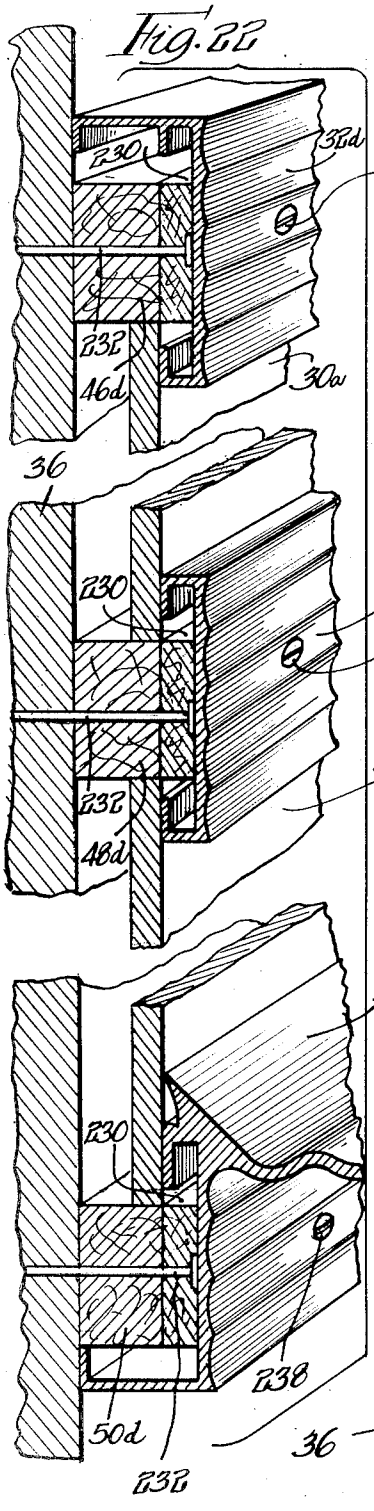


Fig. 23.

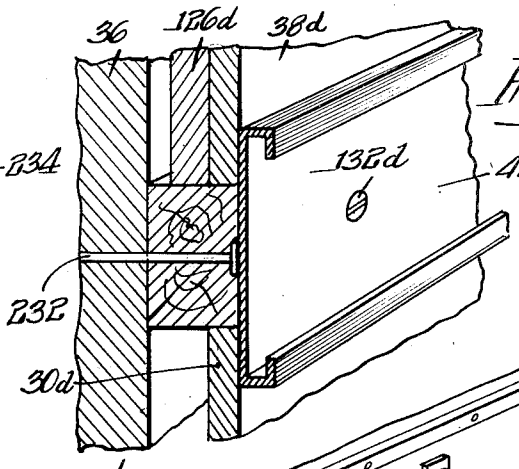


Fig. 24.

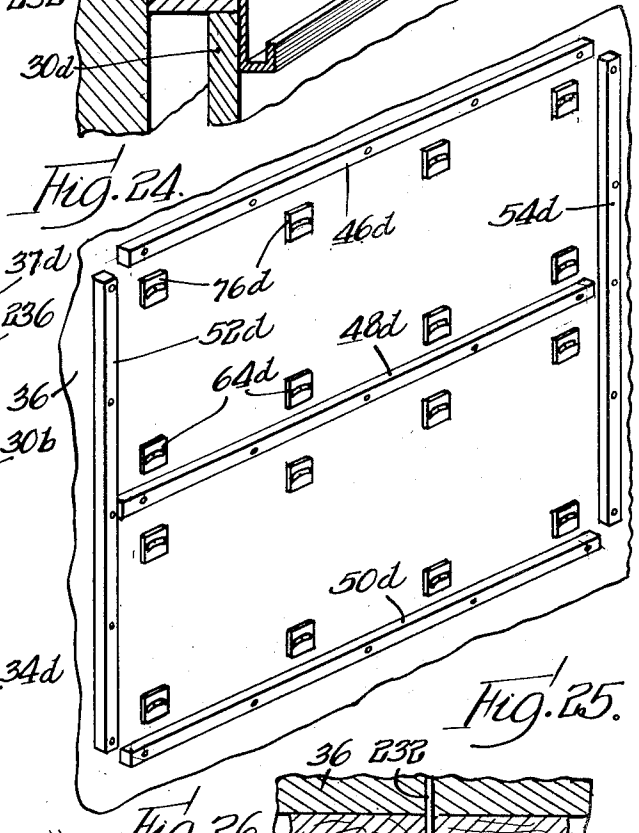


Fig. 25.

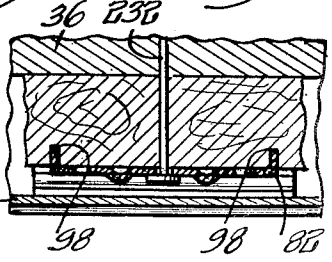
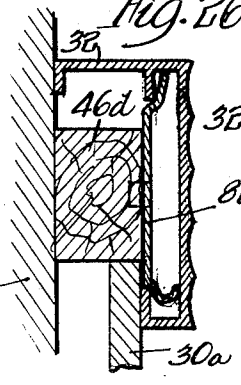


Fig. 26.



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UNITED STATES PATENT OFFICE

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BLACKBOARD SUPPORTING STRUCTURE

Leon F. Urbain, Chicago, Ill.

Application August 17, 1949, Serial No. 110,701

14 Claims. (Cl. 35—63)

1

The present invention relates to a display board construction and particularly to a structure for mounting display boards, blackboards and the like on a wall.

The present invention contemplates providing structure for mounting display boards, blackboards and the like. Such mounting is often accomplished by providing a series of contact points of plaster or the like in back of the blackboard element and then applying a retaining trim. Various gripping means have been used to engage the periphery of each blackboard slab and secure it in place. In most prior constructions the slabs have been clamped between the trim and the rigid backing structure, which even under ideal conditions tends to keep the blackboard slabs continually stressed unless extreme care is taken in the mounting operation. Due to the fact that blackboard slabs, particularly those of slate, are often not of uniform thickness, the conditions are seldom ideal and the slabs are constantly stressed regardless of the care taken in mounting them.

An important object of the present invention is to overcome the foregoing and other difficulties by providing an improved mounting structure for holding blackboard slabs or the like in floating position under resilient pressure.

For the most permanent blackboard mounting possible, it is desirable to build the blackboard into the wall so that the blackboard slab is flush with the plaster of the wall and only the trim extends outwardly therefrom. While this is desirable, it is not always feasible, as in order to keep costs down, unfinished or semi-finished walls are often used, such as concrete, tile or cast cinder block. With such construction, it is of course impossible to mount the blackboard in a wall recess, and the blackboard is accordingly mounted on the surface of wall. At other times a blackboard or other display board may be mounted on a wall where it was not planned to be when the building was designed, and it is not practical to chip away the plaster or other wall finish.

An important object of this invention is to provide an improved and attractive structure for mounting a blackboard or the like on the surface of any wall available.

Another object of this invention is to provide a simplified ground for the mounting of a blackboard or the like.

Yet another object of this invention is to provide an improved blackboard mounting structure including an improved clip for mounting trim and chalk troughs with no fastenings visible,

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the clip cooperating with the improved ground so as to be mountable only in correct position and yet usable with any type of wooden ground.

A still further object of this invention resides in the provision of an ornamental trim for a blackboard or the like which has a projecting portion to overlie and cover the grounds.

Yet another object of this invention is to provide a chalk trough having a portion overlying and covering the lower ground.

Another object of this invention is the provision of a recessed chalk trough, the recess facilitating mounting and adding to the feather edge contact of the chalk trough against the blackboard to preclude the passage of chalk dust therebetween.

A still further object of this invention is the provision of a shelf type chalk trough which is attractive in appearance, easy to mount and inexpensive to manufacture.

Other and further objects and advantages of the present invention will be apparent from a perusal of the following description when taken in conjunction with the accompanying drawings in which:

Fig. 1 is a perspective view of a surface applied blackboard or the like showing a single panel construction;

Fig. 2 is a view similar to Fig. 1 showing a blackboard in conjunction with tack boards and a map rail;

Figure 3 is a view similar to Figure 1 in which the board is comprised of two panels and has a divider rail between them;

Figure 4 is an enlarged perspective view partly in section taken along the line 4—4 in Figure 3;

Figure 5 is a perspective view of a map rail supporting a map hook and paper clip;

Figure 6 is a view similar to Figure 5 showing a combination map rail and tack board;

Figure 7 is a perspective view partly in section of an inclined closed type chalk trough;

Figure 8 is a perspective view of an end plate for a shelf type chalk trough;

Figure 9 is a sectional view of a shelf type chalk trough with the end plate in place;

Figure 10 is a perspective view of my improved mounting clip;

Figure 11 is a sectional view taken along the line 11—11 in Figure 7;

Figure 12 is a sectional view similar to Figure 4 showing a recessed blackboard construction;

Figure 13 is a perspective view of a map rail;

Figure 14 is a sectional view taken along the line 14—14 in Figure 13;

Figure 15 is a perspective sectional view showing a chalk trough with the recessed type of construction;

Figure 16 is a perspective view showing the end plate for an inclined type chalk trough;

Figure 17 is a view taken along the line 17—17 in Fig. 16;

Figure 18 is a front elevational view showing the foundation of grounds for a surface applied type of blackboard;

Figure 19 is a detailed perspective view of a portion of the lower ground rail shown in Figure 18;

Figure 20 is an enlarged perspective view of the mounting blocks shown in Figure 18;

Figure 21 is a sectional view of a modified type of chalk trough;

Figure 22 is a view similar to Figure 4 showing a surface applied blackboard mounting construction using wooden grounds for a foundation;

Figure 23 is a sectional view of a map rail with wooden ground construction;

Figure 24 is a perspective view showing the arrangement of wooden grounds as applied to blackboard construction; and

Figures 25 and 26 are detailed sectional views showing supporting clips as applied to wooden grounds.

Where I refer to a blackboard throughout the ensuing description, it is to be understood that I have in mind any type of chalkboard such as slate, wood, glass, or composition, and of any desirable color, and that I also have in mind any other type of display board such as a bulletin board of cork or composition.

In Figure 1 is shown my improved type of surface applied blackboard showing single panel construction. This blackboard includes a single panel or slab 30 of slate or other type of blackboard, mounting trim 32 and a chalk trough 34, all of which are mounted on the exterior surface of any wall 36. A similar construction is shown in Figure 3 in which the blackboard consists of two panels or slabs 30*a* and 30*b* as well as ornamental supporting trim 32 and a chalk rail 34. This construction additionally includes a mullion or divider strip 37 between the upper and lower blackboard slates. Figure 2 shows a blackboard construction comprising a single slab 30 of chalk board as well as horizontal and vertical tack boards 38 and 40 respectively. Ornamental trim 32 surrounds the external periphery of the structure except for the lower edge where a chalk trough or rail 34 is located. A map rail 42, which will be referred to later in greater detail, separates the horizontal tack board 38 from the chalk board 30 and from the vertical tack board 40. The chalk board and vertical tack board are separated by a divider strip or mullion 44. The basic structure of each of these blackboard constructions is revealed in Figure 4 which is a perspective sectional view of the construction shown in Figure 3.

The foundation of the blackboard mounting structure includes a plurality of horizontal grounds 46, 48 and 50 and a pair of vertical grounds 52 and 54 which are best seen in Figure 18. Again referring to Figure 4, and additionally to Figure 19, each of the grounds 46, 50, 52 and 54 which lie around the outside of the structure comprises an essentially channel-shaped body portion 56 including a front face supplied with a longitudinal recess 58 which will be referred to later in greater particularity. A short inturned flange 60 along one edge of the body portion provides longitudinal rigidity. An outwardly directed flange 62 along the other longitudinal edge of the body portion 56 also imparts longitudinal rigidity and supplies a mounting surface for mounting springs 64. Each of the mounting springs, as may be seen in Figure 19, comprises a flat central body portion 66 with outwardly extending wings 68 terminated in tips 70 which may be bent slightly backward. The springs are centrally apertured and may be secured to the flange 62 of the grounds by rivets or screws 72 which may extend through the flange into the wall 36 for greater mounting strength. The recess 58 in the front face of each of the grounds is apertured at spaced intervals to receive mounting members 74 which pass into a wall and may be nails, toggle bolts or screws as the situation demands. In Figure 4 it may be seen that the central ground 48 is similar to the other grounds but has two extending flanges 62 to support springs 64 and consequently slabs 30*a* and 30*b* on each side thereof. In order to support the slabs other than peripherally, a plurality of wooden blocks 76 each carrying one of the springs 64 as illustrated in detail in Figure 20 are disposed at desirable intervals behind each slab. The intervals in the present illustration may be 18 inches. Each of the blocks may be of substantially the same thickness as the grounds 46 through 54 if desired although this is not essential as the mounting springs will compensate for a great difference in thickness. Each of the mounting springs 64 may be secured by means such as a screw 78, and the blocks may be secured to the wall by means such as nails 80 or an adhesive such as the type known as mastic. It may be readily seen that each blackboard slab is supported in floating position by the plurality of resilient springs 64 and by the body portions of one of the grounds 46, 48.

The blackboard slabs are held in position against the resilient springs 64 by means of clips 82, one of which is illustrated in perspective in Figure 10. Each clip comprises a body portion 84, which is substantially flat. Transverse vertical ridges 86 are stamped in the body portion to provide rigidity, and mounting apertures 88, which are preferably three in number, are provided in this body portion. The top edge of the body portion is bent to form a longitudinal shoulder 90 and a flange 92 extending therefrom at an acute angle relative to the plane of the body portion. The lower longitudinal edge of the body portion is also provided with a longitudinal shoulder 94 and a substantially U-shaped channel providing a camming surface 96. Lugs 98 are struck out rearwardly from the ends of the body portion 84 at substantially right angles thereto for cooperation with the recess 58 of each of the grounds so that it is impossible to mount the clip in any position but the correct position, or one directly opposite thereto which is readily obvious, and consequently very little care need be taken in mounting the clips. As may be seen in Figure 4, the edge of the body portion adjacent one or both of the shoulders 90, 94 overlies the edge of the blackboard to clamp the board resiliently against the springs 64. In the case of all of the clips except those along the bottom ground there is little force exerted against them and they may be secured by a single screw 100 which is preferably of the self-tapping type and is screwed into one of the apertures in the recess 58 which is not occupied by a mounting screw 74. If it were not for the

lugs 98 it would not be possible to use a single screw as each clip would be prone to rotate very readily.

If the blackboard or the like were secured in place only by the structure heretofore described, it would be operable but would not be at all attractive in appearance. To improve the appearance of the structure and to prolong its life by covering all operative parts, I provide the peripheral mounting trim 32 and the mullion trim 37 heretofore noted. Attention is directed first to the mullion trim 37, which as may be seen in Figure 4 is symmetrical and is essentially channel-shaped, having inturned flanges 102 at its free edges and an attractive front face 104, which in the present illustration is scalloped. The mullion trim may be readily applied by placing one of the flanges 102 over the flange 92 of the clips 82 along the central ground 48 and by then forcing the other flange 102 inwardly against the camming surface 96 of the clips 82. The mullion trim 102 is resilient, preferably being formed of extruded aluminum and consequently is readliy snapped into place over the camming surface 96 with the flanges 102 abutting the shoulders 90 and 94. The peripheral trim 32 applied along the top and sides of the blackboard is similar to the mullion trim, having a channel-shaped portion 106, inturned flanges 102 and an ornamental front surface 104. Additionally, the peripheral trim 32 includes a side wall 108 extending from one of the sides of the channel-shaped portion 106 and at right angles to the flange 102. The side wall terminates in an angled flange 110 extending longitudinally therealong. As may be seen in Figure 4, the trim 32 is applied by placing the flange 102 adjacent the side wall 108 over the flange 92 of the clips mounted on the peripheral grounds and forcing the other flange 102 over the camming surfaces 96.

The clips on the lower ground in addition to the lower edge of the blackboard support a chalk trough 34 which in Figure 4 is illustrated as being of the shelf type. The trough comprises an undulating supporting surface 112 having a depending longitudinal flange or front wall 114 similar to the trim 34. This flange has an ornamental outside surface and has an inwardly extending wall 116. A longitudinal flange 118 similar to the flange 102 on the trim projects inwardly from the wall 116. The upper surface 112 is curled over along its free edge to provide a cylindrical configuration 113 which imparts attractive appearance and considerably increases the strength and rigidity of the chalk trough. At the inner longitudinal extremity the top surface 12 extends upwardly to form a flat surface 120 forming an angle with the blackboard which may be on the order of 45°. The back of the inclined surface 120 is provided with a recess 118 which tapers into the surface 120 at a very sharp angle to provide a sharp edge 122 of the type generally known as a feather edge impinging against the surface of the blackboard. From beneath the recess a flange 123, similar to the flanges 102 of the trim, depends. The chalk trough is mounted over the clips 82 in the same manner the trim is mounted—that is by placing the flange 123 over the flanges 92 of the clips and pushing inwardly to force the wall or flange 118 over the camming surfaces 96. An end portion may be provided at each end of the chalk rail if desired, and one is illustrated at a later point in conjunction with a modification of the invention. As may readly be seen, the feather edge 122 prevents chalk dust from getting between the chalk rail or trough and the blackboard. All of the dust falling down the surface of the board is directed by the inclined surface 120 to the lower part of the undulations of the upper surface 112 from whence it may be readily swept out one end into a wastebasket or the like. It should be noted that an eraser rests on the top portions of the undulations so that it does not collect any dust from the chalk trough.

In the construction shown in Figure 2, a map rail between the horizontal tack board 38 and the blackboard 30 is included. This construction is shown in greater detail in Figure 5 and an alternative form thereof is shown in Figure 6. A ground 124 similar to the two-flanged type constituting the mullion ground 48 is provided between the blackboard or chalk board 30 and the horizontal tack board 38. As the tack board 38 is generally of some rather soft material such as cork, it is preferable to provide it with a backing 126 to impart stiffness. The fact that the tack board portion is then thicker than the blackboard portion is of no great consequence as the difference is readily taken up by the mounting springs 64. A longitudinal channel-shaped rail 128 having longitudinal inturned flanges 130 is secured to the ground 124 by means of screws 132 which are preferably of the self-tapping type and are threaded into apertures in the ground. The rail 128 is wider than the body portion of the ground 124, and consequently its edges overlie and secure the tack board 38 and blackboard 30 against the springs 64. In addition to securing the tack board and blackboard, the rail 128 slidably secures a plurality of display fixtures or blocks 134. The longitudinal edges of the block may be chamfered as at 136 and 138 and are provided with longitudinal slots 140 and 142. The side walls of the lower slot 142 are somewhat shorter than those of the upper slot so that the block 134 may be interengaged with the rail 128 by placing the upper slot 140 over the upper rail flange 130 lifting the block 134 upward and inward and then lowering the block with the lower slot 142 over the lower flange 130. The block 134 is provided with a hook 144 extending transversely for carrying maps and other articles. The hook 144 is threaded into the block 134 and secured thereto a paper clip 146 comprising resilient leaf springs 148 and 150 bent toward each other so as to meet near their extremities and having reversely bent tips to facilitate the placing of papers therebetween.

The form of the invention shown in Figure 6 is somewhat similar to that shown in Figure 5, having a tack board 38 and blackboard 30 secured on opposite sides of a doubly-flanged ground 124, the tack board 38 again being provided with a backing 126. A rail 152 is secured to the ground 124 as by means of self-tapping screws and has its longitudinal edges overlying the tack board 38 and blackboard 30 to secure them in position against the mounting springs 64. The rail 152 is comprised of a channel portion 156 having inturned flanges 158 and 160 and a channel portion 162 having inturned flanges 164 and 166. A strip of cork 168 or other suitable material for receiving thumb tacks and the like is secured within the lower channel 162 for securing miscellaneous papers, and is of particular use when a second blackboard rather than the tack board 38 is provided. A block 170 somewhat similar to the block 134 is secured

within the upper channel by having slots 172 and 174 overlying the flanges 158 and 160. The essential difference between the block 170 and the block 134 is that the slot 174 is adjacent the mid-portion of the block rather than at the lower longitudinal edge. The inner wall of the slot 174 is short so that the block may be slidably secured in the channel in the same manner in which the block 134 is secured in its channel. The block 170 carries a hook 144 and paper clip 146 which may be identical with the similarly numbered parts carried by the block 134.

In Figure 7 I have shown an inclined, closed type of chalk trough which is stronger than the shelf type, is more attractive and is more readily cleaned. The blackboard 30b, the ground 50, the mounting springs 64 and the clips 82 may all be identical with the similarly numbered parts in Figure 4. The ground may be secured to the wall 36 by similar fastening means such as screws 74 and the clips may be secured to the ground by a pair of self-tapping screws 100a placed in the two extreme apertures of the clip and screwed into apertures in the ground 50. The pair of screws is used here and in the other chalk trough mountings rather than a single screw as in the trim mounting, as there is apt to be considerable strain thrown on the clips 82 such as by children leaning on the chalk trough. The chalk trough itself has an inclined undulating upper surface 176 having a feather edge 180 along its upper longitudinal surface where it is joined by a recess 178. The recess 178 like the recess 118 in the shelf type of chalk trough imparts flexibility to the upwardly extending portion carrying the feather edge and greatly facilitates the mounting of the chalk trough. Beneath the recess 180 a depending flange 182 is provided for cooperation with the flange 92 along the top of the clip 82. The surface 176 at its outer extremity is bent upwardly and then back upon itself to form a cylindrical edge portion 184 extending outwardly into a smoothly curved wall 186 terminating in a substantially horizontal wall or surface 188 abutting the wall 36. A narrow, longitudinal wall 190 extends upward from the horizontal portion 188 to engage the camming surface 96 of the clip, the mounting of the chalk trough being similar to that of the shelf type trough 112. In this form of trough, dust falling down the outer surface of the blackboard 30b is prevented from sifting between the trough and the board by the feather edge 180, and consequently all of the dust ends up in the lowest undulation of the upper surface 176 from whence it may be readily swept out either end into a wastebasket or the like. An eraser resting in the chalk trough abuts against the innermost portion of the cylindrical edge 184 and consequently does not extend downwardly into the chalk dust and remains clean.

Although the foregoing form of chalk trough is entirely satisfactory in general, there are sometimes encountered extreme conditions in which it is difficult to move the wall 188 past the camming surface 96. In order to obviate this situation, I have provided the form of chalk trough shown in Figure 21. The ground 50, clip 82 and clip mounting screws 100a may be identical with those shown in Figure 7. The chalk trough itself may be identical with that shown in Figure 7 except that instead of having a horizontal extending wall 188 I have provided a quarter-round section 212 merging into a horizontally extending longitudinal wall 214 which is vertically displaced downwardly from the curved wall 186. In this modification, sufficient clearance is provided between the camming surface 96 and the horizontal wall 214 to accommodate any eventuality encountered in practice.

Although it is desirable to cover all of the grounds, it is not necessary from an aesthetic standpoint to cover the lower ground along the bottom as this portion is generally not visible anyway. In such case I have provided the shelf type chalk trough 112a shown in Figure 9 which is identical with the chalk trough 112 except that it lacks the extending wall 116 which covers the lower portion of the lower ground. The lower portion thus ends with an upturned wall 118a which cooperates with the camming surface 96 of a clip for securing purposes. In conjunction with this chalk trough, I have illustrated an end plate which is usable either with this trough or with the trough 112 shown in Figure 4. The end plate comprises a side wall 192 from which extend an undulating top surface 194 similar to the surface 112 of the chalk trough and an inclined surface 196 similar to the inclined surface 120. The surface 196 is of greater transverse extent than the surface 120, or 120a as shown in Figure 9, so that it may cover the side of the lower corner of the blackboard mounting structure as well as the end of the chalk trough. A cylindrical lug 198 extends in a longitudinal direction from the end plate and fits within the cylindrical edge 113a of the trough. From the lower part of the upper surface 194 extends an undulating surface 200 which underlies the top surface 112 of the chalk trough. A lug 202 extends longitudinally from a wall 204 similar to the front surface 114a of the trough and lies behind the surface 114a to lock it between the lug and the surface 200, as may be seen in Figure 9, it being remembered that that subscript is used on the numbers referring to the chalk trough as this is a modified form. A lower wall 206 extends in a longitudinal direction from the end wall 192 to meet the wall 116, and a lug 208 extending from the wall 206 overlies the top of the wall 116 and abuts against the upwardly extending wall 118a. The end plate may be secured to the chalk trough by a screw 210 extending through the cylindrical longitudinal edge 113a of the upper surface 112a and into the lug 198.

Although one of the primary objects of this invention is to present a structure for mounting a blackboard or the like on the outer surface of a wall, the structure heretofore disclosed may be used with very slight modification for a sunken or recessed mounting in which the blackboard is flush with the wall. I have illustrated this modification in Figure 12, which is similar to Figure 4 except that the mullion trim, which is identical, has been omitted from the view. The upper and lower grounds 46 and 50 having mounting springs 64 may be identical with those shown in Figure 4. These grounds may be mounted on the wall 36 in the same manner as in the previous illustration after which plaster is applied to the wall to form an outer wall 216 which is flush with the front surfaces of the grounds. The upper trim 32b as well as the trim along the vertical sides is similar to the mullion trim previously illustrated, and has an ornamental front face 104b and inturned flanges 102b which cooperate with the flange 92 and camming surface 96 on the mounting clip 82. It may be seen that this trim differs from the previous peripheral trim only in omitting the transversely extending wall 108. The upper por-

tion of the trim 32b overlies the edge of the outer wall 216 to hide the joint between it and the ground 46. The same is of course true of the joint along the vertical grounds 52 and 54. In this particular illustration, a shelf type of chalk trough is provided which is identical with the trough shown in Figure 9 and is numbered 34b in this figure. The lower portion of the chalk trough as well as the lower portion of the mounting clips 82 overlies the joint between the outer wall 216 and the ground 50 to hide the same.

A modification of the recessed mounting is shown in Figures 13 and 14 to illustrate another of the constructional features of my invention. The wall 36, outer wall 216, ground 46, springs 64, and blackboard 30 are identical with those shown in Figure 12. A map rail 209 having a channel shaped body portion with inturned flanges 211 is secured to the ground 46 by means such as screws 213. The back of the map rail is not flat, but has its longitudinal edges 215 turned slightly backward to form a sharp edge which bites firmly against the wall to make a dust tight joint. It is to be understood that any of the trim or the chalk trough could be formed with such edges and this construction is not to be limited to a map rail.

In Figure 15 is illustrated an inclined closed type chalk trough 218 usable with a flush or recessed type mounting. The outer wall 216, the ground 50, mounting springs 64, mounting clips 82, and the blackboard 30, as well as the supporting wall 36, may be the same as those shown in Figure 12. The chalk trough 218 is similar to the inclined closed type of chalk trough shown in Figure 7 having an inclined undulating top or front surface 176c terminating at its upper extremity in a feather edge 180c and folded over at its lower margin to form a cylindrical edge 184c merging into a smoothly curved wall 186c terminating in an upstanding flange or wall 190c. There is no portion akin to the horizontal wall 188 in the configuration shown in Figure 7, as the longitudinal upstanding wall 190c is flush against the outer wall 216. As in the earlier modification, the chalk trough 218 is provided with a longitudinal recess 178c along its rear face directly below the feather edge 180c, and a longitudinal flange or wall 182c depends from just below this recess. The mounting and securing of this modification is similar to that of previous illustrations with the flange 182c behind the clip flange 92 and the wall or flange 190c behind the camming surface 96. An end plate 220 for the chalk trough 218 is shown in Figures 16 and 17. The cross section of the end plate is such as to conform to the cross section of the chalk trough 218 and the upper surface is relieved as at 222 to facilitate the sweeping of chalk dust from the trough. Inwardly extending flanges 224 and 226 nest within the chalk trough 218 and the end plate to secure it in place by means such as screws 228 threaded into these flanges.

The construction described in each of the foregoing modifications in which a metal ground is utilized is greatly to be preferred as such installation is fireproof, vermin-proof and relatively permanent. In some cases, however, usually in order to save on initial costs, it is desirable to utilize wooden grounds rather than metal ones. In such cases it is possible to use my mounting structure with no modification other than the drilling of a few holes, which is readily accomplished with the extruded aluminum from which my trim and chalk trough are preferably made. In Figures 22 through 26, a modification of my invention using wooden grounds is illustrated. The wall 36 may be identical with that shown previously. Wooden grounds 46d, 48d, 50d, 52d and 54d extending out as far as the surface of the blackboard may be used with wooden spacer strips 230 mounted along the front surface of each one. It is not necessary to use such two-piece construction, although only one width of ground need then be supplied, as generally the spacer strip and ground, as for instance 230 and 46d, are mounted in contiguous relation against the wall 36 by means such as nails 232. Peripheral trim 32d along the top and sides of the structure is identical with the trim 32 used in conjunction with the metal grounds except for spaced apertures through which mounting screws 234 are threaded into the wooden grounds to secure the trim. The inner edge of the trim overlies the various slabs of the blackboards 30a, 30b in the same manner as with the metal grounds. In the same manner the mullion trim 37d is identical with the trim 37 except for the spaced apertures through which mounting screws 236 are threaded into the wooden ground 48d. Likewise, the shelf type chalk trough 34d is identical with the trough 34 illustrated in Figure 4 with the addition of spaced apertures through which mounting screws 238 are threaded into the ground 50d. A map rail 42d shown in Figure 23 may be identical with that shown in Figure 5 since mounting screws were used there to secure a map rail in place. In this instance, a tack board 38d having a backing 126d is shown secured beneath one longitudinal edge of the map rail 42d, and a blackboard 30d is secured beneath the other longitudinal edge. In this illustration the ground is used without the spacer strip 230 as the back surface of the map rail is flush with both the display board and the ground rail. This illustrates the desirability of having a ground of this size, which in other instances may be built up by the spacer strips 230 rather than supplying grounds of different sizes. The rail is of course secured to the ground by several fasteners such as the screws 132d. Inasmuch as the wooden grounds have no flanges on which to mount springs, I have found it desirable to mount at least two rows of springs beneath each panel or slab of a display board in order to secure the floating mounting desired. The blocks 76d securing the springs 64d may be identical with those previously described without the suffixes and are placed near the periphery of each slab, as shown in Figure 24.

If it is not desired to drill holes in the trim and chalk trough and have the mounting screws showing, it is possible to mount the trim and chalk trough by means of the clips previously described even when utilizing wooden grounds, as may clearly be seen in Figures 25 and 26. The wall 36, wooden ground 46d and blackboard 30a may all be identical with those shown in Figure 22 and the clip 82 and trim 32 may be identical with those shown in Figure 4. A single nail, which may be one of the ground mounting nails 232, may be used to mount each clip, although in the case of the chalk trough mounting clips it may be desirable to use two such nails. The inturned end lugs 98 of the clip 82 may be driven readily into the wooden ground 46d by any driving implement such as a hammer to aid in securing the clips in proper position.

It is apparent that I have shown herein an improved type of mounting structure for securing blackboards and the like in floating position, the structure being usable with either metal or wooden grounds and being readily adapted to a recessed type mounting although being particularly designed for a mounting in which the entire structure extends from the plane of the wall.

Although I have shown and described certain preferred embodiments of my invention for purposes of illustration, it is to be understood that I do not intend my invention to be limited thereby and that it should be construed to include all that which may fairly fall within the spirit and scope of the appended claims.

I claim:

1. A securing member for use in display board construction comprising a substantially flat plate-like body portion, a flange along one longitudinal edge, a shoulder between said body portion and said flange, a cam surface along the other longitudinal edge, and a shoulder between said body portion and said cam surface.

2. The combination for use in display board construction comprising an elongated strip including a longitudinally recessed front face, and a securing member including a substantially flat plate-like body portion, trim supporting structure on said securing member, and an extending projection on said body portion cooperating with the recess.

3. A building construction for supporting a display board or the like on a wall comprising a plurality of ground strips mounted on and extending outwardly from said wall and forming a framework, elongated, ornamental trim comprising a front wall, a narrow side wall extending from one edge of said front wall, a relatively wide side wall extending from the opposite edge of said front wall, and a plurality of flanges extending from said side walls substantially parallel to said front wall, and means mounted on said ground strips for engaging said flanges to secure said trim on said ground strips to cover the latter.

4. A building construction for supporting a display board or the like on a wall comprising a plurality of ground strips forming a framework, securing means on said ground strips, ornamental trim secured by some of said securing means and covering some of said ground strips, and a chalk trough secured by the remainder of said securing means and covering the remainder of said ground strips, said chalk trough including a chalk supporting tray and a rear wall having an upper longitudinal edge engageable with a display board, said rear wall having a rear face longitudinally recessed immediately below said longitudinal edge to impart flexibility to the upper portion of said chalk trough.

5. A building construction for supporting a display board or the like on a wall comprising a ground construction forming a framework having a front surface and comprising a plurality of elongated strips arranged on the surface of a wall and extending therefrom, a plurality of securing members on said strips, a plurality of trim members secured over said securing members and covering some of said strips and said securing members, and a chalk trough securable over the remainder of said securing members and covering the remainder of said elongated strips, said chalk trough including an upper longitudinal edge for bearing against a display board in mounted position and a lower longitudinal wall vertically displaced from said longitudinal edge and extending rearwardly beyond said display board and said edge and abutting said wall to underlie and cover the remainder of said ground strips.

6. In display board mounting construction an elongated ground strip, a plurality of rigid securing members on said ground strip, each of said securing members including a rigid flange along one longitudinal edge and a rigid cam surface along the other longitudinal edge, and a chalk trough securable over said securing members, said chalk trough comprising an eraser supporting wall, a flange integral with said eraser supporting wall and engageable over the rigid longitudinal flanges of said securing members, a lower substantially horizontal wall vertically displaced from said eraser supporting wall and underlying said securing members, a flange on said lower wall cooperable with the rigid cam surfaces of said securing members to mount and secure said chalk trough, an upwardly directed extension integral with said wall having an inclined surface above said eraser supporting wall, and a rear surface recessed to meet said inclined surface at a sharp acute angle to provide a feather edge for sealing said chalk trough to a blackboard and to facilitate installation of said chalk trough.

7. The combination for use in a display board construction comprising an elongated strip having a longitudinally recessed front face, and a securing member including a substantially flat plate-like body portion, a plurality of tongues integral with said body portion and extending therefrom into said recess, and means for retaining said securing member on the front face of said strip with said plurality of tongues in said recess.

8. A display board construction comprising a display board, a supporting wall, a plurality of ground strips mounted on said wall and defining a wall area, said ground strips at their peripheral longitudinal edges meeting said supporting wall at substantially a right angle and having flanges extending into said wall area, a plurality of springs, certain of said springs being mounted on the flanges of said ground strips, the remainder of said springs being mounted on members within said wall area to lie in a common plane with springs on said ground strip and spaced from said ground strips a substantial distance, and securing means mounted on said ground strips substantially in a second common plane, said springs tending to extend forwardly toward said second common plane to assume a position spaced from said second common plane less than the thickness of said display board, the securing means overlying and clamping said display board against said springs.

9. A ground strip for use with a clip having spaced ground strip engaging projections and trim engaging portions, comprising an elongated member having a wall surface, a pair of side surfaces transverse to said wall surface and a rear surface contiguous with at least one of said side surfaces and generally parallel to and transversely opposite from said wall surface, said wall surface having a channel-like recess extending substantially the entire length thereof for cooperation with the spaced ground strip engaging projections on the clip, the spaced projections and the channel-like recess in the ground strip cooperating to prevent rotation of the clip with respect to the ground strip in the plane of the clip.

10. A trim for use with a display board positioned outwardly with respect to a support structure having trim engaging means thereon, comprising a front wall to overlie the front face of the display board, a relatively narrow side wall extending transversely from one edge of said front wall and toward the front face of the associated display board, a relatively wide side wall extending from the opposite edge of said front wall and in the same direction as said narrow wall to overlie and cover the free edge of the associated display board and the space between the display board and its supporting structure, and a flange formed on each of said side walls and extending toward the other side wall for engagement with the trim engaging means.

11. The combination for use in a display board construction comprising an elongated ground strip, a clip mounted on said ground strip, said clip including a substantially flat plate-like body portion, trim engaging means formed on said body portion and extending outwardly therefrom, and a plurality of projections formed on said body portion and extending in a direction opposite to said trim engaging means and toward said strip, said strip having cooperating means formed thereon to receive said projections, said projections and cooperating means preventing rotation of said body portion with respect to said strip in the plane of said body portion.

12. A chalk trough for use with a display board having a trough engaging clip mounted adjacent thereto, comprising a chalk supporting member, a first flange extending from said chalk supporting member and toward the display board in mounted position, said first flange having a longitudinal edge for bearing against the display board to form a tight juncture therewith, a second flange formed on said chalk supporting member and directed away from and downwardly with respect to said first flange in mounted position, said second flange having means formed thereon to engage the clip, a third flange formed on said chalk supporting member and extending upwardly from below said second flange when the chalk trough is in mounted position, said third flange having means formed thereon to engage the clip.

13. A chalk trough as set forth in claim 12, wherein the third flange is attached to the chalk supporting member at the edge thereof opposite the point of attachment of the first flange.

14. A chalk trough as set forth in claim 12, wherein the display board is spaced outwardly from the adjoining support wall and the third flange has an extension thereon underlying and covering the space between the front of the display board and the surrounding supporting wall.

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