

Aug. 22, 1967

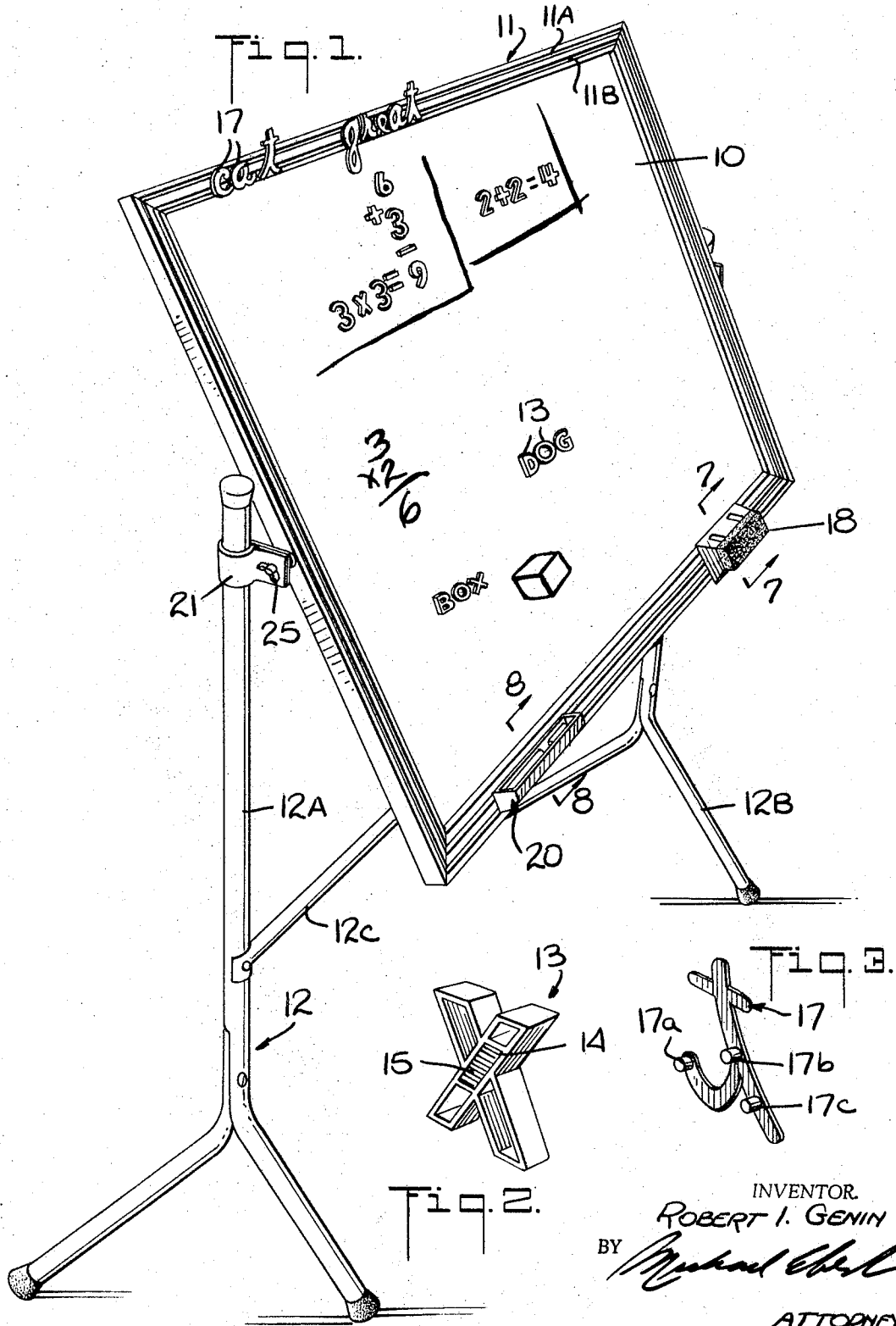
R. I. GENIN

3,336,682

EDUCATIONAL CHALK BOARD

Filed April 21, 1965

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3,336,682

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Fig. 4.

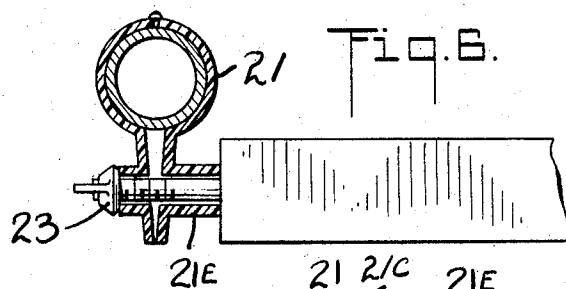
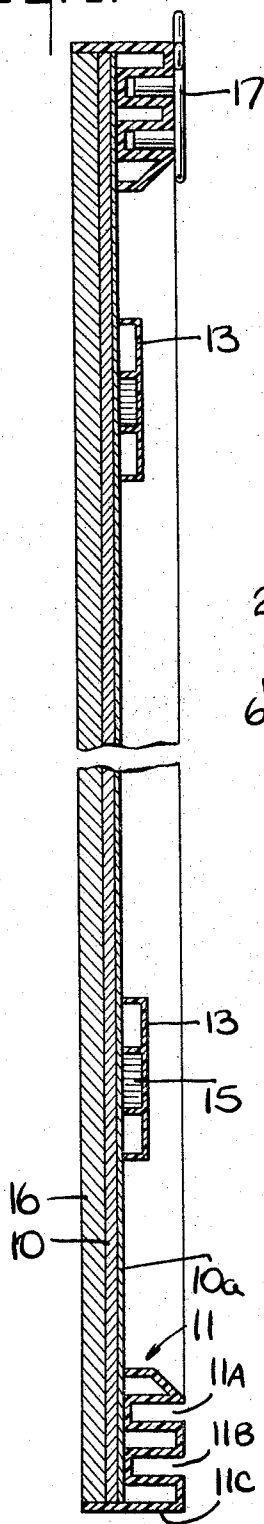


Fig. 6.

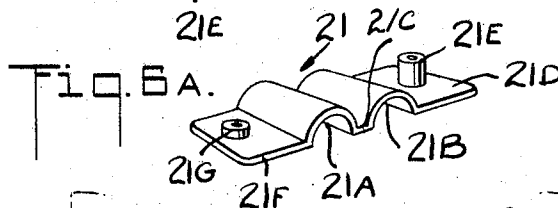


Fig. 6A.

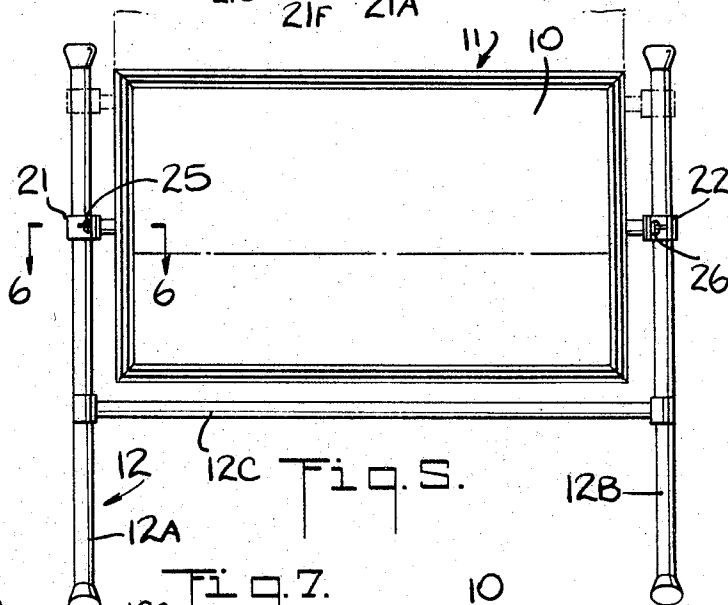


Fig. 5.

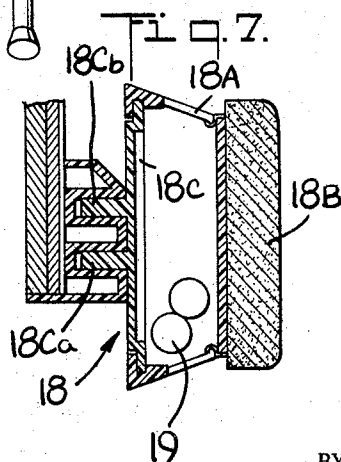


Fig. 7.

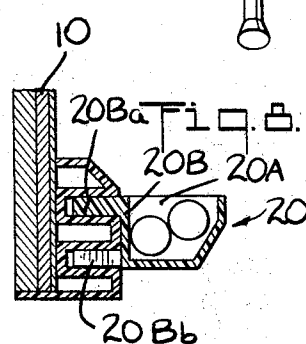


Fig. 8.

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Fig. 9.

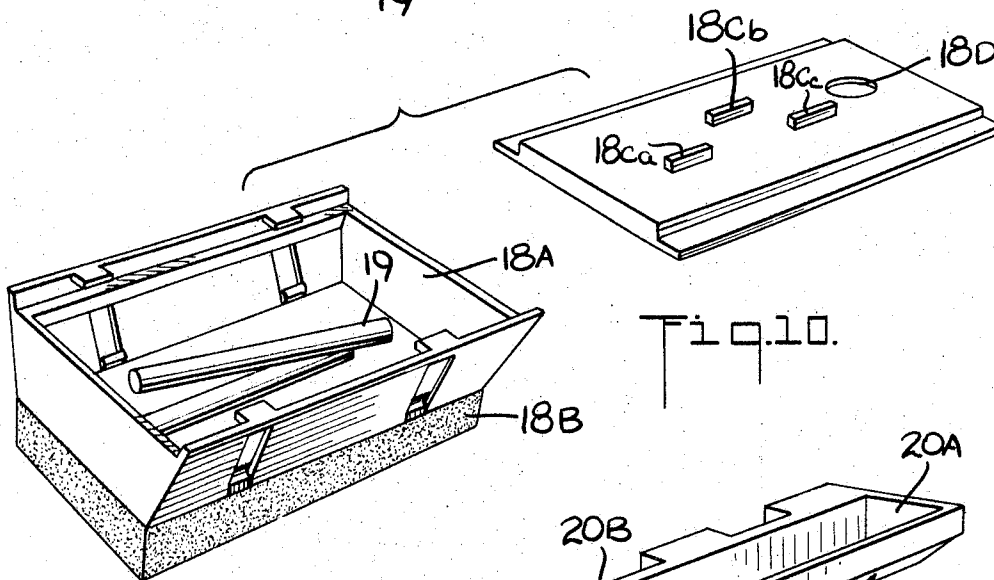
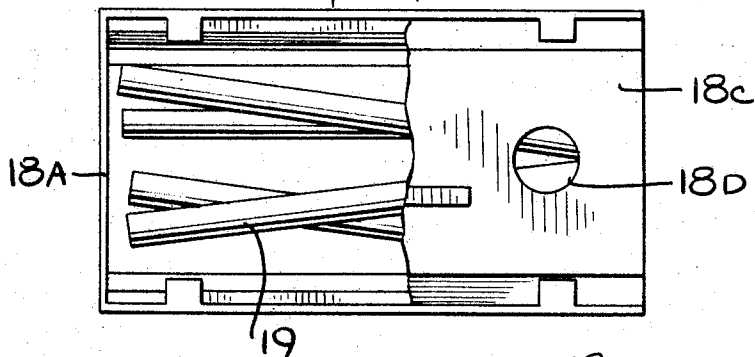


Fig. 10.

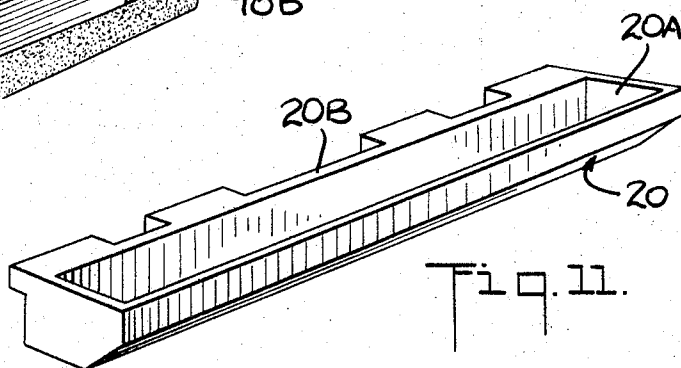


Fig. 11.

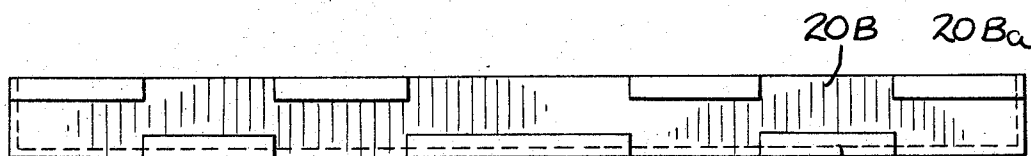


Fig. 12.

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3,336,682

EDUCATIONAL CHALK BOARD

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Filed Apr. 21, 1965, Ser. No. 449,837

9 Claims. (Cl. 35—62)

ABSTRACT OF THE DISCLOSURE

A chalk board structure wherein the writing board is held within a frame having a corrugated configuration defining an extended border that encompasses the board, and yieldable walls forming parallel channels which overlie the board, snap-in elements such as alphabet characters, being removably attached to the frame by means of rear projections or pins which are receivable in said channels and are gripped by said yieldable walls.

This invention relates generally to chalk board structures, and more particularly to an easel-mounted adjustable chalk board whose frame is adapted to support snap-in script letters and other characters as well as to accommodate a snap-in eraser and other articles useful in conjunction with chalk boards.

The traditional school-room blackboard is composed of a slate or other writing surface held within a frame provided with a lower ledge to accommodate an eraser and pieces of chalk. When, however, the board is intended for home use and is easel-mounted, the eraser, pieces of chalk and other articles placed on a ledge will tend to fall off as the easel is adjusted, hence the conventional chalk board is not suitable for this purpose.

In modern educational techniques, students are supplied with sample script letters, numbers, symbols and other characters, the samples serving as a teaching guide for penmanship and other forms of instruction. With a conventional chalk board, these sample characters must be placed on an adjacent wall, laid down on a table, or disposed elsewhere in proximity to the chalk board, and the student then proceeds to make copies thereof on the board. In practice, this procedure is highly inefficient, for the student is usually unable to see the sample as he works, and must therefore alternately look to the sample and then to the board and back again to the sample.

Accordingly, it is the main object of this invention to provide an improved chalk board structure which not only facilitates the learning process, but which is of particular value in home use, for all of the auxiliary devices are in snap-in form attachable to the frame of the board.

More specifically, it is an object of the invention to provide a chalk board having a frame adapted to receive and grip snap-in script letters and other characters so that they are readily visible to the user, as well as to receive a snap-in eraser and a snap-in chalk rail.

A significant advantage of the invention resides in the fact that the sample script letters and other snap-in characters, being attached to the frame of the chalk board, are within the field of vision of the student as he writes, hence it is no longer necessary for the student to alternately look from the sample to the board.

Another object of the invention is to provide a chalk board of the above type, whose underlying surface is ferromagnetic, whereby the student is not only able to write on the board, but he may also place magnetic letters and other teaching elements on the board.

A further object of the invention is to provide an easel-mounted chalk board having multi-directional sliding pivots which permit the board to be raised to any desired height and tilted at any desired angle, the

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adjusted positions being maintained by a single locking action.

Still another object of the invention is to provide a snap-in eraser for a chalk board of the above-described type, which eraser also functions as a storage container for chalk.

Yet another object of the invention is to provide a high-strength chalk board structure incorporating the several features noted above, and which nevertheless can be manufactured and sold at relatively low cost.

Briefly stated, these objects are accomplished in a chalk board structure constituted by a steel plate having a treated top layer adapted to accept chalk markings, the surface also attracting and holding magnetized letters and other characters, the plate being held in a single-piece molded frame having grooves formed therein which surround the writing surface, the grooves being adapted to receive and grip the pins of snap-in script letters, as well as the pins or prongs of an eraser, a chalk rail, or any other auxiliary article suitable for use in conjunction with chalk boards.

The board is pivotally mounted on a horizontal rod between the vertical posts of an easel, the ends of the rod extending through clamps which are shiftable vertically along said posts to adjust the height of the chalk board, and which when tightened not only maintain the vertical setting of the chalk board, but also its tilted position.

For a better understanding of the invention as well as other objects and further features thereof, reference is made to the following detailed description to be read in conjunction with the accompanying drawings, wherein:

FIG. 1 is a perspective view of a chalk board structure in accordance with the invention;

FIG. 2 is a rear view in perspective of a single magnetic letter of the type which may be attached to the writing surface of the board;

FIG. 3 is a rear view in perspective of a single snap-in script letter of the type which may be attached to the frame of the board;

FIG. 4 is a transverse section taken through the board shown in FIG. 1;

FIG. 5 is a front elevational view of the board;

FIG. 6 is a section taken in the plane indicated by line 6—6 in FIG. 5, showing the construction of the multi-directional sliding pivot, while FIG. 6A is a perspective view of the pivot member;

FIG. 7 is a section taken in the plane indicated by line 7—7 in FIG. 1, showing how the snap-in eraser is secured to the frame;

FIG. 8 is a section taken in the plane indicated by line 8—8 in FIG. 1, showing how the snap-in chalk rail is secured to the frame;

FIG. 9 is a plan view of the eraser, with the sliding top partially cut away to expose the interior of the chalk storage box;

FIG. 10 is a perspective view of the eraser, with the sliding top removed from the box;

FIG. 11 is a perspective view of the chalk rail; and

FIG. 12 is a side view of the chalk rail.

Referring now to the drawings, and more particularly to FIG. 1, a chalk board structure in accordance with the invention is constituted by a rectangular writing board 10, held within a frame 11 and supported on an easel stand generally designated by numeral 12.

The writing board 10 is preferably formed of a thin steel sheet whose top surface 10a is suitably enameled or otherwise treated to accept chalk. The student is not only able to write with chalk on surface 10a, but he may also place thereon magnetized characters, such as letters 13. Each magnetized letter 13, a sample of which is shown

separately in FIG. 2, is constituted by a molded plastic body having a well 14 in the rear thereof into which a magnetic strip 15 is inserted. The magnetized characters are preferably of the type disclosed in my Patent No. 3,122,684.

The student is therefore, on the same board, able to create words or set up numerical problems with the magnetized characters 13, and also to draw figures, or write in script with chalk, and in that way form various combinations of written and molded letters or figures.

Rectangular frame 11 is corrugated to define two parallel grooves or channels 11A and 11B which run continuously about the frame and encompass the writing surface. As best seen in FIG. 4, the cross-section of the frame has a square wave configuration, the frame being provided with an extended border 11C within which is placed the board 10 and a backing plate 16 which may be of wood or cardboard. The frame is preferably of one-piece molded high-impact plastic construction, although it may also be made of jointed pieces of wood or other material.

Removably supported on the frame are snap-in script letters 17 or other characters, one of which, in the form of a "i," is shown separately in FIG. 3. The letter 17 is molded of plastic and is provided with pins 17a, 17b and 17c which project from the rear thereof, the pins being dimensioned to be received snugly within the channels 11A and 11B, the pins 17a and 17b going into the upper channel 11A, and the pin 17c going into the lower channel 11B. Because of the corrugated construction of the frame, the walls of the channels 11A and 11B tend to yield somewhat and thereby act to grip the inserted pins. However, the script letters 17 or other snap-in elements may be readily removed by pulling the pins out of the channels.

The script letters 17 may be placed along the upper section of frame 11, or elsewhere along the frame, since the grooves therein completely encircle the board. These script letters afford a guide to script penmanship, and because of their convenient placement, the student is able to copy the letters without difficulty.

Also supplied with the chalk board, is a snap-in eraser, generally designated by numeral 18. As best seen in FIGS. 7, 9 and 10, the eraser incorporates a storage box 18A for storing chalk pieces 19, the bottom of the box having an eraser pad 18B attached thereto, of a fibrous material suitable for removing chalk writing from the board. The box includes a sliding top 18C having a fingerhole 18D.

Projecting from the sliding top are short strips 18Ca, 18Cb and 18Cc, which are receivable within the grooves 11A and 11B in the frame and provide the snap-in feature. When the box top is closed, the eraser functions in the usual way, but when the chalk supply is exhausted, additional pieces may be taken from the box.

Chalk pieces which are in use are kept in the chalk rail, generally designated by numeral 20. The chalk rail is in the form of an open trough 20A from whose rear wall 20B project two sets of short strips 20Ba, and 20Bb, which are insertable in the grooves 11A and 11B to provide the snap-in feature.

Thus at the bottom edge of the frame the student has available in the rail 20, chalk pieces for writing on the board, as well as an eraser 18 for removing chalk writing, with additional chalk stored in the eraser. At the top edge of the frame, the student is able to set up the sample script letters in any desired word formation, with a supply of script letters held along the side edges of the frame. Hence, instead of the auxiliary articles being scattered about the room with the usual danger of misplacement, all of the necessary pieces are maintained on the board where they are readily accessible to the student.

The easel stand 12 is formed of two vertical tubular posts 12A and 12B, each having a pair of legs terminating in non-skid floor caps, the posts being held together by a horizontal cross-piece 12C. Slidable on the posts 12A and

12B are pivots 21 which, as best seen in FIG. 6, are in the form of clamps which encircle the associated post.

As shown separately in FIG. 6A, each pivot 21 is in the form of a strap, preferably molded of polyethylene, having two semi-cylindrical sections 21A and 21B joined together by a junction hinge 21C. Extending from section 21A is a tab section 21D having a collar 21E projecting therefrom and extending from section 21B is a tab section 21F having a sleeve 21G projecting therefrom. When the strap is wrapped about the post, the two semi-cylindrical sections form a cylinder thereabout, while the collar and sleeve lie in registration to receive a threaded rod extending from the frame.

Threadably received on the ends of rod 22 are wing nuts 23 which, when turned, act not only to bring tab sections 21D and 21F together and thereby tighten the associated clamp on the vertical easel post, but they also serve to lock the angular position of the board relative to the posts. Thus after the pivots are raised to their desired height and the board is tilted at a desired angle, the wing nuts are tightened to maintain both the desired height and angle.

While there has been shown a preferred embodiment of chalk board structure in accordance with the invention, it will be appreciated that many changes and modifications may be made therein without, however, departing from the essential spirit of the invention as defined in the annexed claims.

What I claim is:

1. A chalk board structure comprising

(a) a writing board,

(b) a rectangular frame for said board, said frame having a corrugated configuration defining an extended border and yieldable walls forming parallel channels, said border encompassing said board whereby said channels lie thereover, and

(c) at least one snap-in element useful in conjunction with said board and provided with rear projections insertable in said channels and gripped by said yieldable walls to hold said element to said frame.

2. A chalk board structure comprising

(a) a writing board formed of ferromagnetic material having a top surface treated to receive chalk whereby the user may place magnetized characters on said board as well as write with chalk thereon,

(b) a rectangular frame for said board, said frame having a corrugated configuration defining an extended border and yieldable walls forming parallel channels, said border encompassing said board whereby said channels lie thereover, said yieldable walls serving to provide a gripping action with respect to inserts, and

(c) at least one snap-in element useful in conjunction with said board and provided with rear projections insertable in said channels to hold said element to said frame.

3. A structure as set forth in claim 2, wherein said board is formed of a steel plate having an enameled surface.

4. A structure, as set forth in claim 2, wherein said snap-in element is constituted by a molded script letter having pins projecting rearwardly therefrom, said pins being dimensioned to be received snugly in said channels.

5. A structure, as set forth in claim 2, wherein said snap-in element is constituted by an eraser formed by a chalk storage box whose bottom has a chalk erasing member secured thereto and having a sliding top with strips projecting therefrom which are insertable in said channels.

6. A structure, as set forth in claim 2, wherein said snap-in element is constituted by a chalk rail in the form of an open trough whose back wall has strips projecting therefrom which are insertable in said channels.

7. A structure as set forth in claim 2, wherein said frame is molded of a single piece of high-impact plastic material.

8. A chalk board structure comprising,

(a) a writing board,

(b) a rectangular frame for said board, said frame having a corrugated configuration defining an extended border and yieldable walls forming parallel channels, said border encompassing said board whereby said channels lie thereover,

(c) at least one snap-in element useful in conjunction with said board and provided with rear projections insertable in said channels and gripped by said yieldable walls to hold said element to said frame, and

(d) an easel stand for supporting said board and including a pair of vertical posts having pivots slidable thereon, a horizontal rod extending between said pivots and secured to the back of said board, and locking means secured to the ends of said rod to clamp said pivots at an assigned vertical position on

said posts and at the same time to hold said board at an assigned angle with respect thereto.

9. A structure as set forth in claim 8, wherein each pivot is constituted by a plastic strap having two semi-cylindrical sections which encircle the associated post.

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