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CHALKBOARD MOUNTING APPARATUS

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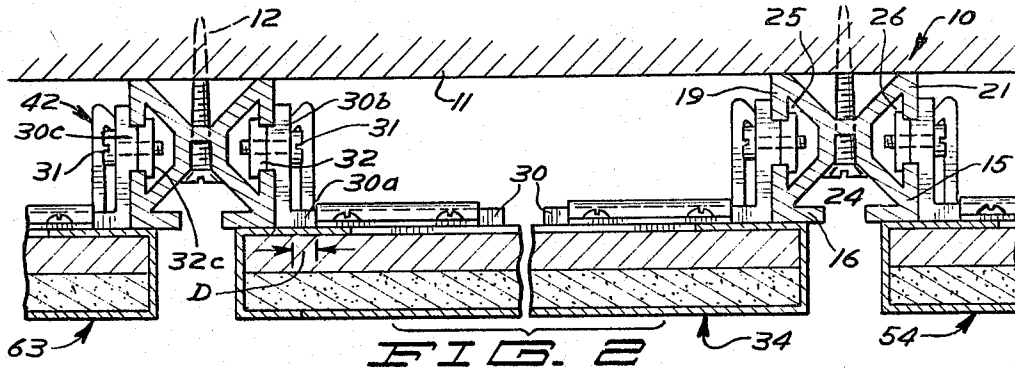
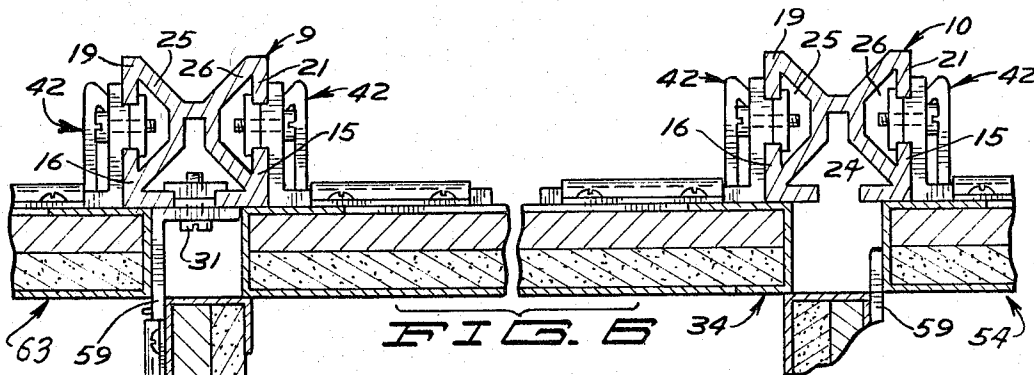
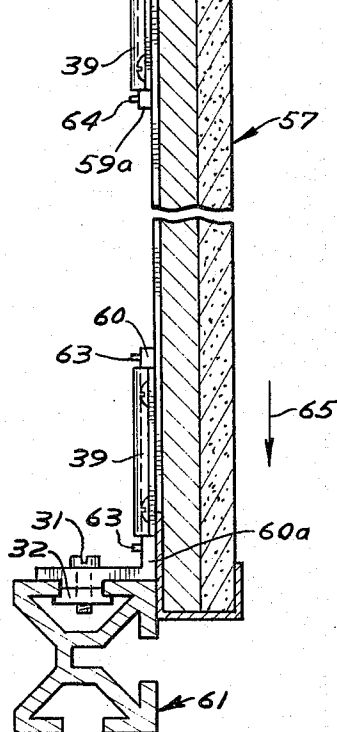
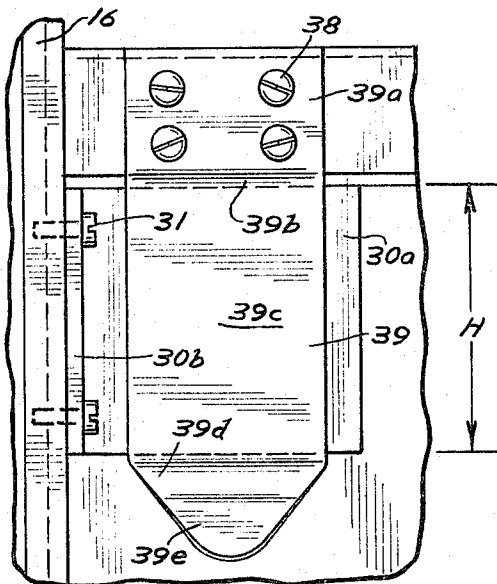


FIG. 5

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CHALKBOARD MOUNTING APPARATUS

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9 Claims. (Cl. 248—28)

This invention relates to new and novel apparatus for removably mounting structure such as chalkboards, peg boards, bookshelves, corkboards and the like. More particularly this invention relates to new and novel apparatus for mounting structure of the aforementioned nature such that the vertical elevation of such structure may be infinitely varied within limits, the structure may not be normally accidentally dislodged, and at the same time provide for interchangeability of structures to be mounted by the same mounting apparatus.

Briefly this invention is directed to apparatus for removably mounting chalkboards and the like such that the elevation thereof may be easily varied, the entire weight of the chalkboard will be supported from the upper portion thereof, and at the same time provide means for resiliently retaining the bottom portion of the chalkboard in a mounted position.

One of the objects of the invention is to provide new and novel apparatus for removably mounting chalkboards and the like on vertical standards such that the entire weight of the chalkboard will be supported from adjacent the upper edge of the chalkboard. A further object of this invention is to provide new and novel structure for removably mounting chalkboards and the like such that substantially the entire weight of the chalkboard will be supported at an elevation closely adjacent the upper edge portion thereof while at the same time resiliently retaining the lower edge of the chalkboard adjacent the supporting standards. Another object of the invention is to provide new and novel apparatus for mounting a chalkboard and the like on vertical standards to permit limited horizontal movement of the chalkboard relative to said standards while at the same time providing for infinitely varying the vertical elevation of the chalkboard within limits relative said standards.

Other and further objects are those inherent in the invention herein illustrated, described and claimed and will become apparent as the description proceeds.

To the accomplishment of the foregoing and related ends, this invention then comprises the features hereinafter fully described and particularly pointed out in the claims, the following description setting forth in detail certain illustrated embodiments of the invention, these being indicative, however, of but a few of the various ways in which the invention may be employed.

The invention is illustrated in the drawings in which corresponding numerals refer to the same parts and in which:

FIGURE 1 is a front vertical elevational view illustrating a modular chalkboard unit mounted in accordance with this invention, portions thereof being broken away;

FIGURE 2 is an enlarged horizontal cross sectional view generally taken along the line and in the direction of the arrows 2—2 of FIGURES 1 and 3 respectively to illustrate the hanger supports and the spring clip hangers for removably mounting a chalkboard on vertically elongated standards;

FIGURE 3 is a vertical transverse elevational view, part in cross section, generally taken along the line and in the direction of the arrows 3—3 of FIGURE 4 to illustrate the structure for supportingly retaining a chalkboard on vertically elongated standards, portions of said view being broken away;

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FIGURE 4 is a fragmentary horizontal cross sectional view, part in cross section, generally taken along the line and in the direction of the arrows 4—4 of FIGURE 1 to illustrate the mounting of the spring clip retainers and the function thereof;

FIGURE 5 is a fragmentary vertical elevational view generally taken along the line and in the direction of arrows 5—5 of FIGURE 3 to illustrate a spring clip hanger mounting supporting the chalkboard on a hanger support; and

FIGURE 6 is a horizontal cross sectional view of a second embodiment of the invention illustrating the mounting of chalkboards or the like on vertically elongated standards to form partitions.

Although the invention will be described hereinafter with relation to mounting a chalkboard, it is to be understood that the same mounting apparatus can be used for mounting cork boards, bookshelves, peg boards, and other corresponding type structure, provided, the structure to be mounted has a back surface of configuration to have spring clip hangers attached thereto in position to supportingly engage hanger supports in the manner described with reference to a chalkboard.

Referring now to FIGURE 1 there is illustrated a pair of vertically elongated standards 10 that are attached to a wall 11 in parallel, spaced relationship by screws 12 to have their elongated axes extend vertically. Preferably the standards are tubular and generally rectangular in cross section as illustrated in FIGURE 2, each of said standards being tubular, formed by extrusion and preferably of aluminum. Referring now to FIGURES 2 and 4, each of the standards 10 includes a pair of right angle flanges 15 and 16 having horizontally extending legs on one side spaced apart from one another to form a front slot 17, an inturned flange 19 on a second side that in conjunction with the other leg of flange 16 that provides a vertical slot 20, and a second inturned flange 21 on a third side that in conjunction with the other leg of flange 15 provides a vertical slot 22. A web 23 has diagonal portions joined at the corners of the standard to flanges 15 and 16 to converge toward one another, diagonal portions joined to flanges 19 and 21 to converge toward one another, and a U-shaped portion joined to said diagonal portions such as illustrated in FIGURE 4. The web in conjunction with the flanges 15, 16, 19 and 21 provides a channel 24 to which the slot 17 opens, a channel 25 into which the slot 20 opens, and a channel 26 into which the slot 22 opens. The horizontal dimension of each slot is smaller than the adjacent dimension of the channel adjacent thereto.

Attached to each standard for selective vertical adjustment is a hanger support 30 having a leg 30a, and a leg 30b extending at a right angle relative leg 30a and toward the other standard, there being provided bolts 31 extended through hanger support leg 30b, through appropriate apertures in the hanger support, the adjacent standard slot and into the respective channel. Oblong nuts 32 located within the respective channel are threaded onto the bolts to bear against the inner surfaces of the flange legs that extend toward one another to form the channel slot through which the bolts are extended. Although not necessary, the bolts and hanger support advantageously may have projecting ribs 32c and 30c respectively to extend into a channel slot and form a close sliding fit with the flange legs providing the slot. The rib 30c is vertically elongated in the direction of the slot. Further the ribs 32c and 30c are jointly of a thickness less than the thickness of a flange leg. By loosening the nuts 32 for a given hanger support, the hanger support may be moved relative the standard to any desired elevation and then the nuts tightened to retain the hanger

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support at any desired vertical adjusted position within the limits of the length of the standard.

Removably mounted on a pair of hanger supports mounted on horizontally spaced standards with legs 30a extending toward one another is a chalkboard generally designated 34 that includes a piece of slate 35, a backing panel 36 and a perimetric frame 37 which is generally U-shaped in horizontal cross section for retaining the backing panel and piece of slate in face to face abutting relation with one another such as illustrated in the drawings. The perimetric frame advantageously may be secured to the back panel by, for example, screws (not shown). Secured to the top frame member 37a of the perimetric frame and closely adjacent each side frame member 37b by appropriate means such as screws 38 is a spring clip hanger 39.

As may be noted from FIGURES 3 and 5 each spring clip hanger is attached to the top frame member 37a along its generally planar upper portion 39a to depend therefrom. For purposes of facilitating the further description of the spring clip hanger, it is to be assumed that it is attached to the chalkboard and the chalkboard is mounted to be supported from a pair of hanger supports 30 in a manner described hereinafter. With a spring clip hanger in the aforementioned condition, the spring clip hanger includes a curved portion 39b that at one end is integrally joined to the lower edge of upper portion 39a to curve outwardly a distance substantially greater than the thickness of the leg 30a, the opposite end of portion 39b being integrally joined to the elongated inclined portion 39c that is inclined to extend inwardly and downwardly toward the chalkboard. The opposite end of portion 39c is integrally joined to an inwardly bent portion 39d that is bent inwardly at a substantially greater angle than portion 39c such that the opposite end of portion 39d will abut against the chalkboard. The opposite end of portion 39d is integrally joined to an outwardly bent portion 39e that has an outer end located a substantial distance outwardly of the chalkboard. Thus the spring clip is of a construction that the juncture of portions 39d, 39e is resiliently retained in abutting relationship with the chalkboard; however, portion 39e is bent sufficiently outwardly that when it is moved downwardly adjacent the hanger support, it will be forced outwardly by the hanger support such that the chalkboard may be moved relative to the hanger support to a position that the hanger support in vertical cross section is bounded by spring clip hanger portions 39b, 39c, 39d and the back panel. As a result, with each spring clip hanger positioned over the adjacent hanger support, the hanger support receivingly supports the total weight of the chalkboard and prevents translatable horizontal dislodgement of the board from the standards in the direction outwardly of the wall 12. Additionally, since each pair of spring clip hangers are mounted to have opposite vertical edges more closely adjacent one another than the adjacent surfaces of the hanger support legs 30b, it is not necessary that the chalkboard be accurately horizontally positioned relative to the standards in a direction between the standards in order that it may be supportedly positioned on the hanger supports. This is one of the big advantages of this invention over the prior part, particularly when it is considered that a chalkboard is a relatively heavy item. That is, the chalkboard may be displaced horizontally in a direction parallel to the surface of the wall 11 by a dimension D in a given horizontal direction from that illustrated in FIGURE 2 without danger of the spring clip hangers being slipped over the adjacent vertical edges of the hanger supports.

Additionally, it is to be noted that the adjacent standards are spaced from one another a distance less than the horizontal dimension of the chalkboard to be supported therefrom. Also each hanger support leg 30a has a generally planar vertical surface when mounted on a standard that generally constitutes an extension of a side

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of the standard that extends at right angles to surface of the standard against which leg 30b abuts. Further leg 30a is of a substantial height H (many times greater than the thickness). As a result of the foregoing, when a chalkboard is mounted by a pair of standards, the spring clip hangers resiliently urge the side portions 37b into abutting engagement with the standards. Further the side edge of a chalkboard is located horizontally intermediate the edges of a flange leg against which it abuts, said flange leg being the one at right angles and adjacent the side of the standard against which hanger support leg 30b abuts.

Mounted on the lower portion of each chalkboard frame member 37b adjacent bottom frame member 37c is a spring clip retainer generally designated 42 which in plan view advantageously may be of general shape illustrated in FIGURE 4. On leg 44 of the spring clip retainer is attached to frame portion 37b by screws 43, portion 44 at one end being integrally joined to one end of the web portion 45 to in a relaxed condition extend generally at right angles relative thereto. Web portion 45 extends outwardly away from the chalkboard and at the opposite end is integrally joined to one end of an inturned portion 46 which extends outwardly away from the web portion in a direction opposite leg 44 and at the same time inwardly toward the chalkboard. The opposite end of the inturned portion is integrally joined to a reversely bent end portion 47. The spring clip retainer is of a size and shape such that when the leg 44 is attached to the chalkboard and the perimetric frame is moved to be parallel to and in abutting relationship with a standard, inturned portion 46 will extend inwardly into a standard slot such that the reversely bent portion 47 will abut against the edge surface of the flange. For example, referring to the right hand spring clip retainer of FIGURE 4, the portion 46 will extend into slot 22 such that end portion 47 will bear against the edge of the flange leg of the right angle flange 15 that extends perpendicular to the general planar surface of the chalkboard 34. In this position, web portion 45 is bent away from the standard to form an angle with leg 44 that is less than 90°. Thus the spring clip retainers serve to resiliently urge the bottom of chalkboard against the standards 10 to resiliently retain the bottom portion of the chalkboard in abutting engagement with the standards 10 to more firmly hold the chalkboard against accidental dislodgement. The spring clip retainers advantageously may be made of either spring steel or nylon.

For purposes of facilitating the description of the use of the invention, we will assume that the chalkboard 34 is being mountingly retained between adjacent pair of standards 10. Now assuming that the chalkboard is to be dismounted, the workman grasps the horizontal bottom frame member 37c and then pulls in the direction of the arrow 50 to generally pivot the bottom of the chalkboard outwardly about a horizontal axis adjacent the hanger supports to a position spaced from the standards 10. This movement of the chalkboard results in retainer portions 46, 47 moving out of the respective standard slot, portion 46 initially being bent to form a greater included angle with web portion 45. Then the inturned portion 47 clears the slot. After the spring clip retainer is no longer being retained in the standard slots, the entire chalkboard is moved generally vertically upwardly in the direction of the arrow 51 which initially results in spring clip hanger portion 39d in abutting against the lower edge of the hanger support being forced in the direction away from the chalkboard. After the chalkboard has been raised sufficiently that hanger support portions 39d, 39e are clear of the hanger supports, the chalkboard is completely dismounted.

If, after the chalkboard is dismounted it is desired to adjust the vertical elevation of the hanger supports within limits of the height of the standards and the vertical dimension of the chalkboard such that the bottom edge will

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not abut against the floor, this may be readily done by loosening the bolts 31. If ribs are provided on the nuts or if the nuts are of sufficiently elongated length, this will prevent the nuts rotating 360° in the respective channel. After the hanger supports have been moved the desired amount in a vertical direction, the bolts 31 are again turned so that the nuts thereon are brought into engagement with the standard flanges. The mounting of the chalkboard or another chalkboard of a different height but with the mounting apparatus of this invention back into position is generally opposite the procedure described relative to the dismounting described above.

By using hanger supports of this invention in conjunction with slotted standards, the hanger supports may be infinitely varied in vertical elevation within the limits of the height of the standards and clampingly locked in a vertical position. Through the provision of the spring clip hangers, the chalkboard may be easily hung even if the standards are not perfectly spaced when installed due to provisions of the spacing between the legs 30b of the hanger supports and the adjacent vertical edges of the respective spring clip hangers. By utilizing the spring clip hangers and retainers, the chalkboards are set flush to the supporting wall 11 to conceal all the mounting hardware while at the same time keep the chalkboards rattle free and safely in place. Additionally neither accidentally bumping the chalkboard nor pulling outwardly on the bottom thereof will dismount it.

By providing an additional standard (not shown) on either side of the aforementioned standards, and a chalkboard 63 and a chalkboard 54 together with the above described mounting apparatus, chalkboards 63 and 54 may be mounted with one on either side of chalkboard 34. Further, through the mounting apparatus of this invention, chalkboards 34, 63 and 54 may be selectively mounted at different elevations if such is desired.

Even though the invention having been described with reference to mounting the chalkboards, it is to be understood that the hanger supports, spring clip hangers, and retainers can be used for mounting the other structure such as cabinets, magazines and bookracks, cork boards and etc.

Referring to FIGURE 6 there is illustrated a modified embodiment of the invention that may be utilized for forming U-shaped compartments. The embodiment of FIGURE 6 includes the structure described with reference to FIGURES 1 and 2 and the additional structure that will be set forth hereinafter. However before describing the additional structure it is to be noted that the legs of flanges 15 and 16 which are located in the same plane, the hanger supports which are clampingly attached to the same standard except the legs 30a extend outwardly in opposite directions therefrom, and spring clip hangers and spring retainers which are attached to a pair of chalkboards are of a size and shape such that the adjacent vertical edges of the perimetric frames of the two chalkboards in part are mounted on the same standard, are spaced a distance about the same or slightly greater than the thickness of a chalkboard.

In referring to FIGURE 6 the chalkboard 34 is supportingly attached to the standards 9 and 10 (standard 9 being the same construction as 10) through hanger supports that are clampingly mounted on flanges 15 and 21, and 16 and 19 respectively. A chalkboard generally designated 55 at one end is supported by a hanger support which is slideably clampingly attached to a standard 9 at flanges 19 and 16.

In order to mount a chalkboard, generally designated 57, to extend at substantially right angles to the plane of the chalkboards 34, 55 there is provided a pair of vertically spaced right angle hanger supports 59 that are clampingly attached to a standard 9 by bolts 31 extended through the adjacent legs of flanges 15 and 16, and into channel 27 (only one of the hanger supports being shown). Nuts 32 are threaded on bolts 31 as may be

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noted from FIGURE 6 to clamp the short legs of the hanger supports flush to the standard with the short legs located within the space between the adjacent vertical edges of chalkboards 34 and 55. The other legs 59a of the hanger supports extend outwardly from standard 9 in directions perpendicular to the planar surface of boards 34, 55 a distance sufficiently great that the spring clip hangers 39 of the board 57 may be slipped thereover.

The second hanger support 59 (not shown) is attached to the standard 9 at a vertically lower elevation than for the one illustrated in FIGURE 5, there being provided a second hanger clip 39 (not shown) attached to the chalkboard at a location to clamp over the second hanger supporting the same manner that the first spring clip hanger is retained on its hanger support. Located outwardly from the standard 9 in a direction substantially at right angles to the general plane of chalkboards 34, 55 is a standard 61 of the same construction as standards 9 and 10. A pair of hanger supports 60 (only one shown) are slideably clampingly retained on the standard 61 in vertical spaced relation by nuts and bolts 31 and 32. The hanger supports 60 are vertically spaced to receivingly hold a pair of spring clip hangers 39 that are attached to the upper and lower portions of the chalkboard 57 at a location adjacent the vertical edge that is opposite standard 9. The hanger support 60 is of the same construction as hanger support 30 other than that there is provided a stud 63 threaded into either end portion of the hanger support leg 60a that extends in the direction towards standard 9. The studs 63 are spaced a distance slightly greater than the width of the spring clip hangers and extend outwardly from legs 60a in a direction opposite board 57 a distance greater than the maximum distance between hanger support portion 39c and the adjacent surface of the chalkboard, to prevent the spring clip hangers from being dislodged in a horizontal direction from the hanger supports. Likewise a pair of studs 64 are secured to each of the legs 59a of the hanger supports 59 for the same purpose. The reason for providing the studs is that normally the chalkboard 57 will extend out into a room to form partition. Likewise there is provided structure including a second standard 61 for mounting a second chalkboard 57 to extend outwardly from the standard 10 in parallel relationship to the previously described chalkboard 57. When such a pair of chalkboards are provided, normally the standards 61 will not be fixedly attached to a wall or floor, but rather each would be provided with a conventional foot (not shown) at the lower end thereof to retain said standards in generally perpendicular relationship to the floor. Since the standards 61 normally are not fixedly attached to structure such as a floor or a wall, studs 63 and 64 prevent the standards 61 being moved sufficiently horizontally in the direction of the arrow 65 away from the standards 9, 10 such that the hanger supports can be moved only a limited amount in a horizontal direction relative the spring clip hangers that are clipped thereto.

In using a chalkboard 57 together with the apparatus for mounting it, the chalkboard is moved to a position that the end portions of the respective spring clip hangers, which are the same as portions 39e, are adjacent and in overhanging relationship to the upper edges of the hanger supports 59 and 60 respectively. Then the chalkboard is translated in a downward direction until the upper edge portions of said hanger supports abut against the outwardly curved portions corresponding to portions 39b of spring clip hangers 39. Since the hanger supports extend between spring clip hangers and the chalkboard 57, and the studs 63, 64 extend a substantial distance rearwardly of the respective hanger support mounting chalkboard 57, the chalkboard 57 will only be dismounted by moving it in an upward direction. This minimizes the chances of accidental dislodgement, however, it permits readily providing partitions to extend outwardly into a room.

With reference to both embodiments of the invention the curved portions 39b of the spring clip hangers serve as rigid supports, i.e. the supporting role is not due to the springy nature of the steel. At the same time the springiness of the spring clip hangers helps retain the clips as it snaps back over the bottom edge portion of the hanger support to prevent the chalkboard from being pushed up without some considerable initial force.

As an example of the size of a hanger support of FIGURE 3, but not as a limitation of the invention, the hanger support may be a height of 2 inches, the leg 30b of a maximum horizontal dimension of 1 inch, the corresponding dimension of leg 30a being 2 inches and each leg thickness of .125 inch; while the maximum width of portion 39c may be 1¾ inches.

As many widely apparently different embodiments of this invention may be made without departing from the spirit and scope thereof, it is to be understood that I do not limit myself to the specific embodiments herein.

What I claim is:

1. Apparatus for mounting chalkboards and the like comprising a first and a second elongated standard, each standard having elongated flanges and web portions to form at least one channel and a slot opening into each channel, means attached to each standard for mounting the standards to extend in a generally vertical direction with the slots facing one another, a pair of generally right angle hanger supports each having a first leg and a second leg, means for each standard slidably extended through the slot and into the channel of the respective standard for releasably clamping the first leg of one hanger support to each standard with the second legs extending toward one another and at generally right angles to the standard, a first and a second spring clip each having an upper end portion, means for attaching the spring clip upper portions to opposite upper corner positions of a chalkboard with the remaining spring clip portions being in depending relation thereto, said spring clips respectively being extendable over the adjacent hanger support second leg and adapted to act in conjunction with a chalkboard when attached thereto for supportingly retaining a chalkboard on the hanger supports, resilient retainer means for each lower corner portion of a chalkboard and mountable thereon for releasably holding a lower corner portion of the chalkboard in abutting engagement with the adjacent standard, each retainer means including a web portion extending outwardly from a chalkboard when mounted thereon and a reversely bent portion joined to the outer end of the web portion and extendable into the adjacent standard slot to bear against a flange for releasably holding a chalkboard lower corner portion adjacent the respective standard.

2. The combination of a chalkboard or the like and mounting apparatus therefor comprising a first chalkboard having opposite side edge portions, a pair of elongated standards extending the entire height of the first chalkboard and above and beyond the upper and lower edges thereof, said pair of standards being mounted to have the longitudinal axes thereof substantially vertical and in spaced relation to one another by a distance less than the horizontal length of said first chalkboard, a first hanger support and a second hanger support each having a first leg with a generally planar surface, vertically adjustable means acting in cooperation with each of said pair of standards for respectively releasably clamping one of said first and second hanger supports on each of said pair of standards to have their first legs extending toward one another in substantially the same plane, first and second spring clip means having upper portions respectively attached to opposite upper corner portions of the first chalkboard to extend downwardly over the leg of the hanger support on the adjacent standard for supportingly mounting the first chalkboard to extend below the above mentioned legs with most of the first chalkboard extending below the above mentioned legs, a third standard

spaced apart from said pair of standards in a plane generally perpendicular to a vertical plane through said pair of standards, said third standard being mounted with its longitudinal axis extending generally vertically, one of said pair of standards having a pair of channel portions disposed at generally right angles to one another with one channel portion facing one of the other standards, said other standards each having channel portions facing one of said pair of channel portions, a third and a fourth hanger support each having a first leg with a generally planar surface, means acting in cooperation with the third standard and the standard having the pair of channel portions for releasably clamping one of the third and fourth hanger supports on the respective standard with the first legs of the third and fourth hanger supports having the generally planar surfaces extending toward one another, said hanger supports each including a second leg extending generally at right angles to its first leg, the means cooperating with a standard including for each hanger support, a bolt extended through the second leg thereof and into the adjacent channel portion and means threaded on the bolt and cooperating with the respective channel portion for clampingly retaining the second leg against the adjacent channel portion, a second chalkboard and spring clip means dependently secured to the upper corner portions of said second chalkboard for cooperating with the second chalkboard to supportingly mount said second chalkboard on the third and fourth hanger supports and releasably retain it against downward movement relative to said third and fourth hanger supports.

3. Apparatus for mounting chalkboards and the like having horizontally spaced, generally vertical edge portions comprising a first and a second elongated standard, each standard having a pair of elongated flanges and web portions to form at least one channel and a slot opening into each channel and a third flange extending at right angles to said pair of flanges, means attached to each standard for mounting the standards to extend in a generally vertical direction with the slots facing one another and horizontally spaced by a distance less than the horizontal dimension between the vertical edges of a chalkboard to be mounted therein, a pair of generally right angle hanger supports each having a first leg and a second leg, means for each standard slidably extended through the slot and into the channel of the respective standard for releasably clamping the first leg of one hanger support to each standard with the second legs extending toward one another and at generally right angles to the respective standard, a first and a second spring clip each having an upper end portion and means for attaching the spring clip upper portions to opposite upper corner portions of a chalkboard with the remaining spring clip portions being in depending relation thereto, said spring clips respectively being extendable over the adjacent hanger support second leg and adapted to act in conjunction with a chalkboard when attached thereto for supportingly retaining a chalkboard on the hanger supports with each chalkboard vertical edge portion in abutting engagement with the adjacent standard third flange.

4. The apparatus of claim 3 further characterized in that there is provided resilient retainer means mountable in each lower corner portion of the chalkboard to be mounted to extend into the adjacent standard slot for resiliently retaining the respective lower corner portion in abutting engagement with said adjacent standard.

5. The combination of a chalkboard or the like and mounting apparatus therefor comprising a chalkboard having opposite vertical edge portions, a first and a second elongated standard, each standard having a pair of elongated flanges and web portions to form at least one channel and a slot opening into each channel and a third flange extending at right angles to said pair of flanges, means attached to each standard for mounting the standards to extend in a generally vertical direction with the slots facing one another and horizontally spaced by a distance

less than the horizontal dimension between the vertical edges of the chalkboard, a pair of generally right angle hanger supports each having a first leg and a second leg, means for each standard slidably extended through the slot and into the channel of the respective standard for releasably clamping the first leg of one hanger support to each standard with the second legs extending toward one another and at generally right angles to the standard, a first and a second spring clip each having an upper end portion, and means for attaching the spring clip upper portions to opposite upper corner portions of the chalkboard to have remaining spring clip portions in depending relation thereto and opposite vertical edges of the clips more closely adjacent one another than the hanger support first legs, said spring clips respectively being extended over the adjacent hanger support second leg and acting in conjunction with the chalkboard for supportingly retaining the chalkboard on the hanger supports with the said vertical edge portions in overlapping relationship with said third flanges, each spring clip remaining portion having an intermediate portion of a height dimension about the same as the height dimension of each hanger support second leg and a lower end portion integrally joined to the intermediate portion to extend first downwardly and inwardly toward the chalkboard and then downwardly outwardly away from the chalkboard.

6. The combination for mounting a chalkboard and the like comprising a pair of elongated standards, said standards being mounted in transverse spaced relationship with the longitudinal axes thereof disposed substantially vertical, each standard in horizontal cross section being generally rectangular and including a pair of right angle flanges at adjacent corners, an intumed flange at each other corner extending toward the adjacent right angle flange and a web portion joining said flanges to form three channels and a slot opening to each channel between each set of an intumed flange and a right angle flange, and the right angle flanges respectively, a first and second hanger support each having a first leg of a horizontal dimension less than the horizontal side dimension of the standard and an elongated second leg joined to one end of said first leg and having a generally planar surface, slideable means for each standard extended into one of the respective standard channels for releasably clamping said first leg of each hanger support to the respective standard against the right angle flange and intumed flange of the one channel with its planar surface substantially constituting an extension of the surfaces of the standard that extends at right angles to the flanges against which the first leg is clamped and the second leg extending toward the second leg of the other hanger support, a pair of spring clip hangers each having an upper portion, an outwardly curved portion joined to said upper portion to extend a distance outwardly greater than the thickness of said second leg, an intermediate portion having one end joined to the outer end of said curved portion and a bent portion joined to the opposite end of said intermediate portion, and means for attaching the upper portions to opposite top corner portions of a chalkboard with the intermediate portions in depending relation to said upper portions, said intermediate portions being of a height about the same as the corresponding dimension of a hanger support second leg, said spring clip hangers being mountable on a chalkboard in positions to have the respective second leg extend between one intermediate portion and the chalkboard for supporting the weight of the chalkboard and resiliently retaining the chalkboard in abutting engagement with the last mentioned right angle

flange, said bent portion including an inwardly and downwardly inclined portion having one end joined to said opposite end of said intermediate portion, and an opposite end, and a downwardly and outwardly inclined portion having one end integrally joined to the last mentioned opposite end and an opposite outer edge, said bent portion being of a shape and size that the juncture of the inwardly and outwardly inclined portions will normally abut against a chalkboard and the outer edge will be located a greater distance perpendicularly outwardly of a chalkboard when the respective spring clip hanger is mounted on a chalkboard.

7. The apparatus of claim 6 further characterized in that there is provided resilient clip means for each lower corner portion of a chalkboard to be mounted and mountable thereon for extending into the respective standard channel to resiliently hold a chalkboard in abutting engagement with the last mentioned right angle flange of the respective standard.

8. Removably mountable chalkboard apparatus comprising a chalkboard having opposite side edge portions, a first and a second elongated standard, each standard having a pair of elongated flanges and a web portion to form a channel and a slot opening into the channel, and a third elongated flange extending at right angles to said pair of flanges, means for mounting said standards to extend in a generally vertical direction with the slots facing one another and the third flanges substantially in the same plane, and horizontally spaced by a distance less than the horizontal distance between the chalkboard side edges, cooperating means mounted on the standards and attached to the upper portion of the chalkboard for removably mounting the chalkboard on the standards and resiliently urging the chalkboard side edge portions into abutting relationship with the respective third flange, and resilient retainer means mounted on each lower corner portion of the chalkboard for releasably holding the lower corner portion of the chalkboard in abutting engagement with the adjacent standard, each retainer means including a web portion extending outwardly from the chalkboard, an intumed portion joined to the outer end of the web portion and extending inwardly toward the chalkboard and into the slot of the adjacent standard, and a reversely bent end portion joined to the inner end of the intumed portion to extend toward said web portion and in abutting engagement with the flange of the pair of flanges of the respective standard that is most closely adjacent the chalkboard.

9. The structure of claim 2 further characterized in that there is provided a stud on the ends of the third and fourth hanger supports opposite the second legs for retaining the respective spring clip means against relative movement off the hanger support in a horizontal direction outwardly of the standard for the respective hanger support.

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