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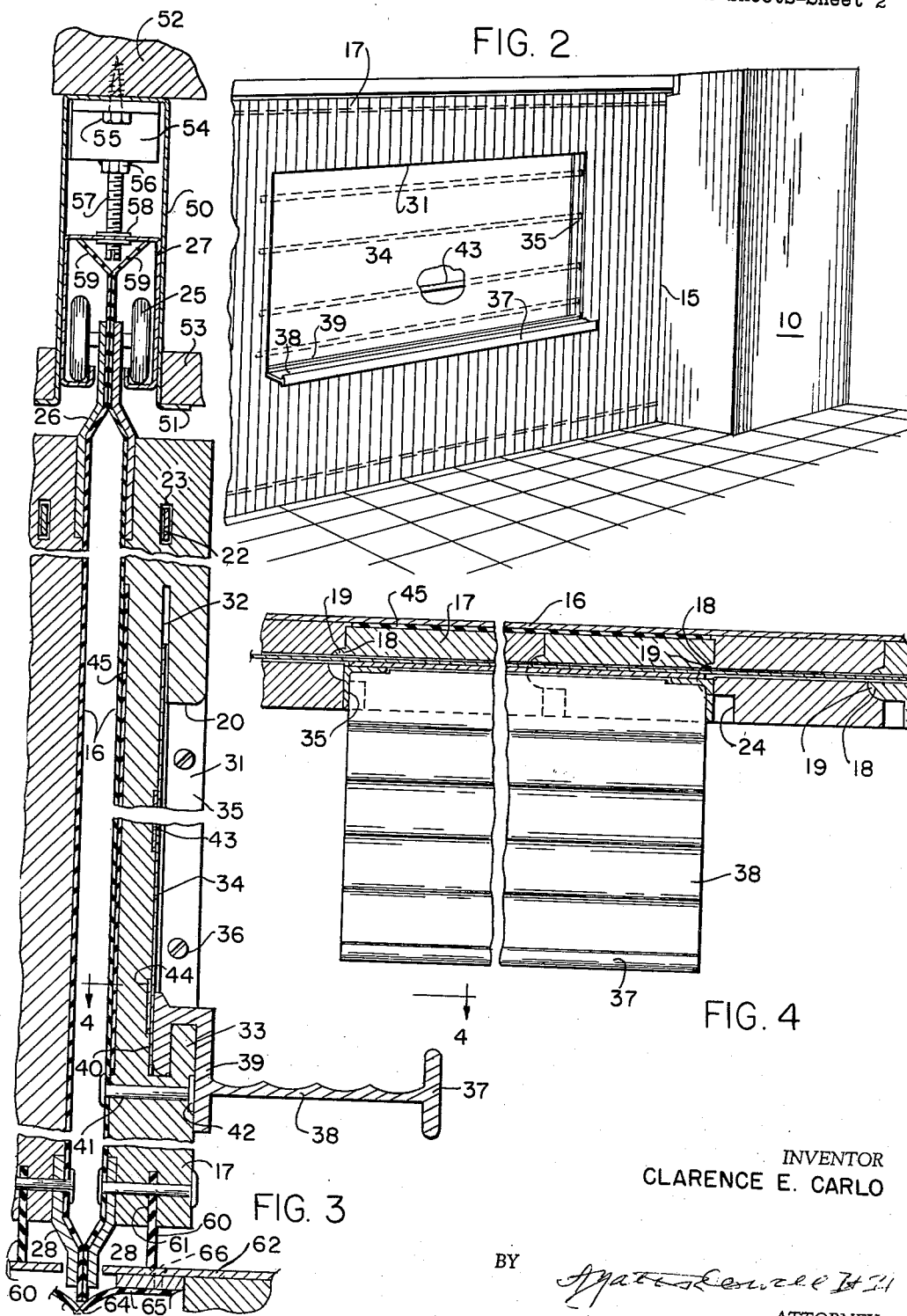
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3,090,426

COILABLE PARTITION WITH CHALK BOARD

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2 Sheets-Sheet 2



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COILABLE PARTITION WITH CHALK BOARD
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 9 Claims. (Cl. 160—25)

This invention relates to buildings of various kinds, to the construction of the same, and to the structure and facilities by which the interior of the buildings may be subdivided into rooms or areas of appropriate smaller size for various uses.

The invention relates particularly to buildings having multiple upright walls or partitions capable of being changed or modified to provide areas of different sizes for different uses, and to the accomplishment of the desired changes in a minimum of time and with a minimum of efforts as well as with like facility the ready restoration of the building to its original condition.

Buildings of various designs have been provided with walls or partitions that could be moved to provide modified areas and facilities as has been disclosed in Patent 2,978,019 and applications 76,212 filed December 16, 1960 and 95,951 filed March 15, 1961.

Prior structures have been massive, heavy, unwieldy and the cost of modification substantial. Also prior structures did not lend themselves to easy modification to provide the desired sight and sound barrier, or otherwise lend themselves readily to the desired modification. This was particularly in buildings employed for schools where it was desired to use a smaller area for instruction and where a chalk board or blackboard was necessary or needed and with the area desired to be used only for a relatively short time.

It is an object of the invention to overcome the difficulties enumerated and to provide a relatively inexpensive, simple and practical wall or partition of light weight, and coilable, and which readily can be extended or contracted and which includes provision for a chalk board and a chalk tray when extended.

Another object of the invention is to provide a coilable wall or partition with a relatively thin chalk board which can be left in place or readily removed and replaced, and with a chalk tray which can be easily attached and removed, and which will provide additional rigidity for the wall as well as a structure of the above character which will provide an adequate sight barrier and an insulation against sound, which can be produced at a relatively small cost, can be readily installed and used with the installation and modification and restoration of the area accomplished in a minimum of time with minimum effort and expense.

Another object of the invention is to provide a wall of the character indicated of double thickness, with insulating sheets or layers between the double layer, with air spaces to form barriers for light, sight and sound, which can be coiled and uncoiled and of a construction that a single crank or motor may be employed for the coiling and uncoiling.

Other objects and advantages of the invention will be apparent from the following description taken in conjunction with the accompanying drawing wherein:

FIG. 1 is a perspective illustrating the mounting of a flexible partition in connection with the present invention;

FIG. 2, a perspective illustrating one application of the invention;

FIG. 3, a section on the line 3—3 of FIG. 2; and

FIG. 4, a section on the line 4—4 of FIG. 3.

Briefly stated, the invention is a coilable single or multiple curtain or partition of interfitting slats provided

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with a generally rectangular cutout portion of a width and height of an area to be used as a chalk board or blackboard, and in order to receive the chalk board the cutout portion is provided with a slot parallel to the wall of the cutout portion at the bottom and top of such cutout portion in which a flexible chalk board forming sheet is disposed with its upper and lower edges received in such slots and with retaining strips at its extremities secured in place by screws or fasteners. In order to provide a shelf or tray for chalk or crayon and to add rigidity to the coilable wall with the chalk board, a rigid chalk tray is provided of a length corresponding to the width of the cutout area, such chalk tray having an outer ledge with an intermediate horizontal supporting portion for chalk and crayon and a mounting flange with a rearwardly and downwardly extending portion forming a hook designed to fit into the slot along the bottom of the cutout portion in front of the chalk board and serving to bear against the chalk board. The chalk tray may be of extruded lightweight metal such as aluminum or the like which can be easily cut to any desired length and mounted in place.

With continued reference to the drawings, a coil box or holder 10 is provided for containing one or more partition forming walls or curtains 11 and 12 mounted upon rollers or rotatable members 13 having their extremities journaled in thrust bearings 14 at the top and bottom of the coil box 10.

The curtain or curtains 11 and 12 extend through an opening 15 in the housing 10, and where there are two of such curtains they will be in side by side or back to back relation.

The curtains 11 and 12 are provided on their inner or contiguous surfaces with light and sight obstructing and sound insulating sheets or membranes 16 to improve the value of the device as a barrier, and these sheets may be stapled or secured in place in any desired manner to the inner edges of the curtains or walls 11 and 12 as described in application 95,951.

The coilable walls or curtains 11 and 12 may be composed of a series of cooperating slats or elements 17, each of which may have a tongue 18 along one edge and a cooperating groove 19 along its opposite edge to allow fitting together of a series of such slats to provide a continuous wall.

The slats 17 at the outer or free edge of each of the walls are connected by a flexible bumper sheet 20 bent into U-shape and having incorporated therein a resilient cushion 21. The flexible sheet 20 and cushion 21 provide a shock-absorbing bumper or buffer along the outer edge of the partition so that when the partition is fully extended with the sudden movement the shock will be absorbed by such bumper or buffer.

The slats 17 and connected and held together in assembled relation by generally horizontally disposed tapes or ribbons 22 received in openings 23 in the slats. These cables connect the outermost slats 17 or end portions of the curtains with the reels 13 and allow each curtain to be coiled with the slats in contact one with the other and without their being disconnected or separated sufficiently to allow the passage of light. To facilitate coiling the outer edge of each of the slats 17 may have a recessed shoulder 24 adjacent to the tongue 18 and this produces the space required for such coiling.

The curtains 11 and 12 are suspended from overhead and are provided with a plurality of supporting rollers 25 rotatably mounted on offset hanger brackets 26 and independently carried in an inverted channel defining double tracks 27 as will be described later. Offset guides 28 are provided one for each of the slats 17 at the lower extremity of each slat for cooperation with an adjacent guide. Each of the guides 28 is adapted to have a shoulder 29 at one of its edges and a notch 30 at an

opposite edge as described and illustrated in the aforesaid copending application.

In order to make the coilable wall or walls useful as a blackboard or chalk board, a number of the coilable interfitting slats 17 are provided with a generally rectangular cutout portion 31 extending partially there- 5 through and of a width and height of the area to be used as a chalk board and in order to receive the chalk board a slot 32 is provided at the top and a slot 33 at the bottom of the generally rectangular opening in which a flexible chalk board forming sheet 34 is disposed with 10 retaining strips 35 secured in place by retaining screws or fasteners 36 at each side of the cutout portion, such retainers not being necessary at the top and bottom of the chalk board area. With the above described construction it will be readily apparent that the partition 15 with the chalk board can be readily coiled or uncoiled.

In order to provide a shelf or tray for chalk or crayon and to add rigidity to the coil wall with the chalk board, a rigid chalk tray of a length corresponding to the width of the blackboard area is provided, such chalk tray having an outer ledge 37, a horizontal supporting portion 38 and a mounting flange 39 having a rearwardly and down- 20 wardly extending portion 40 forming a hook designed to fit into the bottom slot 33 along the bottom of the blackboard area in front of the chalk board. The chalk tray may be of extruded aluminum and consequently of any desired length and it may be mounted in place in the manner described or if desired additional means may be provided for its mounting. Such means may include for example a rivet 41, one head 42 of which will serve as a solid rest for the chalk tray. The area of the coil wall in which the chalk board is located may be reinforced by auxiliary tapes 43 extending through grooves or slots 44 adjacent to the chalk board forming sheet 34. The 25 auxiliary tapes 43 terminate on the slats 17 at the ends of the cutout portion 31 and are fastened to said slats in any desired manner.

In order to maintain a high sound reduction factor in the area of the cutout portion, an additional sound insulating sheet or membrane 45 may be located adjacent to the membrane 16 to prevent sound from penetrating through the cutout portion 31.

The double tracks 27 are slidably mounted within a channel-shaped frame 50 with outwardly turned flanges 51 and such frame is connected to the upper structure 52 of the building. The frame 50 and the flanges 51 extend about the edges of a ceiling member 53. In order to adjustably mount the double track 27, a bracket 54 is 45 mounted on the upper web portion of the frame 50 by fasteners 55. A nut 56 is welded or otherwise attached to the bracket 54 and such nut rotatably receives a bolt 57 threadedly received within a nut 58 carried by the track-forming channel 27. With this construction the track forming channel 27 may be adjusted up and down after the partition has been retracted by merely inserting a screw driver into the slot of the bolt 57 and rotating such bolt to cause the nut 58 to move up or down as desired. It will be apparent that a plurality of these ad- 50 justing bolts may be stationed along the length of the channel 27 so that the track can be adjusted to compensate for any irregularities in the floor structure. The membranes 16 extend upwardly through the channel 27 and diverge outwardly at their upper ends to provide a sweep strip 59 to prevent sound from passing over the sound insulating barriers.

At the bottoms of the partitions additional sweep strips 60 are provided and such sweep strips are mounted within grooves 61 in the lower edge of the slats 17. The lower sweep strips are adapted to engage the floor 62 to form an obstruction to the passage of air and sound. The floor 62 may be provided with a slot 63 to receive the guides 28 between and below which the insulating sheet or membrane 16 projects. In order to provide additional sealing means an additional sweep 64 is provided at each 75

side of the sheet 16 attached to a plumb strip 65 by means of a fastener 66 extending through the floor 62. The inner contiguous edges of the auxiliary sweeps 64 engage the depending insulating sheets 16 and provide additional seals. Thus there will be sealing not only between the sweep strips 60 in the floor 62 but between the auxiliary sweeps 64 and the insulating sheets 16. The lower sweep strips are adapted to engage the floor 62 to prevent the sound from passing under the partition.

If desired, instead of a chalk board a decorative panel or mural may be inserted in the cutout portion 31 to increase the esthetic value of the wall structure.

It will be apparent from the foregoing that a chalk board is provided which also may be used as a tack board for mounting sheets of paper or the like with thumb or other tacks and such coilable wall is provided with an inserted panel which readily can be coiled with the wall.

It will be obvious to one skilled in the art that various changes may be made in the invention without departing from the spirit and scope thereof and therefore the invention is not limited by that which is illustrated in the drawing and described in the specification, but only as indicated in the accompanying claims.

What is claimed is:

1. The combination of a housing having an opening, a roller journaled in said housing, a partition forming wall attached to said roller and coilable onto and uncoilable from said roller, said wall being composed of a plurality of individual elements, connecting means for said elements, certain of said elements having a cutout portion extending partially therethrough, a slot along the top and bottom of said cutout portion, such slot providing an extension of the inner surface of the cutout portion, a flexible sheet chalk board insert of a width greater than the cutout portion whereby the edges of the insert will extend into the slots at the top and bottom thereof, a retention strip along the ends of the cutout for securing the ends of said insert in place, an extruded removable chalk tray having a hook of a construction fitting into the slot along the lower side of the cutout portion.

2. The combination of a housing having an opening in its side, a roller journaled on end in said housing, a partition forming wall attached to said roller and coilable onto and uncoilable from said roller, said wall being composed of a plurality of individual cooperating slats, connecting means for said slats, certain of said slats having a cutout portion extending partially therethrough, on one surface a flexible chalk board insert of a width to fit within said cutout portion, retention means along the ends of the cutout for securing the ends of said insert in place, an extruded chalk tray removably mounted along one edge of the cutout portion, and means for fastening said tray in place.

3. The structure of claim 1 in which said partition forming wall includes spaced wall portions with dead air space therebetween for insulating against the passage of air and sound, said wall being constructed to extend beneath the floor, a pair of web members carried by said partition one at each side of the marginal portions of such wall and above the floor for engaging the floor, and an additional pair of web members for location at each side of the marginal portion of said wall in a position to be located beneath the floor and to engage opposite sides of the marginal portions of said partition.

4. A coilable partition comprising a housing, a pair of rollers journaled in said housing, a partition forming wall attached to each of said rollers, and being connected at their free ends to each other, each of said walls being constructed from a plurality of individual elements, connecting means for said elements, certain of said elements in at least one of said walls having a cutout portion extending partially therethrough, a flexible chalk board forming sheet located in said cutout portion, and retaining means attached to said wall for maintaining said sheet in position.

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5. The structure of claim 4 in which said walls are spaced apart to provide a dead air space therebetween, and an insulating membrane attached to at least one of said walls.

6. The structure of claim 5 including a second insulating membrane behind said cutout portion. 5

7. The structure of claim 4 including a flexible web member attached to each of said walls above the floor for engaging the floor.

8. The combination of a housing having an opening, a roller journaled in said housing, a partition forming wall 10 attached to said roller and coilable onto and uncoilable from said roller, said wall comprising a series of slats, connecting means for said slats, certain of said slats having a cutout portion extending partially therethrough from one side of said wall, and a flexible coilable chalk 15 board forming sheet means inset within said cutout portion and accessible from said one side of said wall.

9. The structure of claim 8, and a chalk tray, means

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by which said chalk tray may be readily applied to and removed from said coilable partition forming wall and when applied serving to add rigidity thereto.

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