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3,072,975

SEALING MECHANISM FOR MOVABLE PARTITION PANELS, DOORS AND THE LIKE

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3 Sheets-Sheet 1

Fig. 1

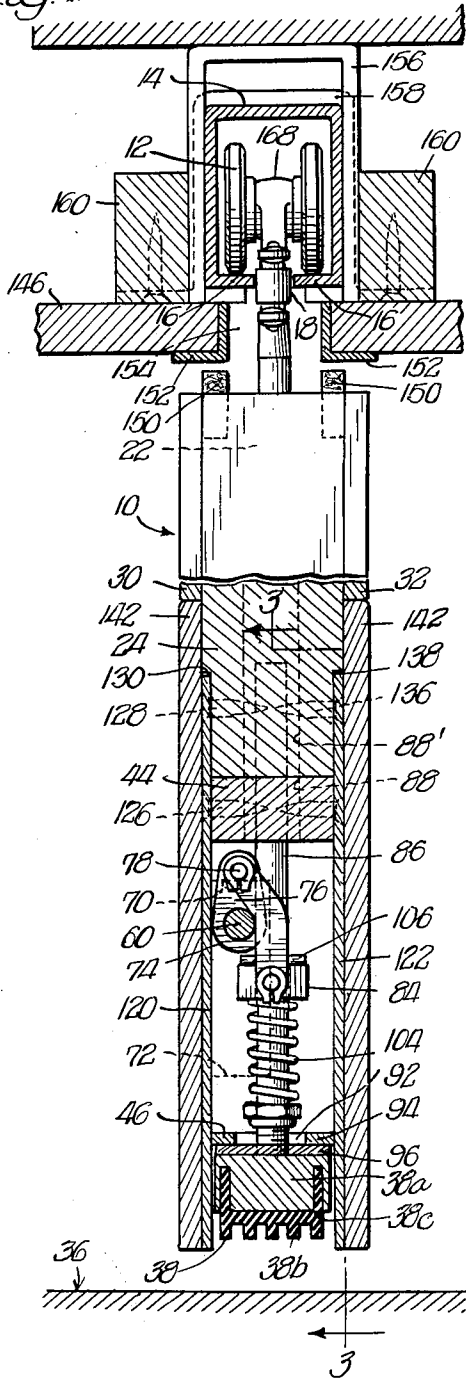
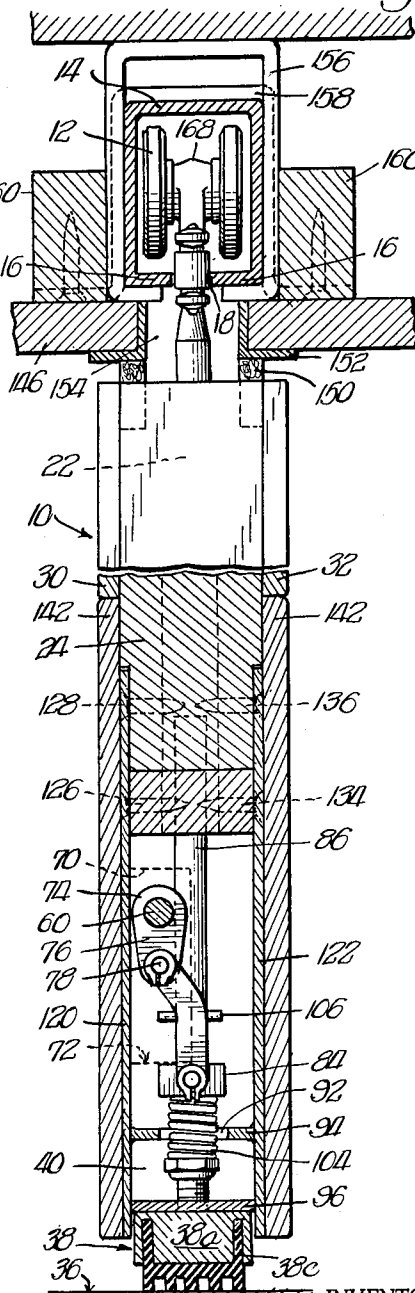


Fig. 2



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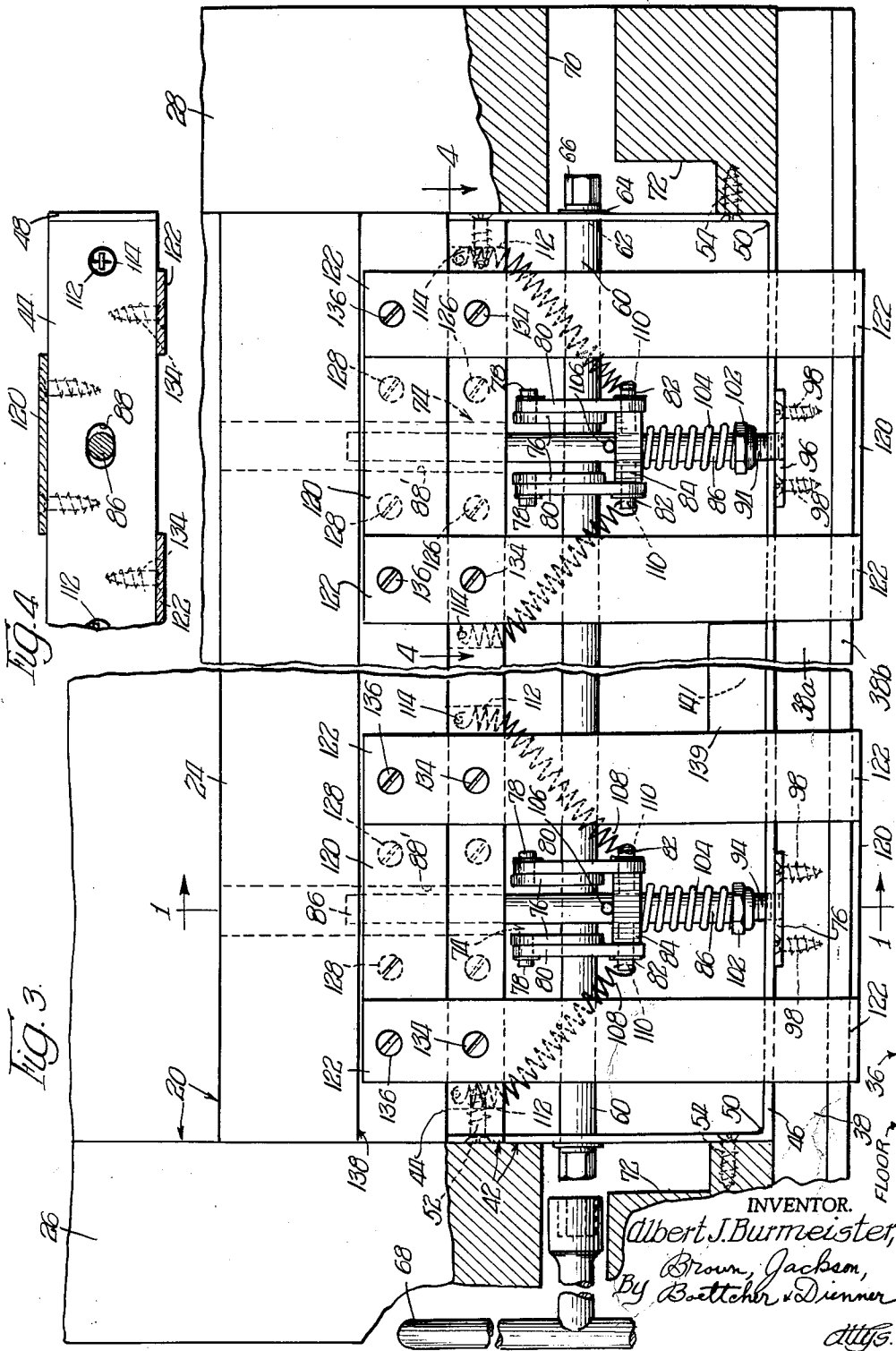
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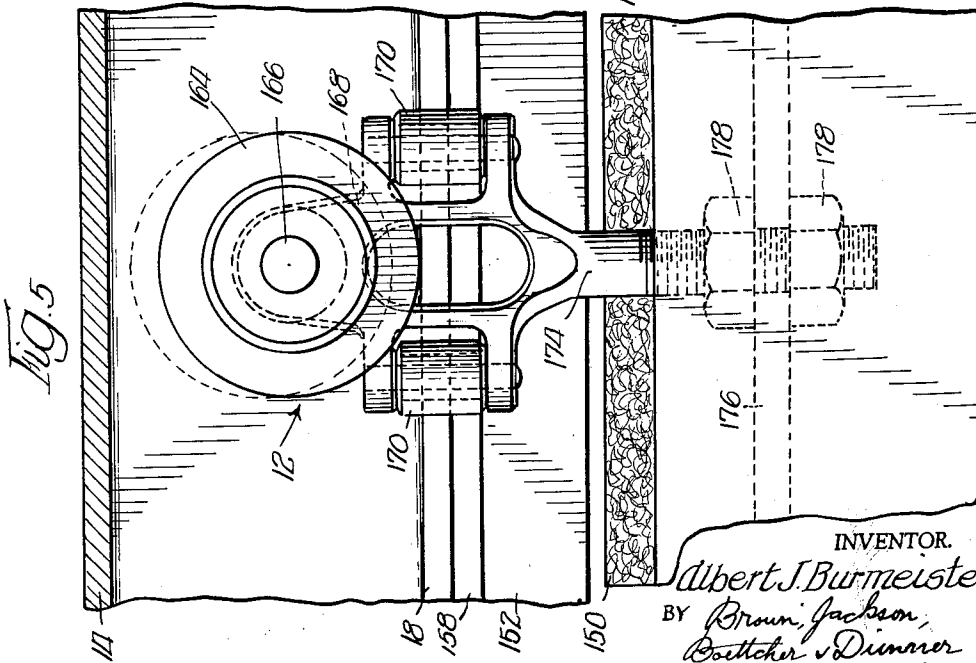
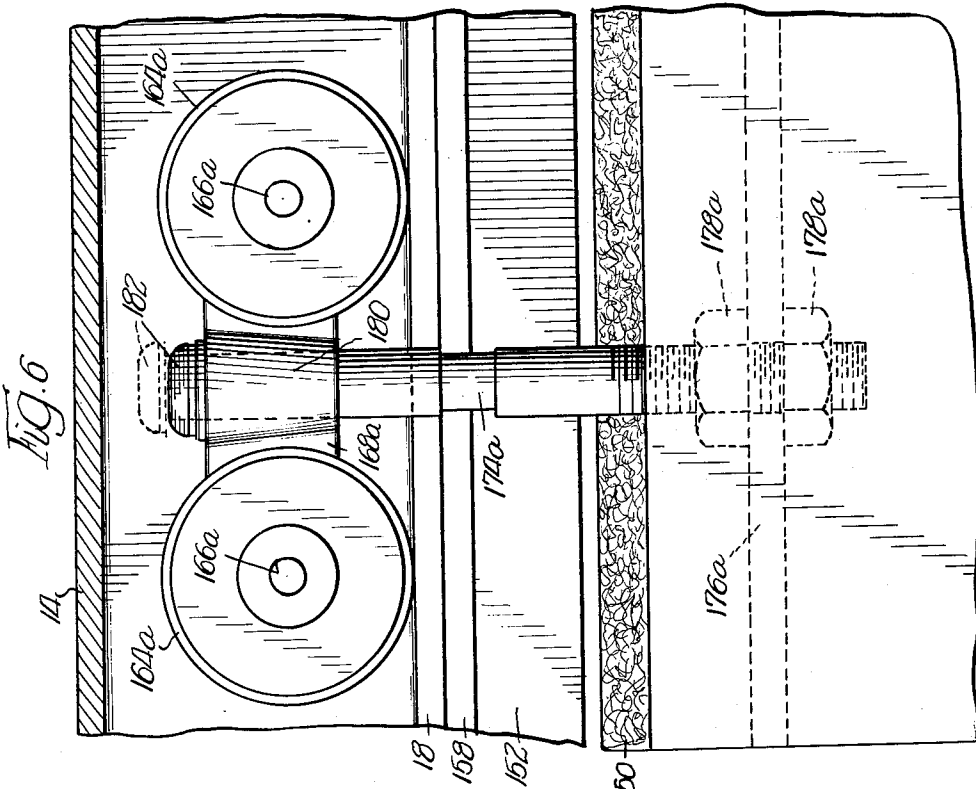
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3 Sheets-Sheet 3



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SEALING MECHANISM FOR MOVABLE PARTITION PANELS, DOORS AND THE LIKE

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The present invention relates to improved sealing mechanism for movable partition panels, doors and the like.

The invention has particular application to movable partition panels or doors of the type adapted for use in hotels, clubs, convention halls, schools and the like, for temporarily dividing up large rooms or areas, halls or gymnasiums into smaller rooms or areas, or for temporarily relocating or redistributing the partitions and floor areas of adjoining rooms, etc.

In certain types of these installations, these partition panels are handled as individual units, each panel unit being individually supported by a pair of wheeled trolleys or hangers running along an overhead track. Such partition panels, operating individually in this manner, may, when not in use, be stored in storage or stacking areas which are removed from the partition opening, so that the stored panels may be concealed.

In most installations using these individually manipulated partition panels, particularly when they are of the top hung type carried by wheeled overhead trolleys running along an overhead track, it is quite important that the lower edges of these panels be locked to the floor when the panels have been located in their desired partition assembly, in order that the assembled panels will not be displaced from their desired positions by being bumped against by moving furniture, body contact of gymnasium players, dancing couples, etc.

Furthermore, in a large proportion of these installations using individually manipulated partition panels, it is also desirable that the assembled partition be as sound proof as possible, so that if a room or area on one side of the partition has large sound effects occurring therein, such as the playing of a musical recital, dance band or the like, the room or area on the other side of the partition can still be used for study, lecture or discussion purposes.

The principal object of the present invention is to provide an improved floor seal mechanism for establishing a sealed joint between the bottom edge of each partition panel and the floor, which sealed joint serves to lock the lower edge of the panel against displacement from its intended position, and also serves to establish a very effective acoustical seal for minimizing sound transmission under the lower edge of the partition panel. This floor seal mechanism is effective against carpeted floors, and also against any hard floor surface, whether it be wood, terrazzo, concrete or the like.

Another object of the invention is to provide an improved overhead sealing arrangement for effecting a substantially similar sealing engagement between the top edge of each partition panel and the ceiling of the hall, room or other enclosure, this overhead sealing engagement being preferably established substantially concurrently with the floor sealing engagement.

A further object of the invention is to provide such bottom and top sealing arrangements in which the bottom and top sealing strips carried by the partition panel will be retracted entirely out of contact with the floor and with the ceiling respectively, when the panel is being moved out into its partition assembling position or is being moved back into its stacking or storing area.

Still another object is to provide a construction in

which the floor sealing strip and its crank actuating mechanism are embodied in a preassembled sub-assembly which can be easily mounted on and dismantled from a partition panel substantially as a preassembled unit.

Still another object is to provide a sealing mechanism of the above description which is manually operable from either vertical edge of the individual panel unit. Thus, irrespective of which vertical edge of each panel unit is placed in edgewise abutment against the next adjacent panel unit, the sealing control shaft can still be actuated by the manipulation thereof at the exposed edge of the panel unit.

Other objects, features and advantages of the invention will be apparent from the following detail description of one preferred embodiment thereof. In the accompanying drawings illustrating such embodiment:

FIGURE 1 is a fragmentary vertical sectional view through a partition panel embodying the invention, showing the panel in its maneuvering condition, with the bottom and top sealing strips out of engagement with the floor and the ceiling respectively, this figure corresponding substantially to a section taken on the plane of the line 1—1 of FIGURE 3.

FIGURE 2 is a similar sectional view, but showing the panel in its sealed condition, with the bottom or floor sealing strip forced downwardly into sealing engagement with the floor, which forces the partition panel upwardly to bring its top sealing strips upwardly into sealing engagement with the ceiling.

FIGURE 3 is a fragmentary side sectional view of the panel showing the floor sealing strip in its elevated position, this figure corresponding substantially to a section taken on the plane of the line 3—3 of FIGURE 1.

FIGURE 4 is a fragmentary detail view taken on the plane of the line 4—4 of FIGURE 3; and

FIGURES 5 and 6 are side sectional views on a larger scale, showing different embodiments of wheeled hangers for the partition panels.

In these drawings I have shown the invention embodied in a series of individually maneuverable partition panels 10 which are not hinged together; but I wish it to be understood that the invention is not necessarily limited to use with such individually maneuverable panels. Each of these panels 10 has overhead rolling support on wheeled hangers 12 traveling along an overhead ceiling track 14. This overhead track is shown as being of the box type, with the wheeled hangers 12 confined within the box track and rolling along the inwardly extending supporting flanges or rails 16 of the track. Defined between these inwardly extending track flanges 16 is a longitudinally extending slot 18 through which the dependent shank or pendant of the hanger carriage extends downwardly for mounting attachment to the movable panel 10. One of these trolley hangers supports the left hand edge of each panel 10, and another trolley hanger supports the right hand edge of the panel. Each of these trolley hangers may be of the two wheeled type, such as is shown at 12 in FIGURE 5, or the hanger may be of the four wheeled type, such as is shown at 12a in FIGURE 6, as will be later described. I preferably employ the box type of overhead track 14 with the wheeled hangers 12 or 12a enclosed therein, in order that the overhead supporting structure shall have a neat concealed appearance for use in hotels, convention halls, etc., but it will be understood that other types of overhead tracks and other types of wheeled hangers may be employed, if desired.

Each partition panel 10 may be made up of any desired material, such as wood, metal, plastic, etc., but in the exemplary embodiment herein shown, the body of the panel is constructed in the form of a rectangular wood frame 20 comprising horizontal top and bottom wood

rails 22 and 24 (FIGURES 1 and 2) and vertical side rails 26 and 28 (FIGURE 3), all rigidly secured together. Secured over the outer surfaces of these marginal frame rails are panel facings 30 and 32 which may consist of thin panel sheets composed of plywood, plastic, aluminum or the like.

The sealing of the bottom edge of each partition panel 10 to the floor surface 36 is effected by a horizontally extending floor sealing strip or bar 38 which is mounted for up and down movement within a recessed area 40 defined in the bottom edge of the partition panel. This floor sealing strip 38 and its operating mechanism are carried in a mounting frame structure 42 which is removably mounted at the lower edge of the partition panel 10. This frame structure 42 comprises a horizontally extending wood rail 44 and a horizontally extending flat metallic bar 46 spaced downwardly therefrom, the wood rail 44 abutting against the underside of the main frame rail 24 and the metallic bar 46 defining the top of the bottom recess 40. Referring particularly to FIGURE 3, vertically extending end plates 48 join the ends of the wood rail 44 and metallic bar 46, these end plates having their lower ends welded to the metallic bar at 50, and having their upper ends secured to the wood rail 44 by screws 52. These end plates 48 lie just inside of the lower ends of vertical side rails 26, 28, and may be secured thereto by screws 54.

Extending horizontally in a plane lying between the wood rail 44 and the metallic bar 46, is a rotatable operating shaft 60 which has bearing support at its ends in round bearing holes 62 provided in the end plates 48. As shown in FIGURES 1 and 2, the axis of this shaft 60 is offset slightly to the left of the median plane of the panel 10. Retaining rings 64 engaging in grooves in the shaft abut against the outsides of the end plates 48 and hold the shaft against endwise shifting. Each end of the shaft 60 is formed with a square or hexagonal wrench receiving formation 66 which is accessible to an operating wrench 68 inserted through a horizontal hole 70 provided in each of the vertical end rails 26, 28. Extending downwardly from the inner end of each wrench receiving hole 70 is a clearance slot 72 formed in the inner face of each vertical rail 26, 28 for facilitating the removal of the floor seal and its operating mechanism from the partition panel, as will be later described.

Mounted on the end portions of the horizontal operating shaft 60 near each side edge of the panel 10 are two crank mechanisms designated 74 in their entirety, which translate the rotational motion of the shaft 60 into up and down shifting motion of the floor sealing strip 38. As shown in FIGURE 3, these two crank mechanisms 74 are identical, each comprising a pair of crank arms 76 which extend outwardly from the shaft 60 in spaced parallel relation. Crank pins 78 project outwardly from the ends of these crank arms, and pivotally mounted on these crank pins 78 are parallel connecting links 80 which, as viewed from the side (FIGURES 1 and 2) are bent to be of dog-leg formation for clearing the shaft 60 in the raised position of the floor sealing strip. The lower ends of these connecting links 80 have pivotal mounting on pivot studs 82 projecting outwardly from the opposite sides of a slide collar or block 84. This slide collar or block 84 has sliding movement up and down along a vertically extending push-pull shaft 86. The upper end of this push-pull shaft extends upwardly through aligned loose fitting guide holes 88 and 88' provided in the abutting wood rails 44 and 24. The lower end of the push-pull shaft 86 extends down through a relatively large hole 92 in the metallic frame bar 46 (FIGURES 1 and 2), and this lower end is provided with a thread 94 which is threaded and welded into an attachment plate 96 which is fastened by screws 98 to the top side of the floor sealing strip 38. As shown in FIGURES 1 and 2, it will be seen that this floor seal 38 comprises a wood bar or rail 38a having a longitudinally grooved rubber strip or shoe 38b

secured to its under surface. The rubber strip is secured to the wood rail by having side lips 38c of the rubber strip extend up into longitudinal slots in the wood rail.

Secrewing over the thread 94 is a nut 102 which forms an adjustable shoulder or end stop for the lower end of a relatively heavy compression spring 104 which encircles the shaft 86 and has its upper end abutting against the underside of the slide collar 84. Passing transversely through the push-pull shaft 86 on the upper side of the slide collar 84 is a stop pin 106 which is adapted to be engaged by the top surface of the slide collar for transmitting upward lifting or pulling movement from the slide collar to the shaft 86. Referring to FIGURE 3, it will be seen that an upwardly acting spring bias is constantly maintained on the slide collar 84 by two tension springs 108, 108 which extend diagonally upwardly from the pivot studs 82 of the slide collar. The lower ends of these tension springs have hooked engagement in holes 110 in the ends of the pivot studs 82, and the upper ends of these springs turn upwardly into vertical holes 112 in the wood frame rail 44, where they have hooked engagement over nails or screws 114 passing transversely through the upper ends of the vertical holes 112.

The mounting frame structure 42 for the floor seal 38 and its above described operating mechanism has detachable mounting on the lower main rail 24 of the partition panel through vertically extending attachment plates 120 and 122, there being one set of such plates associated with each of the crank mechanisms 74 at each side edge of the partition panel. Each attachment plate 120 is relatively wide, and is located at the same side of the frame structure 42 adjacent to which the operating shaft 60 is located. As shown in FIGURE 4, this wide plate 120 backs up the crank mechanism 74 and affords an abutment surface against which the crank arms 76 and connecting links 80 can strike when the crank arms are thrown to either extreme limit of their movement. The lower portion of this wide plate 120 is welded to the metallic frame bar 46 at 124, and extends down below this bar 46 to form the vertical guide surface against which the adjacent side of the floor sealing strip 38 has vertical sliding movement. Screws 126 fasten the upper portion of this wide plate 120 to the wood frame rail 44, and screws 128 fasten the top portion of this wide plate 120 to the main bottom rail 24 of the partition panel. This upper portion of the wide plate 120 sets into a scarfed or recessed area 130 formed in the side surface of bottom rail 24. Referring now to the pair of attachment plates 122, 122 on the opposite side of the frame structure 42, these are preferably spaced apart, as shown in FIGURE 4, to facilitate assembly of the crank mechanism parts therebetween. The lower portions of the pair of attachment plates 122, 122 are welded to the metallic frame bar 46 at 132, and they extend therebelow to form the vertical guide surface against which the adjacent side of the floor sealing strip 38 has vertical sliding movement. Thus, when the floor sealing strip 38 is depressed into locking engagement with the floor surface 36, the lower portions of the metallic attachment plates 120 and 122 define the side walls of the metallic guide box 40, and thereby strongly resist any side stresses against the partition panel reacting against the locked engagement of the floor sealing strip with the floor surface 36. The upper portions of the pair of attachment plates 122, 122 are secured by screws 134 to the wood frame rail 44, and the top portions are secured by screws 136 to the main bottom rail 24 of the panel, these side plates being similarly set into a scarfed or recessed area 138 formed in this side surface of rail 24. Extending between the innermost attachment plates 122—122, directly above the metallic bar 46, is a wood rail 139 which is secured to the bar 46 by vertical screws 141. It will be evident that by simply removing the screws 128 and 136, and 54 if used, the entire preassembled subassembly 42, together with the floor sealing strip

38, can be readily applied to and removed from the bottom edge of the partition panel. In effecting such removal, the clearance slots 72 (FIG. 1) enable the wrench receiving formations 66 to be moved laterally out of the vertical rails 26, 28. Horizontally extending cover plates 142 are detachably secured over the outer surfaces of the mounting frame structure 42 below the upper panel facings 30, 32.

Referring now to the operation of the floor sealing strip 38, and with particular reference to FIGURES 1 and 2, it will of course be understood that this sealing strip 38 is retained in the raised position shown in FIGURE 1 whenever the panel 10 is being maneuvered along the overhead track 14 from a storage position to a position defining part of a desired partition, or vice versa. In raising the sealing strip 38 into this position, the rotatable shaft 60 is revolved in a counterclockwise direction (FIGURES 1 and 2) to swing the crank arms 76 into their uppermost positions, which operates through the crank pins 78 and connecting links 80 to raise the slide block 84 upwardly along the push-pull shaft 86. The upward movement of the slide block 84 brings its upper surface into engagement with the transverse lifting pin 106 for positively lifting the shaft 86 and floor sealing strip 38 into the raised position shown in FIGURE 1. The two tension springs 108, 108 assist in this upward movement of the floor sealing strip 38, and also resiliently hold it in this raised position. The crank pins 78 also occupy a position substantially overcenter with respect to a vertical plane through the axis of the shaft 60, and this also aids in holding the sealing strip in its raised position. At this time, the compression spring 104 is in a relatively un-compressed or extended condition.

When the panel 10 has been located in its desired position in the partition assembly, the floor sealing strip 38 is pressed downwardly into relatively firm or locking engagement with the floor surface 36 by inserting the wrench 68 into the hole 70 at either edge of the partition panel and rotating the shaft 60 in a clockwise direction (FIGURES 1 and 2). This forces the slide block 84 downwardly along the push-pull shaft 86, and compresses the compression spring 104 against the nut 102 for lowering the floor sealing strip and forcing it resiliently downwardly into engagement with the surface of the floor. The crank pins 78 are revolved down into an overcenter position with respect to the vertical axis of the shaft 60, in which relation the crank mechanism remains locked in this over-center position. It will be understood that the two crank mechanisms 74, 74 adjacent the opposite edges of the panel both force their respective ends of the floor sealing strip downwardly simultaneously, but if the floor is not level or there is some obstruction under one end of the sealing strip the compression springs 104 accommodate the tilted position of the floor sealing strip. The ribbed rubber surface 38b of the sealing strip effects a firm acoustical seal with a carpeted surface or any hard floor surface. By adjusting the nuts 102 upwardly along the push-pull shafts 86, the compression springs 104 may be made to exert increased downward pressure against the floor.

This downward pressure of the floor sealing strip against the floor reacts upwardly against the partition panel 10, tending to raise the panel relatively to the ceiling 146 (FIGURES 1 and 2). As an optional feature, the invention may also embody means for effecting a closure seal between the top edge of the panel 10 and the ceiling 146, utilizing this reaction lifting of the panel to effect such ceiling closure. One or more sealing strips 150 are carried either by the top panel surface or by the ceiling surface for pressure engagement against the opposite surface when the panel is raised. There are preferably two of these sealing strips 150 recessed into the top edge of the panel, these strips being composed of felt, sponge rubber or other yieldable material. These strips are shown as being compressed against the undersides of

angle facing bars 152 which line the sides of the ceiling slot 154 extending up to the overhead track 14. This overhead track is supported in any conventional manner, such as by spaced U-shaped brackets 156 having overhead attachment, and by U-shaped clips 158 secured to wood side members 160.

The wheeled hangers 12 must be operative to accommodate this upward lifting of the entire panel 10 when effecting the ceiling closure. In FIGURE 5, I have shown the two-wheeled type of hanger 12 as being lifted in its entirety within the box track 14, the diameter of the wheels 164 and the vertical dimension within the box track being proportioned to permit such direct upward lifting of the entire hanger. The load wheels 164 have any conventional mounting on a transverse axle 166 supported in a carriage 168, which carriage also mounts the two spaced vertical guide rollers 170 which travel in the slot 18 and hold the carriage and load wheels in guided alignment. The downwardly extending shank 174 may have any suitable anchored attachment to the panel 10, such as by passing through a mounting plate 176 secured to the panel, and being provided with adjusting nuts 178 for adjusting the height of the panel relatively to the floor.

FIGURE 6 shows a four-wheeled type of hanger 12a in which the four wheels 164a do not lift with the panel, but instead the shank 174a lifts relatively to the hanger carriage 168a. The shank 174a has rotatable and vertically shiftable mounting in a vertical bearing socket 180 formed as a part of the carriage 168a, and the upper end of the shank 174a has a head 182 which normally bears against the top surface of the bearing socket 180. When the panel 10 is lifted to effect the ceiling closure the shank 174a merely slides upwardly within the bearing socket 180 to elevate the end head 182 above the top of the bearing socket.

The rotatable operating tool 68 for rotating the shaft 60 may, if desired, have a relatively long handle portion for obtaining the desired leverage for lifting a heavy partition panel when it is desired to effect sealing engagement with the ceiling 146; and this operating tool may, in fact, be designed for foot operation as well, using the weight of the attendant, when it is desired to lift relatively heavy partition panels.

While I have illustrated and described what I regard to be the preferred embodiments of my invention, nevertheless it will be understood that such are merely exemplary and that numerous modifications and rearrangements may be made therein without departing from the essence of the invention.

I claim:

1. In combination, a ceiling surface, a floor surface, a supporting track mounted adjacent to one of said surfaces, wheeled carriage means adapted to roll along said track, a partition carried by said wheeled carriage means, a floor seal mounted adjacent to the lower edge of said partition panel, a ceiling seal mounted adjacent to the upper edge of said partition panel, and mechanism carried by said partition panel for exerting a separating force between said two seals thereby concurrently forcing said floor seal downwardly against said floor surface and forcing said ceiling seal upwardly against said ceiling surface.

2. In combination, a floor surface, an overhead ceiling surface above said floor surface, an overhead track supported adjacent to said ceiling surface, wheeled hangers adapted to roll along said track, a partition panel carried by said wheeled hangers, a floor seal mounted adjacent to the lower edge of said partition panel movable relative to the panel for effecting sealing engagement with the floor, a ceiling seal mounted adjacent to the upper edge of said partition panel for effecting sealing engagement with said ceiling surface, and mechanism for forcing said floor seal downwardly relative to the panel into engagement with the floor surface and

7

concurrently effecting an upward reaction of the partition panel for forcing the ceiling seal upwardly against the ceiling surface.

3. In combination, a floor surface, a ceiling surface, an overhead track supported adjacent to said ceiling surface, wheeled hangers adapted to roll along said track, a partition panel carried by said wheeled hangers, a floor seal movably mounted adjacent to the lower edge of said partition and movable downwardly therefrom to effect sealing engagement with the floor surface, a ceiling seal mounted adjacent to the upper edge of said partition panel and movable into engagement with the ceiling surface, and seal engaging mechanism operative to force the floor seal downwardly against the floor surface, said seal operating mechanism being operative by downward pressure of the floor seal against the floor surface to lift the entire partition panel upwardly to bring said ceiling seal against the ceiling surface, said wheeled hangers accommodating such lifting motion of the partition panel relatively to said overhead track.

4. In combination, a floor surface, a ceiling surface, an overhead track supported adjacent to said ceiling surface, wheeled hangers adapted to roll along said track, a partition panel carried by said wheeled hangers, a floor seal movably mounted adjacent to the lower edge of said partition and movable downwardly therefrom to effect sealing engagement with the floor surface, a ceiling seal mounted adjacent to the upper edge of said partition panel and movable into engagement with the ceiling surface, and seal engaging mechanism operative to force the floor seal downwardly against the floor surface, said seal operating mechanism being operative by downward pressure of the floor seal against the floor surface to lift the entire partition panel upwardly to bring said ceiling seal against the ceiling surface, said wheeled hangers lifting in their entireties relatively to said overhead track in such lifting motion of the partition panel.

5. In combination, a floor surface, a ceiling surface, an overhead track supported adjacent to said ceiling surface, wheeled hangers adapted to roll along said track, a partition panel carried by said wheeled hangers, a floor seal movably mounted adjacent to the lower edge of said partition and movable downwardly therefrom to effect sealing engagement with the floor surface, a ceiling seal mounted adjacent to the upper edge of said partition panel and movable into engagement with the ceiling surface, and seal engaging mechanism operative to force the floor seal downwardly against the floor surface, said seal operating mechanism being operative by downward pressure of the floor seal against the floor surface to lift the entire partition panel upwardly to bring said ceiling seal against the ceiling surface, said wheeled hangers comprising wheeled carriages, pendant shanks extending from said carriages down to said partition panel, and vertical slide bosses in said carriages in which said pendant shanks have lifting movement in the lifting motion of the partition panel.

6. In combination, a floor surface, a guide track, a movable closure panel movable along said guide track to different positions relatively to said floor surface, a recess extending longitudinally of the bottom edge of said closure panel, a floor sealing strip mounted in said recess for vertical movement into and out of engagement with said floor surface, vertically reciprocable mounting shafts at spaced points within said closure panel on which said sealing strip is mounted, a substantially horizontal rotatable operating shaft within said closure panel extending along an axis to one side of the axes of said vertically reciprocable mounting shafts, said horizontal operating shaft being manually rotatable from one edge of said closure panel, cranks mounted on said horizontal operating shaft adjacent to said vertical shafts, slide collars reciprocably mounted on said vertical mounting shafts, links pivotally connected between said cranks

8

and said slide collars, compression springs on said vertical shafts through which said slide collars impart yielding and downward thrusting motion to said floor sealing strip for forcing said sealing strip yieldingly against said floor surface, and stop shoulders carried by said vertical shafts against which the top sides of said slide collars transmit upward lifting movement to said vertical shafts.

7. In combination, a floor surface, a ceiling surface, a guide track, a movable closure panel movable along said guide track to different positions relative to said floor surface, a recess extending longitudinally of the bottom edge of said closure panel, a floor sealing strip mounted in said recess for vertical movement into and out of engagement with said floor surface, vertically reciprocable mounting shafts at spaced points within said closure panel on which said sealing strip is mounted, a substantially horizontal rotatable operating shaft within said closure panel extending along an axis to one side of the axes of said vertically reciprocable mounting shafts, said horizontal operating shaft being manually rotatable from one edge of said closure panel, cranks mounted on said horizontal operating shaft adjacent to said vertical shafts, slide collars reciprocably mounted on said vertical mounting shafts, links pivotally connected between said cranks and said slide collars, compression springs on said vertical shafts through which said slide collars impart yielding downward thrusting motion to said floor sealing strip for forcing said sealing strip yieldingly against said floor surface, transverse pins through said vertical shafts above said slide collars against which the upper surfaces of said slide collars engage for lifting said sealing strip out of contact with the floor upon reverse rotation of said horizontal shaft, the downward thrusting of said floor sealing strip against the floor through said compression springs operating to raise the entire closure panel toward said ceiling surface, and a sealing strip extending lengthwise of the top edge of said closure panel adapted to effect closure engagement with said ceiling surface upon such upward lifting of the closure panel.

8. In combination, a floor surface, a guide track, a movable closure panel movable along said guide track to different positions relatively to said floor surface, a pre-assembled floor seal sub-assembly mounted along the lower edge of said closure panel comprising horizontally extending frame members, upwardly extending attaching plates secured to said horizontal frame members and adapted for attachment to the lower edge of the closure panel, vertically reciprocable push-pull mounting shafts mounted at spaced points for guided movement in said horizontal frame members, a substantially horizontal rotatable operating shaft carried by said frame members and extending along an axis to one side of the axes of said vertically reciprocable shafts, said horizontal operating shaft having tool receiving formations at opposite ends thereof for receiving an operating tool inserted from either edge of said closure panel, pairs of cranks on said horizontal operating shaft disposed on opposite sides of each of said vertical push-pull shafts, slide collars on said vertical mounting shafts, tension springs tending to pull said slide collars upwardly, links pivotally connected between said slide collars and each pair of cranks, said links having offset bends therein to clear said horizontal operating shaft when said cranks are in their raised positions, compression springs on said vertical shafts through which said slide collars impart yielding downward thrusting motion to said floor sealing strip for forcing said sealing strip yieldingly against said floor surface, and stops on said vertical shafts above said slide collars through which said slide collars transmit upward lifting movement from said cranks to said floor sealing strip.

9. In combination, a supporting track extending overhead above a floor surface, hanger means moving along said track, a partition panel carried by said hanger means for movement along said track, a floor seal movably

mounted at the lower edge of said partition panel for movement into and out of engagement with the floor surface, a vertically reciprocable mounting shaft carried by said panel on which said seal is mounted, operating means on said panel including a crank, operating means on said panel including a crank, a compression spring about said vertically reciprocal shaft, stop means on said shaft above said compression spring, a slide member slidably mounted on said shaft between the stop means and compression spring, and operating means on said panel including a crank having a pair of arms, one on each side of said shaft, to turn with rotation of the crank, and a pair of links each pivotally connected at one end to opposite sides of the slide member and each pivotally connected at its other end to a respective one of said arms of the crank, said crank acting on said compression spring through said slide member to which it is linked when turned in one direction to impart yielding downward thrusting motion to said floor seal for forcing said seal yieldingly against the floor surface, and the slide member acting on the stop means carried by said vertical shaft when the crank it turned in its opposite operating direction to raise said floor seal and support it out of engagement with the floor.

10. In combination, an overhead track supported above a floor surface, hanger means to move along said track, a partition panel suspended from said hanger means, a resilient floor seal at the lower edge of the panel vertically movable into and out of engagement with the floor surface, said panel supporting an axially rotatable shaft horizontally disposed above said floor seal, a pair of lever arms connected to said shaft at spaced locations to turn therewith, a pair of link arms, pivotal connection means pivotally connecting one end of each said link arms to one said lever arm, the other end of each said link arms being pivotally connected to means through which a downward force may be exerted on the resilient floor seal by rotation of the shaft in one direction, said pivotal connection means being movable to a position centered beneath said shaft which will lock the floor seal in sealing engagement with the floor surface, and said shaft being rotatable in an opposite direction to unlock the floor seal and to raise the floor seal out of engagement with the floor surface.

11. In combination, a partition panel adapted to be suspended from hanger means movable along an overhead track, a resilient floor seal at the lower edge of the panel vertically movable into and out of engagement with a floor surface over which the panel is suspended said panel supporting an axially rotatable shaft spaced parallel with said floor seal, a pair of lever arms connected to said shaft at spaced locations to turn therewith, a pair of link arms, pivotal connection means pivotally connecting one end of each said link arms to one said lever arm, the other end of each said link arms being pivotally connected to means through which an outward force may be exerted on the resilient floor seal by rotation of the shaft in one direction, spring means exerting a force on the floor seal in opposition to said outward force, said pivotal connection means being movable to a position between said shaft and floor seal against the force of said spring means upon rotation of the shaft in said one direction to lock the floor seal in sealing engagement with a floor surface over which the panel is suspended, and said shaft being rotatable in an opposite direction to unlock the floor seal and in cooperation with the spring means to move the floor seal out of engagement with the floor surface.

12. In combination, a partition panel adapted to be suspended from hanger means movable along an overhead track above a floor surface, a resilient floor seal at the lower edge of the panel movable into and out of engagement with a floor surface over which the panel is suspended, a substantially horizontal rotatable operating

shaft journaled for rotation in said panel above the floor seal and extending longitudinally thereof, the ends of said shaft having tool receiving formations which are accessible through provided openings in opposite edges of the panels for rotating the shaft, a lever arm connected to said shaft to turn therewith, a link arm, and pivotal connection means pivotally joining one end of said link arm to the lever arm, the other end of said link arm being pivotally connected to means through which a downward force may be exerted on said floor seal by said lever and link arms in response to rotation of the shaft in one direction, spring means exerting a force on the floor seal in opposition to said downward force, said pivotal connection means being movable to a position beneath said shaft against the force of the spring means by rotation of said shaft in said one direction to lock the floor seal in engagement with the floor surface, and said pivotal connection being movable to a position above said shaft by rotation of the shaft in an opposite direction to unlock the floor seal and with the spring means to raise the floor seal out of engagement with the floor surface.

13. In combination, a partition panel adapted to be suspended from hanger means movable along an overhead track above a floor surface, a resilient floor seal at the lower edge of the panel movable into and out of engagement with a floor surface over which the panel is suspended, a substantially horizontal rotatable operating shaft journaled for rotation in said panel above the floor seal and extending longitudinally thereof, the ends of said shaft having tool receiving formations which are accessible through provided openings in opposite edges of the panels for rotating the shaft, a lever arm connected to said shaft to turn therewith, a link arm, and pivotal connection means pivotally joining one end of said link arm to the lever arm, the other end of said link arm being pivotally connected to vertically movable engagement means through which a downward force may be exerted by said lever and link arms on the floor seal in response to rotation of the shaft in one direction, compression spring means between the floor seal and said engagement means to receive the downward force exerted by said lever and link arms, said pivotal connection means being movable by rotation of said shaft in said one direction to a position beneath said shaft to move the floor seal downwardly and to lock is in engagement with the floor surface, and said pivotal connection being movable to a position above said shaft upon rotation of the shaft in an opposite direction to unlock the floor seal and to raise the floor seal out of engagement with the floor surface.

14. In combination, an overhead track supported above a floor surface, hanger means to move along said track, a partition panel suspended from said hanger means, a resilient floor seal at the lower edge of the panel vertically movable into and out of engagement with the floor surface, said panel supporting an axially rotatable shaft above said floor seal, compression spring means between said shaft and the floor seal, a slide member confined between the shaft and the compression means for vertical movement, a pair of lever arms connected to said shaft at spaced locations to turn therewith, a pair of link arms, pivotal connection means pivotally connecting one end of each said link arms to one said lever arm, the other end of each said link arms being pivotally connected to said slide member through which a downward force may be exerted on the compression spring means by rotation of the shaft in one direction, the force thereof being yieldingly transferred therethrough to the floor seal, tension spring means connected between said slide member and a location above said shaft, said pivotal connection means being movable to a position beneath said shaft against the pull of said tension spring means upon rotation of the shaft in said one direction to lock the floor seal in sealing engagement with the floor surface, and said shaft being rotatable in an opposite direction to unlock the floor seal

and in cooperation with the tension spring means to raise the floor seal out of engagement with the floor surface.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,072,975

January 15, 1963

Albert J. Burmeister

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 9, lines 4 to 6, strike out "operating means on said panel including a crank, operating means on said panel including a crank," column 10, line 46, for "is" read -- it --.

Signed and sealed this 23rd day of July 1963.

(SEAL)

Attest:

ERNEST W. SWIDER
Attesting Officer

DAVID L. LADD
Commissioner of Patents