Sept. 19, 1967 B. W. PIPER 3,341,992

PORTABLE ROOM DIVIDING PANEL

Filed Oct. 7, 1964

FIG. 1.

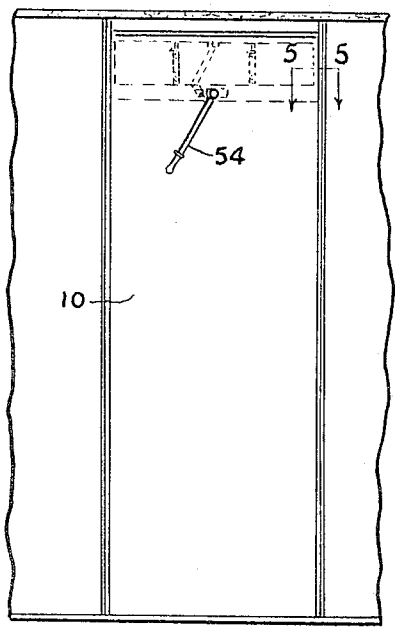


FIG. 4.

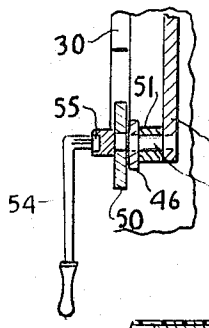


FIG. 5.

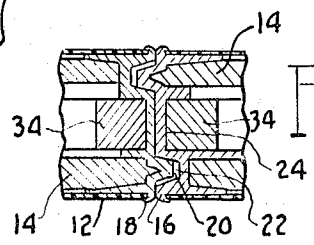


FIG. 6

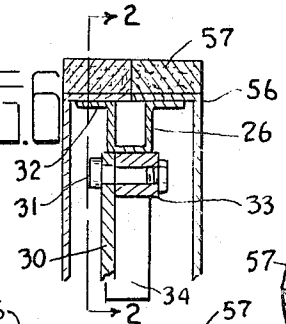


FIG. 3.

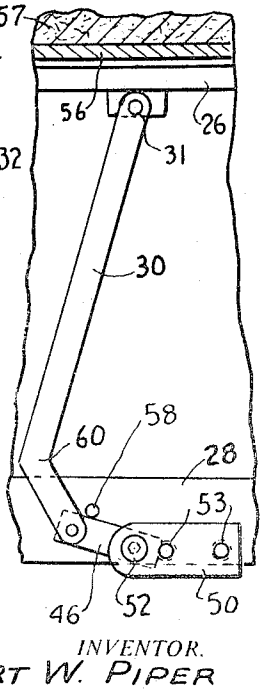
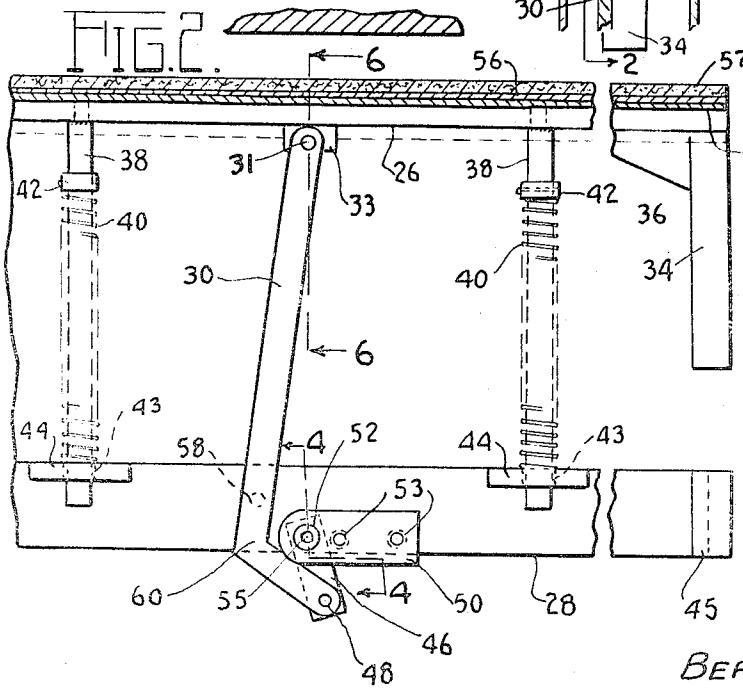


FIG. 2.



INVENTOR.
BERT W. PIPER

BY

Barnes, Kisselle, Raisch & Choate

ATTORNEYS

United States Patent Office 3,341,992 Patented Sept. 19, 1967

3,341,992

PORTABLE ROOM DIVIDING PANEL

Bert W. Piper, Redford Township, Wayne County, Mich., assignor to Robert Haws Co., Melvindale, Mich., a corporation of Michigan

Filed Oct. 7, 1964, Ser. No. 402,148
2 Claims. (Cl. 52—127)

ABSTRACT OF THE DISCLOSURE

The room dividing panel of the present invention includes a header at the upper end of the panel which is adapted to be actuated vertically by means of a crank from one face of the panel. The header is provided with a resilient pad along its upper edge for sealing engagement with the ceiling of the room in which it is arranged and is also provided with depending guide bars at each end thereof which slidably engage in grooves formed on the inside faces of the members forming the vertical edges of the door so that the header is guided for vertical movement.

The present invention relates to a portable room dividing panel containing an expanding sealing means so that when desired the panel may be fixed in position between the floor and ceiling of a room either by itself or with similar panels. When no longer needed, the panel may be removed to a storage space or to another position either in the same room or another room.

It is an object of this invention to provide a portable room dividing panel which can be positioned in operative position independently of any external supports.

A further object of the invention resides in the provision of a panel of the type described in which the sealing means and the operating mechanism for the sealing means are substantially completely concealed so that the panel when used as a partition presents an attractive appearance.

Further objects and uses will be apparent through the description and drawings that follow in which:

FIG. 1 is a front view of the panel.

FIG. 2 is a sectional view along the line 2—2 of FIG. 6 showing the sealing mechanism in the retracted position.

FIG. 3 is a view similar to FIG. 2 with the sealing mechanism in the expanded position.

FIG. 4 is a sectional view along the line 4—4 in FIG. 2.

FIG. 5 is a sectional view along the line 5—5 in FIG. 1.

FIG. 6 is a sectional view along the line 6—6 in FIG. 2.

FIG. 1 shows a panel 10 located securely between the ceiling and the floor of a room. The walls of the panel comprise plywood or hardboard panels 14 faced with decorative panels 12 and are held parallel in spaced relation by longitudinal metal edge strips 16. In the present embodiment, the opposite faces 12 may be made of a hard material such as a plastic laminate adhesively secured to panels 14. The vertical side edges of panels 12 are covered by the crimped flanges 18 on the metal strips 16. As shown in FIG. 5, the exterior faces of metal strips 16 are formed with vertically extending complementary projections 20 and recesses 22 to allow for interengaging relationship with adjacent panels of similar construction. The metal strips have a guide groove 24 located in the interior of the strip.

Referring now to FIG. 2, the sealing mechanism comprises a header 26 and a base plate 28 connected in spaced relation by a control arm 30. The header 26 is of a generally U-shape with outwordly extending horizontal flanges 32 forming top surfaces as shown in FIG. 6. Control arm 30 is pivotally connected at its upper end as at 31 to a mounting block 33 on header 26. The control

arm 30 is pivotally linked at its lower end as at 48 to a crank arm 46. Arm 46 in turn is pivotally mounted on base plate 28 between a face plate 50 and a spacer 51 by means of a stud 52. Plate 50 is mounted on base plate 28 by screws 53. Stud 52 is rotatable in plate 50 and spacer 51. Crank arm 46 is fixed to stud 52. The outer enlarged end of stud 52 has a noncircular socket 55 therein. Guide rods 38 have their upper reduced ends extending through the base of the header 26 and are secured to said header by a weld or similar means. The lower end of each rod 38 extends through a hole 43 in a guide block 44 secured to base plate 28. Compression springs 40 encircle each rod 38 with their lower ends bearing against blocks 44 and their upper ends against collars 42 secured to rods 38 as by pins 41. Opposite ends of header 26 are provided with guide bars 34 slidably positioned in grooves 24 of the metal strips 16. The connection between bars 34 and header 26 is reinforced by gusset plates 36. Bars 45 secured to the base plate 28 also fit within groove 24 of the metal edge strip 16 but unlike the guide bars 34 bars 45 are anchored in said groove. As shown in FIG. 6, a generally U-shaped member 56 fits over the flanges 32 of the header 26. The depending legs of member 56 overlie the faces 12 of the panel 10 and are long enough to conceal the sealing mechanism when in the expanded position. A resilient pad 57 formed of a compressible material such as felt, is fixed to the horizontal portion of the U-shaped member 56. This resilient pad provides a good seal between the sealing mechanism and the ceiling of the room and prevents marring of the ceiling. A removable handle 54 is constructed to engage in socket 55 for rotating crank 46.

To fix the panel securely in position between the floor and ceiling of a room, the handle 54 is inserted into socket 55 and rotated clockwise as viewed in FIG. 2. The crank arm 46 correspondingly moves clockwise out of the locked position and forces the control arm 30 upwards. Since the guide bars 45 on the base plate 28 are anchored to the metal edge strips 16, the resulting motion is that of the header 26 moving upwardly. The vertical force applied by rotating the handle 54 clockwise is aided by the springs 40 which, when the sealing mechanism is in the retracted position, are under compression. The rods 38 are guided by the holes 43 in blocks 44. Header 26 is constrained to vertical movement by the arrangement of guide bars 34 in the metal strip grooves 24. The vertical movement of the header continues until the felt pad 57 or other resilient material abuts the ceiling, whereupon motion stops. The spring loaded bars 38 hold the header securely against the ceiling thereby fixing the panel firmly in position. A stop pin 58 is located on base plate 28 in the path of crank arm 46 to prevent the header from moving upwardly an excessive distance (FIG. 3) particularly when the panel is not in operative position. More than one panel may be so placed in end to end position and, since the metal strips 16 are formed with complementary projections 20 and recesses 22, they are of an interengaging nature, a solid wall will be formed. After the panel is fixed in position, the handle 54 may be removed from the socket 55 and stored.

To remove the panel, handle 54 is inserted in socket 5 and rotated counterclockwise moving the crank arm 46 correspondingly counterclockwise which moves the control arm 30 downward against the compression of the springs 40 on the rods 38. The header is locked in the retracted position when arm 46 is rotated to the position shown in FIG. 2 wherein the pivot pin 48 is over center, that is, lies just to the right of a line connecting pivot pin 31 and stud 52. Control arm 30 is fashioned with an elbow 60 to permit it to swing to the over center locked position.

What is claimed is:

1. A portable partitioning panel having a pair of spaced apart side walls, a sealing mechanism for one edge of the panel comprising a pad at said one edge guided for movement in a direction transverse of said edge, means disposed between said side walls for moving said pad, means extending through one of said side walls for operating said pad moving means, the means for moving said pad comprising a header attached to said pad, a base plate anchored within said panel, means connecting said header and said base plate in spaced relation, said connecting means comprising resilient means urging said header away from said base plate, the means for moving said pad including a further means connected to said header and said operating means for retracting and locking said header in the retracted position, means extending along the side edges of said side walls and forming edge walls therebetween, said edge walls having longitudinal grooves along their inside faces, and guide bars attached to each end of said header, said guide bars being slidably disposed in said grooves.

2. A device as defined in claim 1 wherein said edge walls include exterior faces having complementary projections and recesses adapted for interengagement with adjacent panels of similar construction.

References Cited

UNITED STATES PATENTS

1,558,954	10/1925	Walker	49—320
2,443,548	6/1948	Wilson	52—122
3,000,063	9/1961	Hoog	49—465 X
3,024,880	3/1962	Burmeister	52—620 X
3,141,553	7/1964	Below et al.	52—122
3,160,246	12/1964	Donlon	52—593
3,172,166	3/1965	Imbrecht	52—238
3,199,641	8/1965	Yake	52—127

FRANK L. ABBOTT, *Primary Examiner.*

A. C. PERHAM, *Assistant Examiner.*