June 29, 1954 R. L. SIERING 2,682,087

DEMOUNTABLE WALL FOR BUILDINGS

Filed Dec. 19, 1949

Fig. 1.

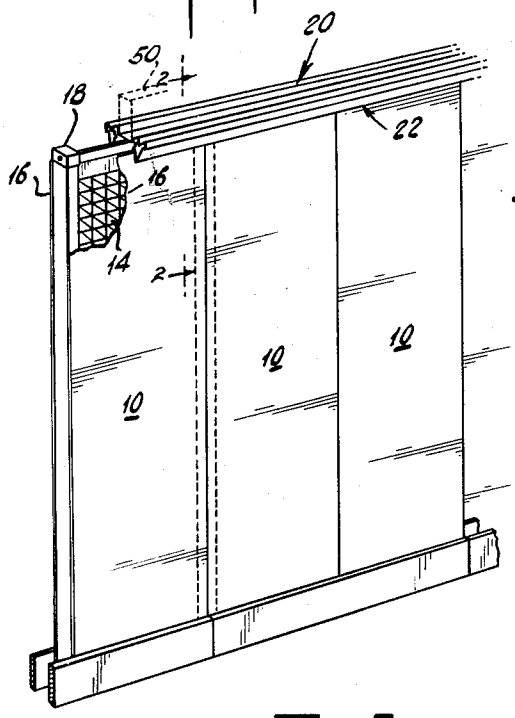


Fig. 2.

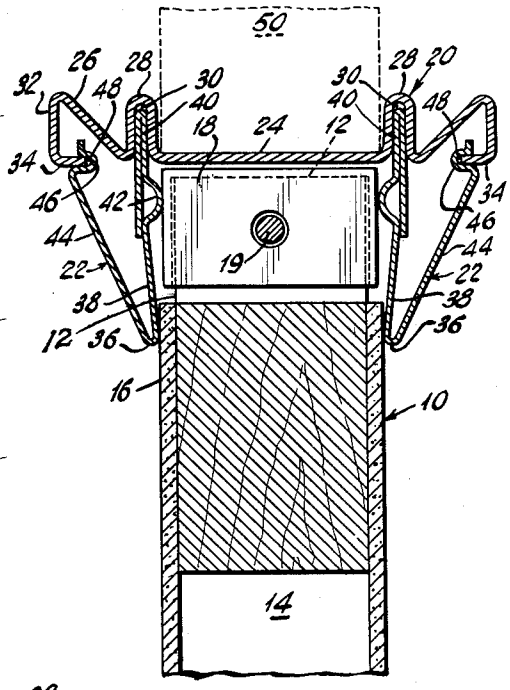


Fig. 3.

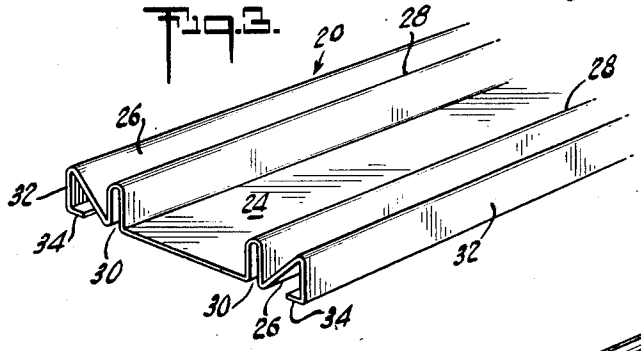
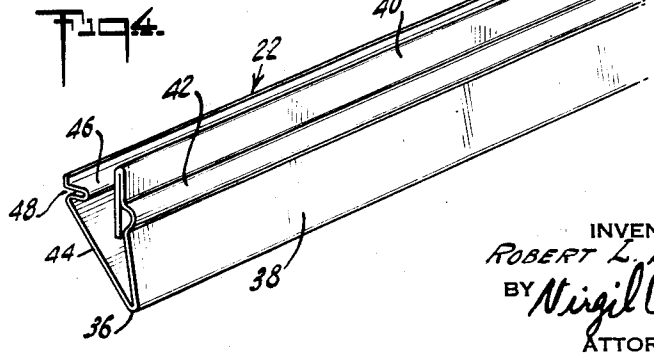


Fig. 4.



INVENTOR
ROBERT L. SIERING.
BY Virgil C. Kline
ATTORNEY

Patented June 29, 1954

2,682,087

UNITED STATES PATENT OFFICE

2,682,087

DEMOUNTABLE WALL FOR BUILDINGS

Robert L. Siering, New York, N. Y., assignor to Johns-Manville Corporation, New York, N. Y., a corporation of New York

Application December 19, 1949, Serial No. 133,746

10 Claims. (Cl. 20—4)

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The instant invention relates to improved wall or partition assemblies for sub-dividing space in office buildings and the like and is an improvement on certain features of the construction shown in Patent No. 2,316,980 issued April 20, 1943, to L. C. Sigloch et al.

The principal object of the invention is the provision of a wall assembly of the type shown in said patent, but which will have more rigidity and greater ease of erection and alteration.

Another object of the invention is the provision of a wall assembly embodying an improved stiffening rail and cooperating molding structure.

A further object of the invention is the provision of a wall assembly involving a plurality of aligned panels, the assembly including a rail extending longitudinally of the upper edges of the panels and molding strips resiliently engaging the outer faces of the panels and in removable interlocking engagement with the rail.

My invention will be more fully understood and further objects and advantages thereof will become apparent when reference is made to the more detailed description of the invention which is to follow and to the accompanying drawings in which:

Fig. 1 is a perspective view of an assembly of wall panels in accordance with the invention, with parts broken away for clearness of illustration;

Fig. 2 is a sectional view on an enlarged scale, taken on the line 2—2 of Fig. 1;

Fig. 3 is a perspective view of a stiffening rail employed in the structure of Figs. 1 and 2; and,

Fig. 4 is a perspective view of a molding member for cooperation with the stiffening rail.

Referring now to the drawings and particularly to Fig. 1, there is shown a wall or partition comprising an assembly of aligned panels 10 in edge abutting relationship. The panels may be imperforate throughout their areas or they may include window or door openings where the latter are desired.

The specific construction of the panels 10 is not critical to the instant invention and may take different forms, the construction shown in Fig. 2 of said prior Patent #2,316,980 being suitable. Such panels include a frame with the stiles projecting beyond the top and bottom of the panel, as indicated at 12. The frame encloses an intermediate core structure 14. Facing sheets 16 overlie the core and frame. As shown in said prior patent, the upper projecting ends 12 of the stiles may carry caps 18, and suitable means such as bolts, indicated in the instant drawing at 19 and

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illustrated more fully in the prior patent, may be employed to connect stile ends of adjoining panels.

In accordance with the instant invention the assembly includes a stiffening rail 20 extending longitudinally of and resting on the upper edge of the assembly of panels, and molding strips 22 for cooperation therewith. The stiffening rail (see particularly Fig. 3) includes a central section 24 and lateral flanges 26, the flanges being separated from the central section by integral U-shaped portions 28 defining downwardly opening pockets 30, the latter being substantially in line with, but slightly outwardly of the surfaces of the panels. Flanges 26 extend upwardly and outwardly from the U-shaped portions, as illustrated in Figs. 2 and 3, and are integrally joined to downwardly extending sections 32 which terminate in inwardly projecting lips 34. The stiffening rails are made of a relatively stiff material such as sheet steel of 0.040 to 0.065 inch in thickness.

The molding strips 22 (see particularly Fig. 4), preferably made of a lighter gauge springy material, are roughly V-shape in cross-section, the apex 36 of the V pointing downwardly and inwardly toward the faces of the panels. The inner arm 38 of the V extends upwardly and is bent on itself to define a double thickness marginal section 40 adapted to be received within pocket 30. A longitudinal, inwardly projecting bead 42 is formed in the arm intermediate apex 36 and the upper edge of the double thickness marginal section, the inner thickness of the latter overlying the rear of the bead. The molding strip also includes an arm 44 extending outwardly and upwardly from apex 36 and terminating in a return bend 46 defining a pocket 48 adapted to receive lip 34 of the stiffening rail. It will be appreciated that pockets 30 and 48 are made of a width to snugly receive marginal section 40 and lip 34, respectively.

In assembling the structure described above a stiffening rail 20 is mounted on the upper edge of the previously assembled panels. Molding strips 22, which have their legs relatively widely spread apart when in their relaxed position (see Fig. 4) are then placed in position by inserting marginal section 40 into the pocket 30 and then springing arm 44 inwardly until lip 34 can enter pocket 48. Either the apex 36 or the bead 42 or both, depending upon the particular shape of the upper margins of the panels, are thus pressed into yielding engagement with the panels. The resilient characteristics of the molding hold it firmly in

position against accidental removal, although permitting it to be readily removed when desired. For example, if a wall is to be disassembled or a single panel is to be removed, leg **44** may be pressed inwardly until the lip **34** is clear of pocket **48** and the molding strip then removed by a downward pull. The double thickness marginal section **40** provides the necessary strength to enable the molding to exert the desired stiffening effect, without at the same time increasing the thickness of the material to such an extent as to make the strip difficult to fabricate or assemble. If it is desired to extend the partition structure to the ceiling of the room or space, supplementary panels **50** may be mounted in the channel defined by the inner walls of U-shaped portions **28**.

The construction described above provides for easy assembly and disassembly of the wall structure and, at the same time holds the several panels in alignment and prevents rattling between the several parts of the partition where the latter is subject to vibration. Any desired panel of the partition may be removed by first removing the molding strips at the location of such panel, and then disconnecting the bolts where such are employed as in the prior construction of Patent No. 2,316,980. A wall of greater overall stability than those previously known is thus achieved without loss of ease of erection and alteration.

Having thus described my invention in rather full detail, it will be understood that these details need not be strictly adhered to but that various changes and modifications may suggest themselves to one skilled in the art, all falling within the scope of the invention as defined by the subjoined claims.

What I claim is:

1. A wall comprising an assembly of aligned panels, a rail extending along the upper edge of the assembly, said rail including longitudinally extending inverted U sections, the legs of the U sections defining downwardly open pockets, flanges extending outwardly from the U sections, and moldings resiliently engaging the opposite faces of the assembly and including portions received within the pockets and portions in interlocking engagement with said outwardly extending flanges of the rail.

2. A wall comprising an assembly of aligned panels, a rail extending along the upper edge of the assembly, said rail having longitudinally extending inverted U sections, the legs of the U sections defining downwardly opening pockets adjacent the faces of the assembly, and flanges extending outwardly and then downwardly from the U sections, and moldings resiliently engaging the faces of the assembly and including portions received within the pockets and portions in interlocking engagement with said flanges.

3. A wall comprising an assembly of aligned panels, a rail extending along the upper edge of the assembly, said rail having longitudinally extending inverted U sections, the legs of the U sections defining downwardly opening pockets adjacent the faces of the assembly, and flanges projecting upwardly and outwardly from the U sections and then downwardly and terminating in inwardly directed lips, and moldings resiliently engaging the opposite faces of the assembly and including arms received within the pockets and arms in interlocking engagement with said lips.

4. A wall comprising an assembly of aligned panels, a rail extending along the upper edge of the assembly, said rail including longitudinally extending inverted U sections, the legs of the U sections defining downwardly opening pockets adjacent the faces of the assembly, and flanges projecting outwardly and upwardly from the U sections and then downwardly to terminate in inwardly projecting lips, and moldings including arms resiliently engaging the faces of the assembly and received within said pockets and outwardly projecting arms in interlocking engagement with said lips.

5. A wall comprising an assembly of aligned panels, a rail extending along the upper edge of the assembly, said rail including a longitudinally extending inverted U section, the legs of the U section defining an inwardly opening pocket adjacent a face of the assembly, and a flange projecting outwardly and upwardly and then downwardly from the U section and terminating in an inwardly projecting lip, and a molding formed of resilient strip material bent into substantially V-shape to define an arm received within said pocket and an arm in interlocking engagement with the lip.

6. A wall comprising an assembly of aligned panels, a rail extending along the upper edge of the assembly, said rail including longitudinally extending sections of inverted U-shape, the legs of the U-shaped sections defining inwardly opening pockets adjacent the faces of the assembly, and flanges projecting outwardly and upwardly and then downwardly from the U-shaped sections and terminating in inwardly projecting lips, and moldings each formed of resilient strip material bent into V-shape to define an arm having a bead in engagement with a face of the assembly, and an upper marginal portion received within one of said pockets, and to define a second arm having a portion in interlocking engagement with the lip.

7. In a stiffening structure for a wall including a plurality of aligned panels, a rail to extend along the upper edge of the assembly and having a longitudinally extending section of inverted U-shape, the legs of the U-shaped section defining a pocket, and a flange projecting outwardly from the U-shaped section, and a molding formed of resilient strip material bent into substantially V-form and including an arm received within the pocket and an arm in interlocking engagement with the outwardly projecting flange of said rail.

8. In a stiffening structure for a wall including a plurality of aligned panels, a rail to extend along the upper edge of the assembly, said rail having longitudinally extending sections of inverted U-shape, the legs of the U-shaped sections, defining downwardly opening pockets, and flanges projecting outwardly and upwardly and then downwardly from the U-shaped sections to terminate in inwardly directed lips, and molding strips resiliently engaging the opposite sides of the assembly, each of the molding strips comprising resilient strip material bent into substantially V-form to define an arm having a marginal portion received within a pocket of the rail and an outwardly projecting arm in interlocking engagement with one of said lips.

9. In a stiffening structure for a wall including a plurality of aligned panels, a rail to extend along the upper edge of the assembly, said rail having longitudinally extending sections of inverted U-shape, the legs of the U-shaped sections defining downwardly opening pockets, and flanges projecting outwardly from the U-shaped sections, and molding strips resiliently engaging the side walls of the assembly, each molding strip comprising strip material bent into V-shape to de-

fine an arm having an intermediate bead and a terminal portion formed of a double thickness of the material inserted within one of said pockets and an outwardly projecting arm having a terminal portion in resilient interlocking engagement with one of said flanges.

10. A stiffening rail for a wall assembly, said rail comprising a central web section having inverted U sections extending outwardly from its lateral edges so that the two generally parallel legs of each U section are disposed generally normal to the web with one of the legs of each U section disposed laterally outwardly of the other leg of each section, the outer leg of each of said sections having at its end remote from the closed portion of the corresponding U section a flange extending in a reverse direction relative to said end of each outer leg and inclined laterally outwardly therefrom, each of said inclined flanges terminating in a reversely directed flange lying generally parallel to the legs of the U sections and in turn terminating in an inwardly directed lip.

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