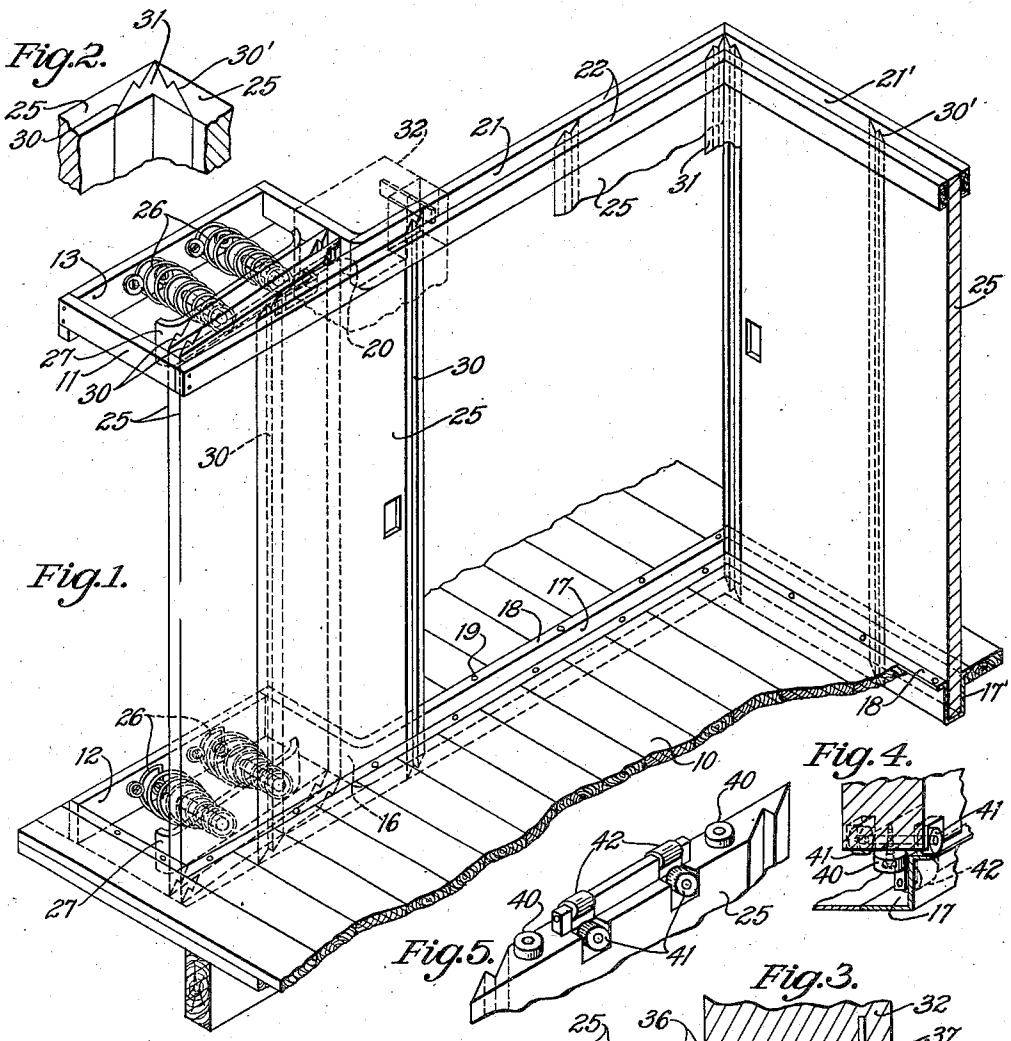
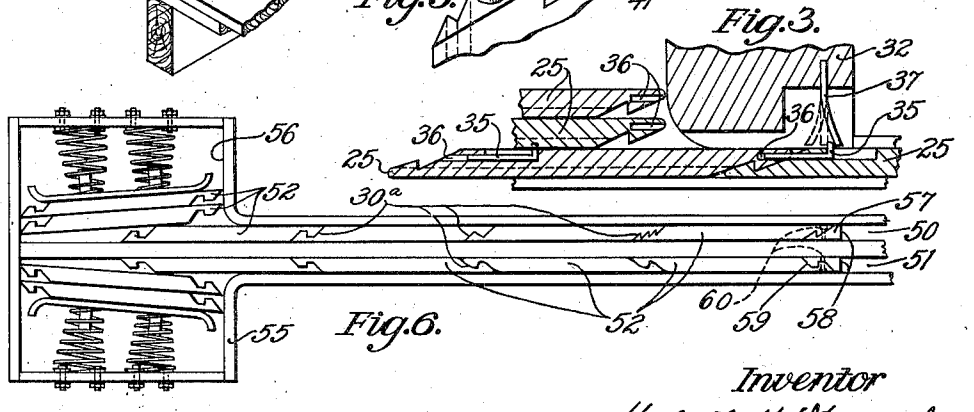
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SLIDABLE PARTITION

Filed May 29, 1937





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SLIDABLE PARTITION

Herbert H. Stevens, Jr., Lynn, Mass.

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6 Claims. (Cl. 20—19)

This invention relates to building constructions and more particularly to a movable wall structure for dividing space in any building, such as a dwelling, office building, or factory, and may in fact be used to divide space horizontally as well as vertically.

It is an object of the present invention to provide a movable wall structure which may be quickly and conveniently moved into a position to divide a space, such as a floor space and form a neat appearing continuous wall. The wall structure may be made of any suitable material, metal, wood, glass or otherwise, and may be painted, decorated, or even insulated, as desired. My construction is particularly adaptable to modern dwellings in providing great flexibility of floor space and of room arrangement, and the wall structure may be kept out of the way in attractive magazines when not in use. Thus additional rooms may be provided, and the size of existing rooms changed, as desired, at very little expense and effort.

The invention will be more clearly understood from the following description in conjunction with the accompanying drawing, in which:

Fig. 1 is a fragmentary perspective view of a portion of a building having a wall structure embodying the invention;

Fig. 2 is a fragmentary perspective view of a portion of the structure shown in Fig. 1;

Fig. 3 is a sectional detail plan view of an auxiliary locking device which may be used on the structure shown in Fig. 1;

Figs. 4 and 5 are fragmentary perspective views of a portion of a structure of modified form embodying the invention; and

Fig. 6 is a fragmentary plan view of another modified construction embodying the invention, having double panels.

Before explaining in detail the present invention, it is to be understood that the invention is not limited in its application to the details of construction and arrangement of parts illustrated in the accompanying drawing, since the invention is capable of other embodiments and of being practiced or carried out in various ways. Also it is to be understood that the phraseology or terminology employed herein is for the purpose of description and not of limitation, and it is not intended to limit the invention claimed herein beyond the requirements of the prior art.

In Fig. 1 of the accompanying drawing there is illustrated a floor 10 of a room arranged to be sub-divided by a movable wall structure embodying the invention. A magazine 11 extends vertically from the floor 10 and is defined by a lower substantially rectangular frame 12 and an upper substantially rectangular frame 13. The lower frame 12 is preferably imbedded in and substantially flush with the surface of the floor 10, but may be disposed on top of the floor, if desired. Magazine 11 may also be journaled in the floor and ceiling to pivot in any direction, with corresponding channels or guideways for the wall panels. Likewise magazine 11 may be made movable laterally in any direction to enlarge or decrease room size, by the use of suitable fastenings. The upper frame 13 is suitably secured to the ceiling (not shown) of the room. The lower frame 12 is provided with a groove or passage 16 communicating with a guideway or channel 17, the upper edges of which are provided with outwardly turned flanges 18 lying flush with and secured to the floor 10 by fasteners 19. The upper frame 13 is provided with a groove or passage 20 communicating with a guideway 21 formed by spaced guide members 22.

The magazine 11 is adapted to receive a plurality of panels 25 arranged in parallel relation. A pair of coil springs 26 are secured at one end to the back of each of the upper and lower magazine frames 12 and 13. The other ends of each pair of springs 26 engage and urge a presser foot 27 toward the panels 25 and maintain one of the latter in a position in alinement with the cooperating guideways 17 and 21.

Preferably the adjacent edges of adjacent panels are provided with stepped cam-like portions or notches 30 adapted to lap and cooperate to lock adjacent panels together. These notches 30 may be of any desirable shape. A number of variations are shown at 30*a* in Fig. 6. It is only necessary that they form a sloping surface which will unlock when the panels are telescoped or pushed together, and will lock when the panels are pulled out or extended longitudinally. One magazine 11 may be used, the panels in which may extend entirely across a room, to be suitably fastened as by a spring-pressed catch to the wall on the opposite side, or two magazines 11 may be used if a large space is to be divided, the panels of which will be extended toward each other in a straight line and meet, and be suitably fastened. Or a second magazine may be used the panels of which will extend in a different direction, so that two sets of panels will meet, as at right angles. This latter arrangement is shown in Fig. 1, except that the second magazine is itself not illustrated.

In Fig. 1 the second structure provided has a

channel 17' and a guideway 21' intersecting the channel 17 and guideway 21 respectively. The channel 17' and guideway 21' lead from a magazine similar to the magazine 11 and adapted to receive a plurality of panels 25' which are normally urged toward a position in alinement with the cooperating guideways 17' and 21'.

If desired, and when so firm a structure is not necessary guideways 17 and 21 may be eliminated, so long as other suitable locking means are provided for preventing the panels 25 from falling apart, in addition to notches 30.

When it is desired to subdivide the room, the panels 25 are successively withdrawn from the magazine 11 along the cooperating guideways 17 and 21 to provide a wall structure extending the entire length of the guideways. As each panel 25 is moved along the guideways from the magazine 11, the next adjacent panel 25 in the magazine is urged by the springs 26 toward a position in alinement with the cooperating guideways. Consequently, as the stepped cam-like portions 30 on adjacent edges of adjacent panels approach one another they are urged into cooperative relation so as to lock the adjacent panels together as illustrated in Fig. 1. In a similar manner the panels 25' are moved along the cooperating guideways 17' and 21' to their locations in the desired wall structure. A locking strip 31 shown in detail in Fig. 2 having stepped cam-like surfaces adapted to cooperate and interengage with the stepped cam-like edge portions 30 and 30' on the corner panels 25 and 25' is fitted into the intersection of the guideways 21 and 21' and the intersection of the guideways 17 and 17' so as to extend between the two intersections and form a corner of the wall structure.

In Fig. 3, I have shown an auxiliary locking device, which may be used, if desired, for preventing the sections from separating when it is undesirable to allow the guideways 17 and 21 and notches 30 to perform this function alone.

If desired, a latch 35 may be slidably mounted in one edge of each of the panels 25 and adapted to engage a recess 36 in the edge of an adjacent panel. The latch member 35 is adapted to be engaged by the end of a flexible dog 37 so as to move the latch 35 into the recess and lock the adjacent panels together. When the panels 25 are moved along the cooperating guideways 17 and 21 toward the magazine 11, the flexible dog 37 engages the latch member 35 and withdraws it from the recess 36. I have shown this auxiliary locking device of Fig. 3, as applied to Fig. 1, in dotted lines thereon, at 32.

As each panel 25 is returned to the magazine 11 the springs 26 tend to maintain it in alinement with the cooperating guideways 17 and 21 by the presser feet 27. The cam-like portion 30 on the edge of a panel in the magazine adjacent the guideways is engaged by the cam-like portion 30 on the next adjacent panel as it enters the magazine to move the panels out of interlocking relation and permit the latter panel to enter the magazine 11 and urge the first panel toward the back of the magazine.

If desired, the upper and lower edges of the panels 25 may be provided with a roller structure for supporting and guiding the panels in their movement in and into and out of the magazine 11. Thus, as illustrated in Figs. 4 and 5, the upper and lower edges of the panel 25 may be provided with spaced rollers 40 mounted to rotate about a vertical axis and adapted to engage the side walls of the channel 17 or guide-ways 21 and absorb lateral thrust upon the panel. A pair of spaced rollers 41 are mounted adjacent each face of the panel to rotate about an axis perpendicular to the face of the panel and adapted to engage the outwardly turned flanges 18 on the guide channels 17 or the lower edges of the members 22. A pair of rollers 42 are mounted to rotate about a horizontal axis parallel to the general plane of the panel and adapted to engage the bottom or top of the magazine 11.

In Fig. 6 there is illustrated a structure adapted to provide a movable double wall structure. This structure comprises a pair of guide-ways 50 and 51 at the floor and ceiling adapted to guide panels 52, constructed similar to the panels 25, into and out of magazines 55 and 56 respectively and positioned in opposed relation and each constructed similar to the magazine 11.

In this modification the outer edges of the outer panels are finished by a strip 57 having one vertical edge 58 square and the other vertical edge shaped to fit the stepped cam-like portion 59 so that the strip may be secured to the panel as by pins 60.

It will then be seen that by means of my construction I have provided a movable wall structure of great flexibility and practicality in dividing room spaces, which will form a firm and permanent structure when desired, and may be stored out of the way when not in use. Being made of any desired material, and capable of receiving any desired decorative treatment, it may be used in any type of building, for any space dividing purpose.

I claim:

1. A movable wall structure comprising a plurality of panels, a magazine adapted to receive said panels, means for guiding said panels from said magazine to their locations in said wall structure, means for moving said panels in said magazine into alignment with said guiding means while maintaining said panels in parallel positions, means operative to move said panels out of alinement and into parallel positions in said magazine as said panels enter said magazines, and means for operatively connecting adjacent panels together, so that the movement of one panel in said guiding means away from said magazine will cause another panel to be moved out of said magazine.

2. A movable wall structure comprising a plurality of panels, a magazine adapted to receive said panels, means for guiding said panels from said magazine to their locations in said wall structure, means for moving said panels in said magazine into alignment with said guiding means, means at adjacent edges of said panels operative as each panel is moved into alignment with said guiding means to interlock with an adjacent panel.

3. A movable wall structure comprising a plurality of panels, a magazine adapted to receive said panels, means for guiding said panels from said magazine to their locations in said wall structure, means for moving said panels in said magazine into alignment with said guiding means, means in each panel operative as each panel is moved in said magazine into and out of alignment with said guiding means to lock said panel with and unlock it from an adjacent panel respectively, and means independent of each panel operative as a panel moves along said guiding means from and toward said magazine for locking and unlocking adjacent panels respectively.

4. A movable wall structure comprising a plu-

rality of panels, a magazine adapted to receive said panels, means for guiding said panels from said magazine to their locations in said wall structure, means for moving said panels in said magazine into alignment with said guiding means, and means operative as a panel moves along said guiding means from and toward said magazine for independently locking and unlocking adjacent panels respectively.

5. A movable wall structure comprising a plurality of panels, a magazine adapted to receive said panels, means for guiding said panels from said magazine edge to edge to their locations in said wall structure, and means for moving said panels in said magazine in a direction perpendicular to their faces and into alignment with said guiding means, the adjacent panels having stepped cam-like portions adapted to overlap and cooperate to lock adjacent panels together as a panel is moved along said guiding means out of said magazine and an adjacent panel is moved in said magazine toward its position in alignment with said guiding means.

6. A movable wall structure comprising a plurality of panels, a magazine adapted to receive said panels, means for guiding said panels from said magazine edge to edge to their locations in said wall structure, and means for moving said panels in said magazine in a direction perpendicular to their faces and into alignment with said guiding means, the adjacent panels having stepped cam-like portions adapted to overlap and cooperate to lock adjacent panels together as a panel is moved along said guiding means out of said magazine and an adjacent panel is moved in said magazine toward its position in alignment with said guiding means, and an edge strip having a stepped cam-like portion adapted to cooperate with the stepped cam-like portion of a panel to provide the end portion of a wall.

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