

[54] **PARTITION ASSEMBLY**

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[58] Field of Search 52/238, 241, 242, 36, 239, 52/282, 122

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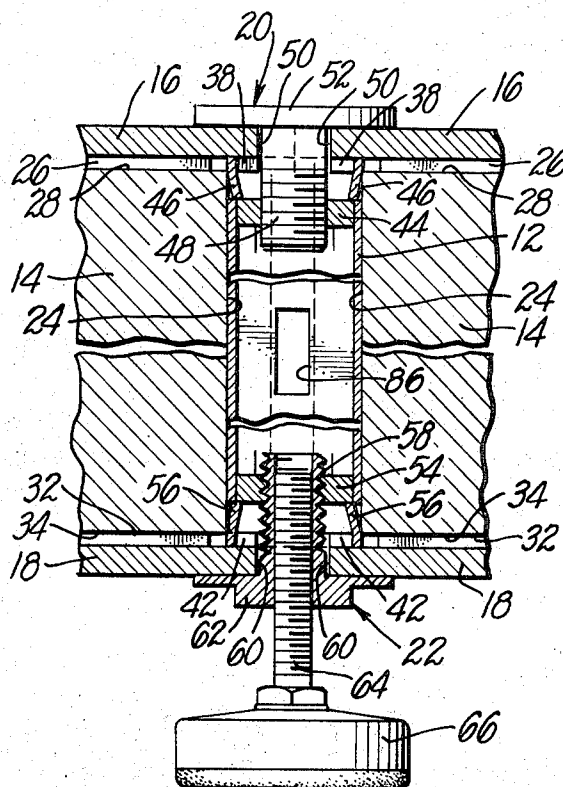
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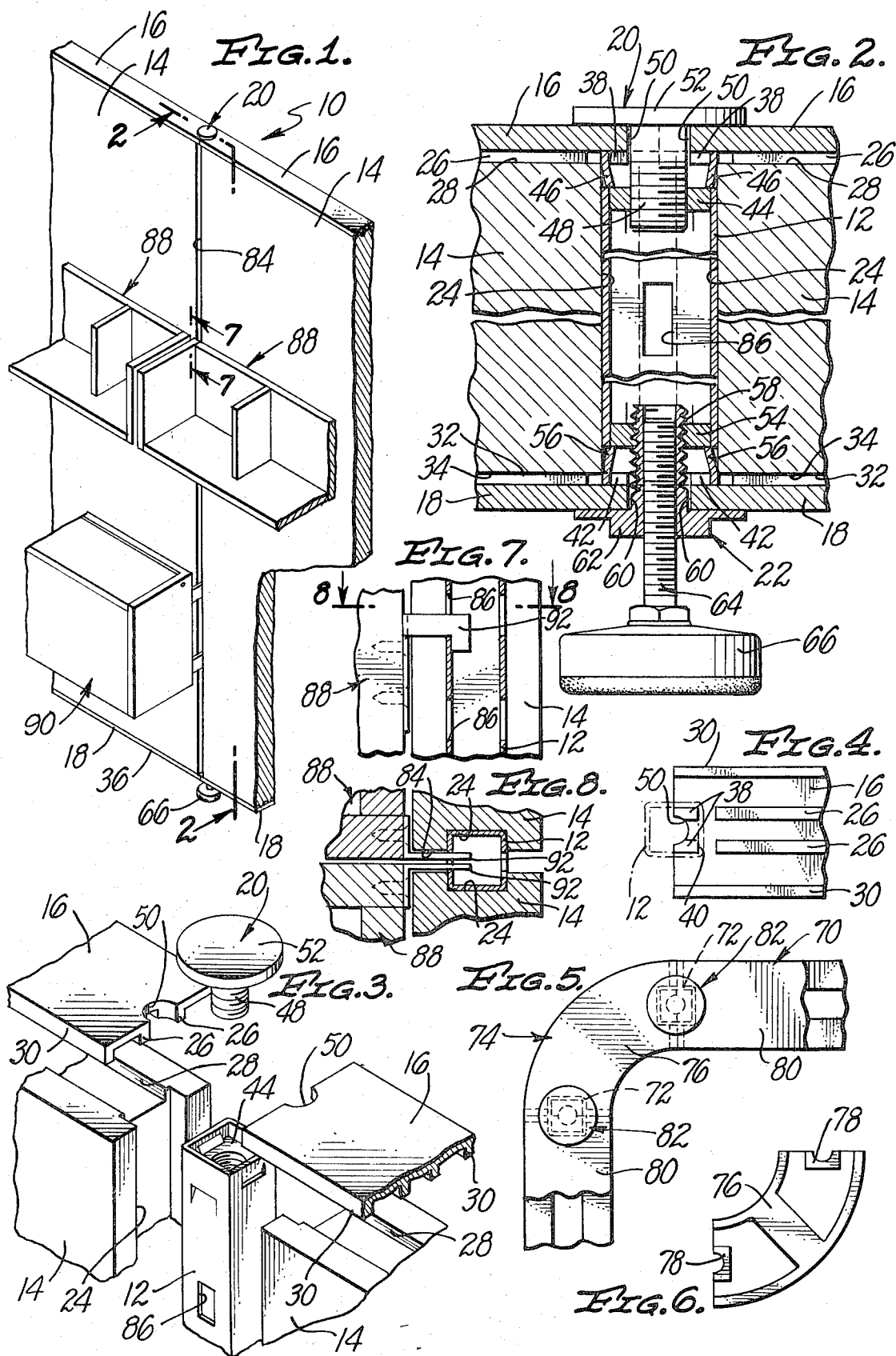
ABSTRACT

A partition assembly including a tubular post, panels

respectively having vertical edges engaging opposite sides of the post, top stringers respectively overlying the upper edges of the panels and respectively having ends interlocked with the tubular upper end of the post, bottom stringers respectively underlying the lower edges of the panels and respectively having ends interlocked with the lower tubular end of the post, an upper screw threaded into a nut in the upper tubular end of the post and clamping the ends of the top stringers to the upper tubular end of the post, and a bottom screw threaded into a nut in the lower tubular end of the post and clamping the ends of the bottom stringers to the lower tubular end of the post. The vertical edges of the panels are spaced apart to provide a gap therebetween and the post is provided with vertically spaced openings accessible through the gap, various shelf or bin units, or the like, carrying hangers which extend through the gap into desired ones of such openings. The hangers are laterally offset from the units so that they can be inserted into the same openings in the post so that the units can be at the same level.

8 Claims, 8 Drawing Figures





PARTITION ASSEMBLY

BACKGROUND OF INVENTION

The present invention relates in general to a partition assembly and, more particularly, to a partition assembly comprising a frame composed of posts and top and bottom stringers and adapted to receive partition panels therein.

SUMMARY AND OBJECTS OF INVENTION

General objects of the invention are to provide a partition assembly which includes a sturdy and rigid frame capable of being assembled and disassembled readily and which includes panels capable of being installed in and removed from the frame readily, in many instances without completely disassembling the frame.

More particularly, the invention may be summarized as including, and a primary object of the invention is to provide a partition assembly which includes: a post having upper and lower tubular ends; panels respectively having vertical edges engaging sides of the post; top stringers respectively overlying the upper edges of the panels and respectively having ends mechanically interlocked with the tubular upper end of the post; bottom stringers respectively underlying the lower edges of the panels and respectively having ends mechanically interlocked with the lower tubular end of the post; upper screw means clamping the ends of the top stringers to the upper tubular end of the post; and bottom screw means clamping the ends of the bottom stringers to the lower tubular end of the post.

Another object is to provide the ends of the top and bottom stringers with portions inserted into the upper and lower tubular ends of the post to mechanically interlock the stringers and the post.

A further object is to provide a construction wherein each screw means comprises a screw threaded into a nut in the corresponding tubular end of the post and adapted to clamp the ends of the corresponding stringers to the corresponding end of the post.

Another object is to provide a partition assembly wherein the panels are provided in their vertical edges with grooves receiving the post therein. With this construction, the panels can be installed and removed readily merely by removing the top stringers and sliding the panels upwardly or downwardly along the post, this being possible wherever there is sufficient overhead clearance, which is an important feature.

Another object is to provide the stringers with edge flanges engageable with the front and rear sides of the panels.

Yet another object is to provide a partition assembly wherein the vertical edges of the panels are spaced apart to provide a gap therebetween, and wherein the post is provided with vertically spaced openings accessible through the gap. With this construction, various shelf or bin units, or the like, can be mounted on the post by means of hangers extending through the gap between the panels into the proper openings in the post. Another object in this connection is to provide hangers which are laterally offset from the units so that hangers of adjacent units can be inserted into the same openings in the post so that such units can be positioned at the same level.

The foregoing objects, advantages, features and results of the present invention, together with various

other objects, advantages, features and results thereof which will be evident to those skilled in the partition assembly art in the light of this disclosure, may be achieved with the exemplary embodiments of the invention illustrated in the accompanying drawing and described in detail hereinafter.

DESCRIPTION OF DRAWING

FIG. 1 is a fragmentary perspective view of a partition assembly of the invention;

FIG. 2 is an enlarged, fragmentary vertical sectional view taken as indicated by the arrowed line 2—2 of FIG. 1;

FIG. 3 is a fragmentary exploded perspective view showing a portion of the partition assembly of the invention;

FIG. 4 is a fragmentary bottom plan view of a top stringer of the partition assembly;

FIG. 5 is a fragmentary top plan view of a curved partition assembly of the invention;

FIG. 6 is a bottom plan view of a top stringer forming part of the curved partition assembly of FIG. 5;

FIG. 7 is an enlarged, fragmentary sectional view taken as indicated by the arrowed line 7—7 of FIG. 1; and

FIG. 8 is a sectional view taken as indicated by the arrowed line 8—8 of FIG. 7.

DESCRIPTION OF EXEMPLARY EMBODIMENTS OF

INVENTION

Referring initially to FIGS. 1 to 3 of the drawing, shown fragmentarily therein is a partition assembly 10 of the invention which includes a tubular post 12, two panels 14 respectively having vertical edges engaging opposite sides of the post, two top stringers 16 respectively overlying the upper edges of the panels and respectively having ends interlocked with the tubular upper end of the post, two bottom stringers 18 respectively underlying the lower edges of the panels and respectively having ends interlocked with the lower tubular end of the post, upper screw means 20 clamping the ends of the top stringers to the upper tubular end of the post, and bottom screw means 22 clamping the ends of the bottom stringers to the lower tubular end of the post. The post 12 is preferably of square cross section, but other cross sections may be used.

The vertical edges of the panels 14 are provided with grooves 24 which receive opposite sides of the post 12 therein, as perhaps best shown in FIG. 8. With this construction, provided that sufficient overhead clearance is available, it will be apparent that the panels 14 may be installed or removed simply by removing the top stringers 16, which is an important feature of the invention.

The top stringers 16 are provided with laterally spaced central ribs 26 which preferably fit into grooves 28 in the upper edges of the panels 14. The top stringers 16 also have edge flanges 30 which engage the front and rear sides of the panels 14 to further secure them in place. Similarly, the bottom stringers 18 have laterally spaced central ribs 32, FIG. 2, received in grooves 34 in the bottom edges of the panels 14. The bottom stringers also have edge flanges 36 engageable with the front and rear sides of the panels 14 to secure the panels in place.

The end of the top stringers 16 have portions 38 which are inserted into the upper tubular end of the post 12 to interlock the top stringers and post mechanically. Conveniently, the portions 38 are formed by a groove 40 across the central ribs 26, as best shown in FIG. 4. Similarly, the bottom stringers 18 have portions 42, FIG. 2, inserted in the lower tubular end of the post 12 to interlock the post and the bottom stringers. The portions 42 of the bottom stringers 18 may be formed in the same way as the portions 38 of the top stringers 16.

The upper screw means 20 includes a nut 44 which is complementary in configuration to the post 12 and which is pressed into the upper end of the post, being held against upward movement by inwardly staked portions 46 of the post. The upper screw means 20 also includes a screw 48 which extends through semicircular notches 50 in the adjacent ends of the top stringers 16 and which is threaded into the nut 44, the screw 48 having an enlarged head 52 overlying the adjacent ends of the top stringers. With this construction, the top stringers 16 are securely clamped to the upper tubular end of the post 12, in addition to being mechanically interlocked relative thereto by the portions 38 inserted into the upper tubular end of the post.

Similarly, the lower screw means 22 includes a nut 54 pressed into the lower end of the post 12 and secured against downward movement by stakes 56. The lower screw means 22 also includes a screw 58 extending upwardly through semicircular notches 60 in the adjacent ends of the bottom stringers 18 and threaded into the nut 54. An enlarged head 62 on the screw 58 engages the adjacent ends of the bottom stringers 18 and clamps them against the lower end of the post 12, this also being in addition to the mechanical interlock provided by the insertion of the portions 42 of the bottom stringers 18 into the lower tubular end of the post.

In the construction illustrated, the screw 58 is tubular and internally threaded to receive the externally threaded stem 64 of a foot 66 for supporting the post 12. As will be apparent, the foot 66 can be adjusted to properly level the partition assembly 10.

FIGS. 5 and 6 illustrate a variation 70 of the partition assembly 10 which is curved. More particularly, two adjacent posts 72 are interconnected by a curved portion 74 which is shown as including a curved top stringer 76 having portions 78 insertable into the tubular upper ends of the posts 72 to achieve the same type of mechanical interlock as hereinbefore discussed. The ends of the curved top stringer 76 and adjacent ends of straight top stringers 80 are clamped to the upper ends of the post 72 by upper screw means 82 similar to the upper screw means 20. Similar interconnections are provided at the lower ends of the posts 72, as will be clear from the hereinbefore-described interconnections between the bottom stringers 18 and the lower end of the post 12. Consequently, a further description is not required.

As best shown in FIGS. 1 and 8, the vertical edges of the panels 14 adjacent the post 12 are spaced apart horizontally to provide a gap 84 therebetween. The post 12 is provided with vertically spaced openings 86 therein in register with the gap 84. Shelf or bin units 88 and 90, or the like, are provided with hangers 92 which can be inserted through the gap 84 into desired ones of the openings 86. As best shown in FIG. 7, the hangers 92 are hook shaped so that they engage the interior of

the post 12. It will be understood that each of the units 88 and 90 is of a length to span one or more of the panels 14, the opposite ends of these units from the ones shown being similarly equipped with hangers engageable in corresponding openings in posts spaced from the post 12 shown.

An important feature is that the hangers 92 are laterally offset from the units 88 and 90, as shown in FIG. 8, so that two of the hangers 92 may be inserted in the same opening 86 while still providing at least a slight clearance between the adjacent ends of the units. With this construction, two of the units, such as the units 88, can be mounted at the same elevation, by inserting corresponding hangers 92 into the same openings 86, as shown in FIG. 8. Thus, it is not necessary to vertically stagger the units, which is an important feature.

Although exemplary embodiments of the invention have been disclosed for purposes of illustration, it will be understood that various changes, modifications and substitutions may be incorporated in such embodiments without departing from the spirit of the invention as defined by the claims hereinafter appearing.

I claim as my invention:

1. In a partition assembly, the combination of:

- a. a post having upper and lower tubular ends;
- b. panels respectively having vertical edges engaging said post;
- c. top stringers respectively overlying the upper edges of said panels and respectively having ends interlocked with the tubular upper end of said post;
- d. bottom stringers respectively underlying the lower edges of said panels and respectively having ends interlocked with the lower tubular end of said post;
- e. upper screw means clamping said ends of said top stringers to the upper tubular end of said post; and
- f. bottom screw means clamping said ends of said bottom stringers to the lower tubular end of said post.

2. A partition assembly according to claim 1 wherein said ends of said top and bottom stringers respectively have portions inserted into the upper and lower tubular ends of said post.

3. A partition assembly according to claim 2 wherein said vertical edges of said panels are spaced apart to provide a gap therebetween and wherein said post is provided with vertically spaced openings accessible through said gap.

4. A partition assembly according to claim 3 including units carrying hangers extending through said gap into certain of said openings.

5. A partition assembly according to claim 4 wherein said hangers are laterally offset from said units so that they can be inserted into the same openings in said post.

6. A partition assembly according to claim 2 wherein the vertical edges of said panels are provided with grooves receiving said post therein.

7. A partition assembly according to claim 2 wherein said top and bottom stringers respectively have flanges engageable with front and rear sides of said panels adjacent the upper and lower edges thereof.

8. In a partition frame assembly, the combination of:

- a. a post having upper and lower tubular ends and adapted to have vertical edges of panels engage sides thereof;

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- b. top stringers respectively having ends interlocked with the tubular upper end of said post and adapted to overlie upper edges of the panels;
- c. bottom stringers respectively having ends interlocked with the lower tubular end of said post and adapted to underlie lower edges of the panels;

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- d. upper screw means clamping said ends of said top stringers to the upper tubular end of said post; and
- e. bottom screw means clamping said ends of said bottom stringers to the lower tubular end of said post.

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