

[72] Inventor **David H. LaGue**
Kansas City, Mo.
 [21] Appl. No. **794,077**
 [22] Filed **Jan. 27, 1969**
 [45] Patented **July 20, 1971**
 [73] Assignee **The Glen O'Brien Movable Partition**
Company, Inc.
Kansas City, Mo.

FOREIGN PATENTS

374,471 1964 Switzerland..... 52/463

OTHER REFERENCES

UNITED STATES GYPSUM PUBLICATION, Industrial
 Sales Dept. 300 West Adams St., Chicago, IL MP-135 "USG
 E-Z Wall Movable Partition" page 1 copy received June 28,
 1960 52-238

Primary Examiner—John E. Murtagh
 Attorney—Fishburn, Gold and Litman

[54] PARTITION SYSTEM 4 Claims, 5 Drawing Figs.

[52] U.S. Cl..... 52/241,
 52/161, 52/481
 [51] Int. Cl..... E04b 2/28,
 E04b 2/78
 [50] Field of Search..... 52/241,
 242, 481, 463, 464, 238

[56] References Cited UNITED STATES PATENTS

2,219,714	10/1940	Sperry	52/716
3,274,741	9/1966	Neagle	52/476
3,034,609	5/1962	Young	52/241
3,381,438	5/1968	Bohnsack	52/241
3,388,521	6/1968	Tillisch	52/573

ABSTRACT: A partition system extending between a floor surface and a ceiling surface comprises a plurality of pairs of laterally spaced wall-defining panel units extending between upright joint-framing members which engage facing edge portions of adjacent panel units. Snap-on retainer-cover members are mounted on the joint framing members and engage the facing edge portions of the adjacent panel units. Ceiling, floor, and end framing members engage and position upper, lower, and end edge portions, respectively, of the panel units. The edge member at the ceiling surface receives and retains a resilient clip therein which cooperates with the ceiling edge member to engage and retain the upper edge portions of the panel units.

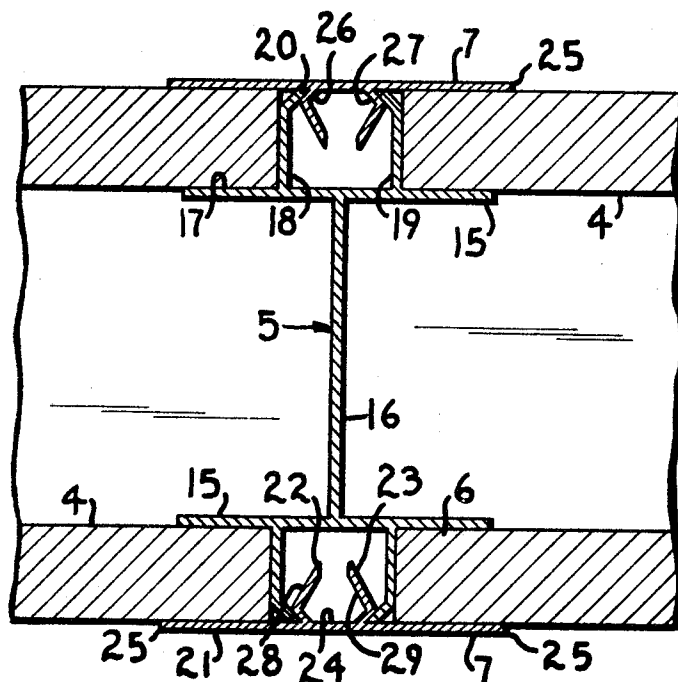


Fig. 1.

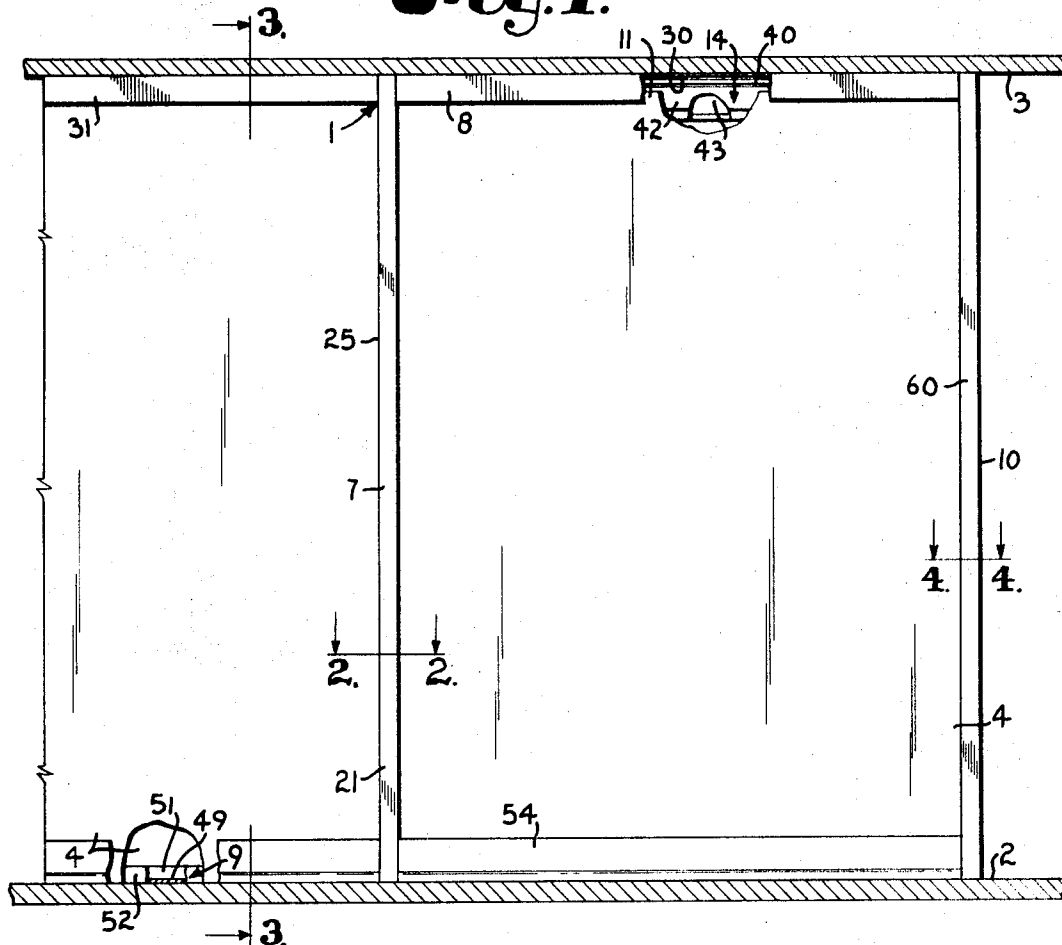
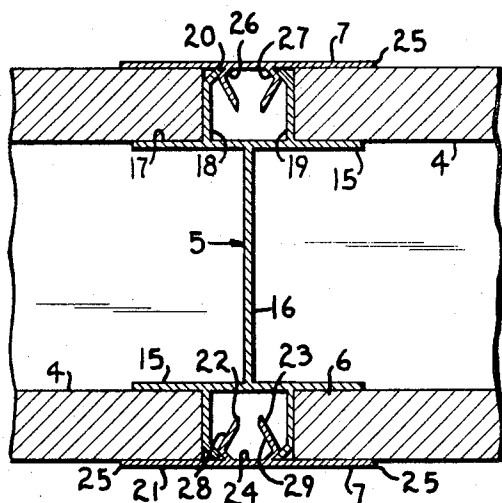


Fig. 2.



INVENTOR
DAVID H. La GUE

BY
Fishburn, Gold & Linton
ATTORNEYS

Fig. 3.

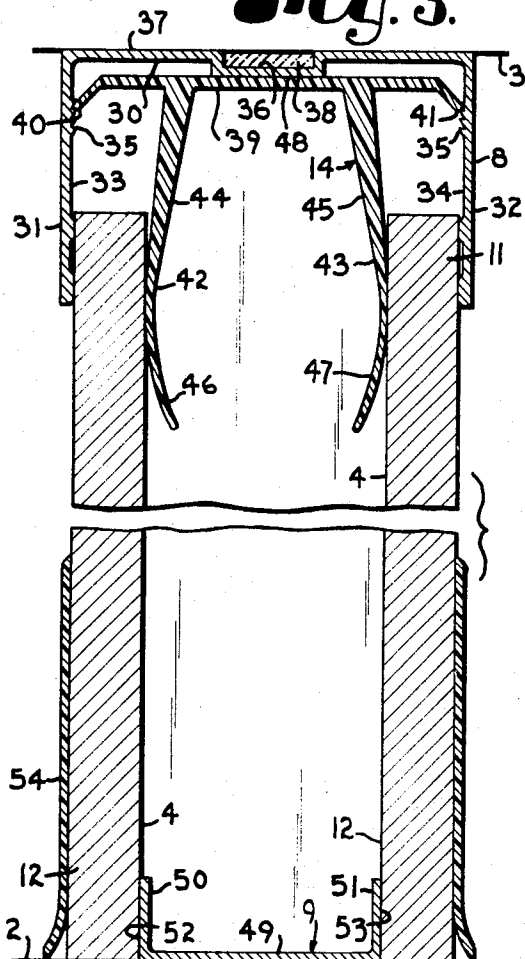


Fig. 4.

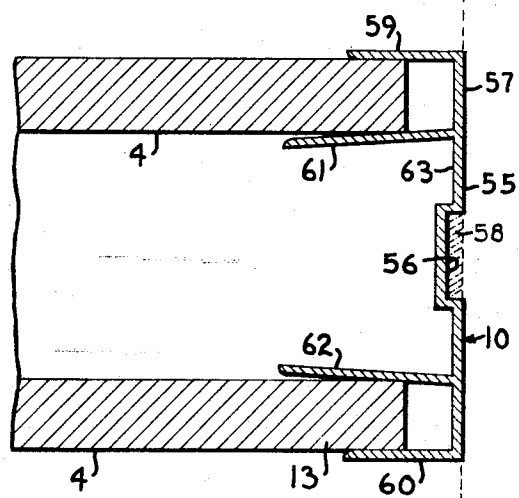
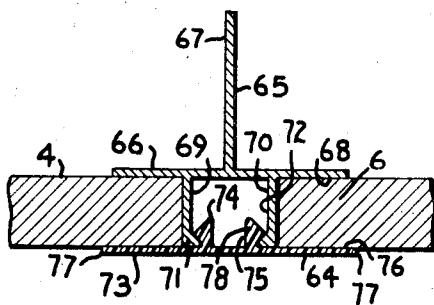


Fig. 5.



INVENTOR
DAVID H. La GUE

BY
Fishburn, Goddard & Sullivan
ATTORNEYS

PARTITION SYSTEM

The present invention relates generally to partition systems, and more particularly to novel post or joint framing members and novel edge framing members cooperating therewith to position and retain peripheral edges of laterally spaced wall-defining pairs of panel units.

The principal objects of the present invention are: to provide a partition system having novel snap-on panel retainer-cover members which are interengageable with joint framing members for retaining facing edge portions of wall-defining panel units; and to provide such a partition system with novel ceiling edge framing members having a resilient clip received and retained therein for cooperatively retaining upper edge portions of the panel units.

Other objects of the invention are: to provide a partition system having framing members which display plain, attractive, and simple lines and which provide finished joints and edges; to provide such a partition system wherein the framing members may be simply and readily assembled and disassembled without damage to the components thereof; to provide such a partition system wherein the framing members are extrusions of simple shape and have novel interengageable connecting parts; to provide such a partition system wherein a minimum of labor and tools are required for assembly and disassembly; to provide such a partition system which is easily adapted to building construction wherein there are minor misalignments of structural elements such as columns, walls, floors, ceilings, and the like; to provide such a partition system which is substantially rigid when assembled into a completed wall; and to provide novel framing members for such a partition system which are economical to manufacture, assemble, disassemble, and maintain.

Other objects and advantages of this invention will become apparent from the following description taken in connection with the accompanying drawings, wherein are set forth by way of illustration and example certain embodiments of this invention.

FIG. 1 is an elevational view of a partition system having framing members therein embodying features of the present invention.

FIG. 2 is a transverse sectional view taken on line 2-2, FIG. 1, showing a joint framing member and interengaging snap-on retainer-cover members.

FIG. 3 is a fragmentary sectional view through the partition system taken on line 3-3, FIG. 1, showing a ceiling edge member and a resilient panel unit retaining clip therein.

FIG. 4 is a transverse sectional view taken on line 4-4, FIG. 1, showing an end edge framing member and wall-defining panel units retained therein.

FIG. 5 is an enlarged fragmentary sectional view showing a modified joint framing member and a modified snap-on retainer-cover member interengaged therewith.

Referring more in detail to the drawings:

The reference numeral 1 generally designates a partition system wherein a wall extends between a floor surface 2 and a ceiling surface 3, with the wall having a plurality of pairs of laterally spaced wall-defining panel units 4 extending between upright posts or joint framing members 5 which engage facing edge portions 6 of adjacent panel units 4. Snap-on retainer-cover members 7 are mounted on the joint framing members 5 and engage the facing edge portions 6 of the adjacent panel units 4 and retain same in clamping engagement between the joint framing member 5 and the snap-on retainer-cover members 7. Ceiling, floor, and end edge members 8, 9, and 10, respectively, engage and position upper, lower, and end edge portions 11, 12, and 13, respectively, of the panel units 4, thereby cooperating with the joint framing members 5 and the snap-on retainer-cover members 7 to position and retain peripheral edges of the panel units 4. The ceiling edge member 8 receives and retains a resilient clip 14 which cooperates with the ceiling edge member 8 to engage and retain the upper edge portions 11 of the panel units 4.

Each joint framing member 5 is an extruded member with portions thereof of suitable cross section and the joint framing members 5 are preferably H- or I-sections with substantially parallel-spaced flanges 15 connected by a web portion 16 extending therebetween. The flanges 15 each have an exterior face or surface 17 parallel with the plane of the wall, and positioned to be engaged by the facing edge portions 6 of the panel units 4. Each joint framing member 5 has longitudinally extending pairs of mounting ribs 18 and 19 integral with the flanges 15 and extending outwardly from the respective exterior surfaces 17 of each of said flanges 15. The mounting ribs 18 and 19 of each pair are laterally spaced and terminate in outer edge portions 20, with said edge portions of each pair of mounting ribs extending outwardly and inwardly in converging relation, to thereby narrow the spacing between the outer edge portions 20 of the laterally spaced mounting ribs 18 and 19.

The outer or free edges of the edge portions 20 of the mounting ribs 18 and 19 are spaced from the exterior surface 17 of the respective flange 15 a distance substantially corresponding to the thickness of the wall panel unit 4, with edges of the facing edge portions 6 of the wall panel units 4 adapted to engage the mounting ribs 18 and 19.

Each of the snap-on retainer-cover members 7 is preferably an elongate structure formed by extrusion, with an elongate platelike cover member 21 and a pair of laterally spaced longitudinally extending fastening structures for engaging the outer edge portions 20 of the mounting ribs 18 and 19, with an interference that retains the respective snap-on retainer-cover member 7 in place. In the illustrated form, the fastening structure is a pair of snap-on ribs 22 and 23 extending from an interior face or surface 24 of the platelike cover member 21 and substantially centered between side edges 25 thereof. The snap-on ribs 22 and 23 are positioned to be inserted between the mounting ribs 18 and 19 and retained in interengagement therewith. In the illustrated structure, the snap-on ribs 22 and 23 have diverging portions 26 and 27, respectively, extending outwardly from the interior face or surface 24 and inwardly converging portions 28 and 29 forming the outer edge portions of the snap-on ribs 22 and 23, respectively.

Exterior surfaces of the outwardly diverging portions 26 and 27 of the pair of snap-on ribs 22 and 23 are spaced apart a greater distance than the distance between corresponding interior surfaces of the outer edge portions 20 of the pair of mounting ribs 18 and 19, whereby the side edges 25 of the plate member 21 of the snap-on retainer 7 are moved into retaining engagement with adjacent edge portions 6 of the adjacent panel units 4.

It is preferable that the platelike cover member 21 have a slightly arcuate cross section and that the plate member 21 be of a yieldable material, such as aluminum, vinyl, rubber, or the like, whereby, when the outwardly diverging portions 26 and 27 are retained between the outer edge portions 20 of the mounting ribs 18 and 19, the platelike cover member 21 will assume an arcuate shape having a shorter radius, whereby the opposite side edges 25 thereof clampingly engage the facing edge portion 6 of the panel units 4 and retain same between the exterior surface 17 of the joint framing member flanges 15 and the respective snap-on retainer-cover member 7.

It is noted that the free edges of the inwardly converging portions 28 and 29 of the snap-on ribs 22 and 23 are spaced closer together than the free ends of the edge portions 20 of the mounting ribs 18 and 19, whereby, when the snap-on ribs 22 and 23 are inserted between the mounting ribs 18 and 19, the mounting ribs 18 and 19 are spread apart sufficiently to permit the snap-on ribs 22 and 23 to be inserted therebetween.

The ceiling edge member 8 is a channel-shaped member having a web portion 30 with spaced flanges 31 and 32 extending from opposite edges of the web portion 30. Each of facing interior surfaces 33 and 34 of the flanges 31 and 32, respectively, have aligned serrated portions 35 for engaging and retaining the resilient clip 14, as later described. The web por-

tion 30 of the channel-shaped ceiling member 8 has a recess 36 in an exterior surface 37 of the web portion 30, and is adapted to receive and retain a suitable sealing material 38. The exterior surface 37 of the web portion 30 engages the ceiling surface 3 and the sealing material 38 is placed in the recess 36 and engages the ceiling surface 3.

The resilient clip 14 is preferably an elongate structure formed by extrusion, with an elongate plate portion 39 having opposite edge portions 40 and 41 engageable with the serrated portions 35 in the facing interior surfaces 33 and 34 of the flanges 31 and 32, respectively. The plate portion 39 has a pair of laterally spaced longitudinally extending pair of legs 42 and 43 extending outwardly from the plate portion 39, and the legs 42 and 43 are positioned to engage and retain the upper edge portions 11 of the panel units 4 between the flanges 31 and 32, respectively.

The legs 42 and 43 are outwardly bowed, whereby said legs 42 and 43 each engage and retain a respective upper edge portion 11 in clamping engagement with the interior surfaces 33 and 34, respectively. In the illustrated structure, the legs 42 and 43 each have outwardly diverging portions 44 and 45 extending outwardly from the plate portion 39, and the legs 42 and 43 have inwardly converging portions 46 and 47, respectively. The legs 42 and 43 each have a gradually reducing thickness from a fixed end of the outwardly diverging portions 44 and 45 toward a free end of the inwardly converging portions 46 and 47, whereby the legs 42 and 43 are flexible, and the portion of the plate portion 39 between the legs 42 and 43 will be moved into contact with an interior surface 48 of the web portion 30 of the ceiling edge member 8 when the legs 42 and 43 each engage the respective upper edge portion 11 of the panel units 4.

It is preferable that the resilient clip 14 be an extruded member of substantially uniform cross section and be of a yieldable, resilient material, such as vinyl, rubber, or the like, whereby the legs 42 and 43 will be biased toward the facing interior surfaces 33 and 34 of the flanges 31 and 32 when in engagement with the upper edge portions 11 of the panel units 4.

To install the resilient clip 14 in the ceiling edge member 8, the legs 42 and 43 are moved toward each other to bow the portion of the plate portion 39 between the legs 42 and 43, thereby moving the opposite edge portions 40 and 41 thereof toward each other, to permit same to move past the serrated portions 35 on the facing interior surfaces 33 and 34, and releasing the legs 42 and 43 allows the opposite edge portions 40 and 41 to move outwardly and be retained within the serrated portions 35 of the ceiling edge member 8.

The floor edge member 9 is a channel-shaped member having a web portion 49 engaging the floor surface 2 and flanges 50 and 51 extending upwardly from opposite edges of the web portion 49. The lower edge portions 12 of the panel units 4 engage exterior surfaces 52 and 53 of the flanges 50 and 51, respectively, and a suitable base member such as a cove base 54 is secured on the lower edge portion 12, to provide a finished appearance thereto.

It is preferable that the base 54 be of a suitable resilient material such as rubber, vinyl, or the like and have a suitable adhesive on the back thereof to engage an exterior or exposed surface of the lower edge portions 12 of the panel units 4.

The end edge member 10 is a channel-shaped member having a web portion 55, adapted to engage a vertical surface such as a wall, column, or the like. The web portion 55 has a recess 56 in an exterior surface 57 for receiving and retaining sealing material 58. Flanges 59 and 60 extend outwardly from opposite edges of the web portion 55 and a pair of laterally spaced longitudinally extending legs or ribs 61 and 62 extend outwardly from an interior surface 63 of the web portion 55 and are spaced from the flanges 59 and 60, respectively, a distance corresponding to the thickness of the end edge portion 13 of the panel units 4.

FIG. 5 illustrates a modified snap-on retainer-cover member 64 mounted on opposite sides of a modified joint framing member 65. The modified joint framing member 65 is an ex-

truded member, with portions thereof of suitable cross section and preferably H- or I-sections, with substantially parallel spaced flanges 66 connected by a web portion 67 extending therebetween. The flanges 66 each have opposed exterior surfaces 68 parallel with the plane of the wall. The modified joint framing member 65 has longitudinally extending pairs of mounting ribs 69 and 70 integral with the flanges 66 and extending outwardly from the respective exterior surfaces 68 of each of said flanges 66. The mounting ribs 69 and 70 of each pair are laterally spaced and terminate in thickened outer edge portions 71, with said edge portions 71 of each pair extending inwardly from facing surfaces 72 of the mounting ribs 69 and 70, to thereby narrow the spacing between the facing surfaces 72.

The free edge of the outer edge portions 71 of the mounting ribs 69 and 70 are spaced from the surface 68 of the respective flange 66 a distance substantially corresponding to the thickness of a wall panel unit 4 adapted to engage said surface 68 at the sides of the pair of mounting ribs 69 and 70.

Each modified snap-on retainer-cover member 64 is an extruded member with an elongate arcuate platelike cover member 73, with a pair of laterally spaced longitudinally extending fastening ribs illustrated as snap-on ribs 74 and 75 extending from an interior face or surface 76 of the cover member 73, and substantially centered between side edges 77 thereof. The snap-on ribs 74 and 75 are positioned to be inserted between the mounting ribs 69 and 70 and in interengagement therewith, with an interference that retains the snap-on panel retainer 64 in place. In the illustrated structure, the snap-on ribs 74 and 75 each have enlarged outer end portions 78 extending outwardly from exterior surfaces of the snap-on ribs 74 and 75.

Exterior surfaces of the enlarged outer end portions 78 of the snap-on ribs 74 and 75 are spaced apart a greater distance than the distance between corresponding interior surfaces 72 of the enlarged outer edge portions 71 of the pair of mounting ribs 69 and 70, whereby opposite edges of the cover member 73 are moved into retaining engagement with adjacent edge portions 6 of the adjacent panel units 4.

It is preferable that the cover member 73 be of a suitable yieldable resilient material, such as vinyl, aluminum, or the like whereby when the enlarged end portions 78 of the snap-on ribs 74 and 75 are positioned between the outer edge portions 71 of the mounting ribs 69 and 70, the cover member 73 will assume an arcuate shape of a reduced radius, whereby the opposite side edges 77 thereof will clampingly engage the facing edge portions 6 of the panel units 4 and retain same between the exterior surface 68 of the respective flange 66 of the joint framing member 65.

It is to be understood that while I have illustrated and described certain forms of my invention, it is not to be limited to these specific forms or arrangement of parts herein described and shown, except insofar as such limitations are included in the claims.

What I claim and desire to secure by Letters Patent is:

1. A partition system comprising:

- a. a plurality of spaced joint framing members each having a web portion extending between spaced substantially parallel flanges;
- b. a plurality of retainer-cover members each mounted on and spaced from said respective flanges of said joint framing members;
- c. cooperating interengaging means on an exterior surface of said flanges of said joint framing members and on an interior surface of each of said retainer-cover members for positioning and retaining said retainer-cover members in spaced relation with said respective flanges of said joint framing members;
- d. edge framing members cooperating with said joint framing members and said retainer-cover members mounted thereon to form a framework;
- e. a plurality of pairs of laterally spaced substantially parallel wall-defining panel units each having peripheral edge

portions thereof engaging said framework, said panel unit edge portions being in clamping engagement between said flanges of said joint framing members and said adjacent retainer-cover members;

- f. said partition extending between a floor and a ceiling and the edge framing at the ceiling being a ceiling edge framing member and including a channel-shaped member having a web portion engaging the ceiling and flanges depending from opposite edges of said web portion and resilient means mounted within said channel-shaped member for retaining said panel unit edge portions in clamping engagement with interior surfaces of said flanges;
 - g. said resilient means is an elongate resilient clip having a plate portion and a pair of laterally spaced legs extending from said plate portion, said legs being positioned to engage said edge portions of said panel units and retain same within said channel-shaped member;
 - h. retaining means on said interior surfaces of said flanges of said channel-shaped member for engaging opposite edge portions of said plate portion of said resilient clip thereby retaining same within said channel-shaped member;
 - i. said plate portion of said resilient clip has opposite edge portions extending outwardly and downwardly from said plate portion for engaging said retaining means; and
 - j. said laterally spaced legs of said clip are outwardly bowed whereby said legs each resiliently retain one of said panel unit edge portions between said respective interior surface of said flanges of said channel-shaped member.
2. A partition system comprising:
- a. a plurality of spaced joint framing members each having a web portion extending between spaced substantially parallel flanges;
 - b. a plurality of retainer-cover members each mounted on and spaced from said respective flanges of said joint framing members;
 - c. cooperating interengaging means on an exterior surface of said flanges of said joint framing members and on an interior surface of each of said retainer-cover members for positioning and retaining said retainer-cover members in spaced relation with said respective flanges of said joint framing members;
 - d. edge framing members cooperating with said joint framing members and said retainer-cover members mounted thereon to form a framework;
 - e. a plurality of pairs of laterally spaced substantially parallel wall-defining panel units each having peripheral edge portions thereof engaging said framework, said panel unit edge portions being in clamping engagement between said flanges of said joint framing members and said adjacent retainer-cover members;
 - f. said partition extending between a floor and a ceiling and the edge framing at the ceiling being a ceiling edge framing member and including a channel-shaped member having a web portion engaging the ceiling and flanges depending from opposite edges of said web portion and resilient means mounted within said channel-shaped member for retaining said panel unit edge portions in clamping engagement with interior surfaces of said flanges;
 - g. said resilient means is an elongate resilient clip having a plate portion and a pair of laterally spaced legs extending from said plate portion, said legs being positioned to engage said edge portions of said panel units and retain same within said channel-shaped member;
 - h. retaining means on said interior surfaces of said flanges of said channel-shaped member for engaging opposite edge portions of said plate portion of said resilient clip thereby retaining same within said channel-shaped member; and
 - i. said laterally spaced legs of said clip each have a gradually reducing thickness from a fixed end at said plate portion toward a free end whereby flexibility thereof is increased and a portion of said plate portion between said legs is

moved into contact with said web portion of said channel-shaped member when said legs each engage said edge portions of said panel units.

3. A partition system comprising:

- a. a plurality of spaced joint framing members each having a web portion extending between spaced substantially parallel flange members, said flange members being in opposed relation and having outwardly facing surfaces;
 - b. a plurality of pairs of laterally spaced substantially parallel wall-defining panel units each having marginal edge portions thereof engaging said outwardly facing surfaces of said framing members;
 - c. each framing member having spaced wall members substantially coextensive in length with the framing member and extending from the flange members between edges of the panel units and adapted to be engaged thereby and form a separator therefor, said wall members having outer edge portions angled in outwardly converging relation and terminating substantially in the plane of outer surfaces of the wall panels engaging the framing member flanges to form a reduced width portion between said wall members;
 - d. an elongate retainer-cover member spanning the space between adjacent wall panels for the length thereof and having marginal portions overlying and engaging the adjacent marginal portions of said wall panels;
 - e. spaced flange members integral with said retainer-cover members and extending longitudinally for the length thereof, said spaced flange members having opposed portions angled outwardly to a line of greater spacing and then inwardly to an area of lesser spacing whereby said flange members are insertable between the terminating portions of the wall member with the line of greater spacing moving therebetween to effect an interengagement that retains the cover members in engagement with the wall panels to clamp same against the outwardly facing surfaces of the flanges of the framing members, the spacing between outer surfaces of said angled opposed portion at the retainer-cover being less than the said reduced width portion between the wall members whereby the edge portions of the wall members are substantially against the cover member.
4. A partition system comprising:
- a. a plurality of spaced joint framing members each having a web portion extending between spaced substantially parallel flanges;
 - b. edge framing members cooperating with said joint framing members to form a framework;
 - c. a plurality of pairs of laterally spaced substantially parallel wall-defining panel units each having peripheral edge portions thereof engaging said framework;
 - d. a plurality of retainer-cover member each mounted on and spaced from said respective flanges of said joint framing members and having marginal portions overlying adjacent marginal portions of the panel unit whereby the panel unit edge portions are between the retainer-cover members and the flanges of the joint framing members;
 - e. means retaining said retainer-cover members to the joint framing members to clamp the panel edge portions against the flanges of the joint framing members;
 - f. said edge framing members being channel-shaped and having a web portion with flanges depending from opposite edges of the web portions in overlying relation to adjacent panel margins;
 - g. resilient means in the form of an elongate resilient clip having a plate portion and a pair of laterally spaced legs extending from said plate portion, said legs being bowed whereby each resiliently engage one of said panel unit edge portions between interior surfaces of the flanges of the channel-shaped member to retain said clip within the channel-shaped member;
 - h. retaining means on said interior surfaces of said flanges of said channel-shaped member;

7

i. said plate portion of said resilient clip having opposite edge portions extending outwardly and downwardly from the plate portion and engaging said retaining means on said flanges of said channel-shaped member to retain said

8

resilient clip within said channel-shaped member and thereby secure said channel-shaped member to the panel units.

5

10

15

20

25

30

35

40

45

50

55

60

65

70

75