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(71) Applicant: **DORMA INDIA PRIVATE LIMITED** [IN/IN]; No.14, Pattulous Road, Chennai- 600 002, Tamil Nadu (IN).

(72) Inventor; and

(71) Applicant *(for all designated States except US)*: **P.Muthukrishnan** [IN/IN]; C/o Dorma India Private Limited, No.14, Pattulous Road, Chennai- 600 002, Tamil Nadu (IN).

(74) Agent: **JHABAKH, Kalyan**; Surana & Surana International Attorneys, International Law Center, No. 61 -63, Dr. Radhakrishnan Salai, Malodor, Chennai 600 004, Tamil Nadu (IN).

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(54) **Title**: AN INTEGRATED FRAME ASSEMBLY TO IMPROVE ACOUSTICS AND AESTHETICS OF AN INTERIOR

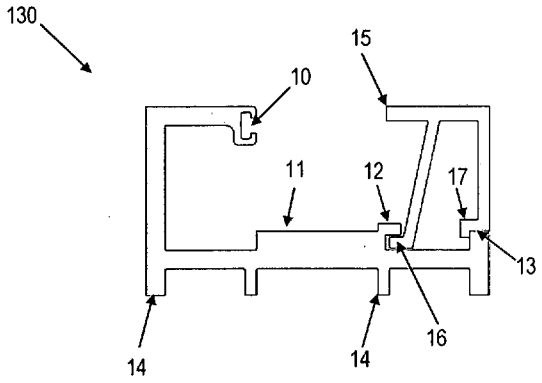

Figure 3

(57) **Abstract**: An integrated frame assembly to improve acoustics and aesthetics of an interior is disclosed. The integrated frame assembly has a host of optional integration features (access control, cable routing, electrical sockets, blinds/privacy control etc.), that make it suitable for any installation environment.

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TITLE OF THE INVENTION: AN INTEGRATED FRAME ASSEMBLY TO IMPROVE ACOUSTICS AND AESTHETICS OF AN INTERIOR

FIELD OF THE INVENTION

The present invention generally relates to integrated frame assemblies that improve the acoustics and aesthetics of an interior.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 depicts a first frame;
Figure 2 depicts a first clip;
Figure 3 depicts a first frame assembly;
Figure 4 depicts a second frame;
Figure 4a depicts a seventeenth frame;
Figure 4b depicts a fifth clip;
Figure 4c depicts a seventeenth frame assembly;
Figure 5 depicts a third frame;
Figure 6 depicts a second clip;
Figure 7 depicts a third frame assembly;
Figure 8 depicts a fifth frame;
Figure 9 depicts a fifth frame assembly;
Figure 10 depicts a sixth frame;
Figure 11 depicts a sixth frame assembly;
Figure 12 depicts a second frame assembly;
Figure 13 depicts a twenty first frame;
Figure 14 depicts a fourth frame assembly;
Figure 15 depicts a first junction frame;
Figure 15a depicts a second junction frame;
Figure 15b depicts a third junction frame;
Figure 16 depicts a first overhead panel lock;
Figure 16a depicts a first overhead panel assembly;
Figure 17 depicts a seventh frame;
Figure 17a depicts an eighteenth frame;

Figure 18 depicts a third clip;
Figure 19 depicts a seventh frame assembly;
Figure 20 depicts an eighth frame;
Figure 21 depicts a thirteenth frame;
Figure 22 depicts a fifteenth frame;
Figure 23 depicts an eighth frame assembly;
Figure 24 depicts a ninth frame assembly;
Figure 24a depicts a second overhead panel lock;
Figure 24b depicts a second overhead panel assembly;
Figure 25 depicts a fourth clip;
Figure 26 depicts an eleventh frame assembly;
Figure 27 depicts an eleventh frame;
Figure 28 depicts a twelfth frame assembly;
Figure 29 depicts a ninth frame;
Figure 30 depicts a tenth frame assembly;
Figure 31 depicts a sixteenth frame;
Figure 31a depicts a twenty second frame (380);
Figure 32 depicts a thirteenth frame assembly;
Figure 33 depicts an eighteenth frame;
Figure 34 depicts a fourteenth frame assembly;
Figure 35 depicts a fifteenth frame assembly;
Figure 36 depicts a twentieth frame;
Figure 37 depicts a sixteenth frame assembly;
Figure 38 depicts a first system;
Figures 39 and 40 depict a second system;
Figure 41 depicts a third system;
Figure 42 depicts a fourth system;
Figure 43 depicts a fifth system;
Figure 44 depicts a sixth system;
Figure 45 depicts a seventh system;
Figure 46 depicts an eighth system;
Figure 47 depicts a ninth system;
Figure 48 depicts a tenth system;

Figure 49 depicts an eleventh system;
Figure 50 depicts a twelfth system;
Figure 51 depicts thirteenth system;
Figure 52 depicts a fourteenth system;
Figure 53 depicts a fifteenth system;
Figure 54 depicts a sixteenth system;
Figure 55 depicts a seventeenth system;
Figure 56 depicts an eighteenth system;
Figure 57 depicts a nineteenth system;
Figure 58 depicts a twentieth system;
Figure 59 depicts a twenty first system;
Figure 60 depicts a twenty second system;
Figures 61a and 61b depict electrical socket integration;
Figure 62 depicts furniture integration;
Figure 63 depicts an exterior application of the disclosed frame assemblies.

DETAILED DESCRIPTION OF THE INVENTION

An integrated frame assembly to improve acoustics and aesthetics of an interior is disclosed. The integrated frame assembly has a host of optional integration features (access control, cable routing, electrical sockets, blinds/privacy control etc.), that make it suitable for any installation environment.

The integrated frame assembly comprising of a first module that is associated with a second module. In an embodiment, the integrated frame assembly has a width of 45 mm and is used for accommodating glass doors that have a thickness of up to 20 mm or non-glass doors that have a thickness of up to 40 mm (the glass/non-glass doors being framed or frameless), and SG glass sheets that have a height of up to 3 metres, wherein the first module is selected from the group consisting of:

a first frame (1) as shown in Figure 1, said first frame (1) comprising of a first support member (13) at a first end of the first frame (1), a mounting surface (11) that is associated with a first lock (12), a plurality of support fins (14) that support the first frame (1) on an uneven floor and a fixed seal receiving fin (10);

a second frame (3) as shown in Figure 4, said second frame (3) comprising of the mounting surface (11), the plurality of support fins (14) that support the second frame (3) on an uneven floor, the fixed seal receiving fin (10) and a tip (15) for accommodating a flexible seal, said tip (15) being disposed opposite to the fixed seal receiving fin (10), wherein a sheet of glass is mounted on the mounting surface (11) between the fixed seal receiving fin (10) and the tip (15); and

a third frame (4) as shown in Figure 5, said third frame (4) comprising of a first pair of door rebating fins (18), a first pair of locking fins (19) and a pair of mounting fins (20), wherein a glass door/non-glass door is mounted between the pair of mounting fins (20);

In an embodiment, a seventeenth frame (3a) as shown in Figure 4a, said seventeenth frame (3a) consisting essentially of the mounting surface (11), a sixth clip (5a) mounted on the bottom of the said seventeenth frame (3a), the fixed seal receiving fin (10) and a tip (15) for accommodating a flexible seal, said tip (15) being disposed opposite to the fixed seal receiving fin (10), wherein a sheet of glass is mounted on the mounting surface (11) between the fixed seal receiving fin (10) and the tip (15);

and the second module is respectively selected from the group comprising of:

a first clip (2) as shown in Figure 2, said first clip (2) consisting essentially of a second lock (16) that forms a first locking mechanism with the first lock (12) for holding the first clip (2) in its place when the first clip (2) is associated with the first frame (1) to form the first frame assembly (130) as shown in Figure 3, the tip (15) for accommodating a flexible seal that is disposed opposite to the fixed seal receiving fin (10) in the first frame assembly (130), wherein a sheet of glass is mounted on the mounting surface (11) between the fixed seal receiving fin (10) and the tip (15), and a second support member (17) that supports the first frame assembly (130) in conjunction with the first support member (13);

a fifth clip (2a) as shown in Figure 4b, said fifth clip (2a) comprising of a sixth clip (5a) fixed at a first end of the said fifth clip (2a) and the fixed seal receiving fin (10) disposed at a second end of said fifth clip (2a).

the second frame (3) comprising of the mounting surface (11), the plurality of support fins (14) that support the second frame (3) on an uneven floor, the fixed seal receiving fin (10) and the tip

(15) for accommodating a flexible seal that is disposed opposite to the fixed seal receiving fin (10), wherein a sheet of glass is mounted on the mounting surface (11) between the fixed seal receiving fin (10) and the tip (15), said second frame (3) being associated with itself as shown in Figure 12 to form a second frame assembly (180);

a seventeenth frame (3a) comprising of the mounting surface (11), the sixth clip (5a) mounted on the bottom of the said seventeenth frame (3a), the fixed seal receiving fin (10) and the tip (15) for accommodating a flexible seal, said tip (15) being disposed opposite to the fixed seal receiving fin (10), wherein a sheet of glass is mounted on the mounting surface (11) between the fixed seal receiving fin (10) and the tip (15); said seventeenth frame (3a) being associated with the fifth clip (2a), wherein said fifth clip (2a) being adjustably mounted at the bottom end of said seventeenth frame (3a) to form a seventeenth frame assembly (370) as shown in Figure 4c.

a second clip (5) as shown in Figure 6, said second clip (5) comprising of a second pair of locking fins (21) that form a second locking mechanism with the first pair of locking fins (19) to form the third frame assembly (140) as shown in Figure 7.

The first frame assembly (130) is interchangeable (used hereinafter in the context of substitutable/ replaceable) with the second frame (3).

The second frame (3) is interchangeable with a fourth frame assembly (170; Figure 14), wherein the fourth frame assembly (170) comprising of the fixed seal receiving fin (10), the mounting surface (11), the tip (15) for accommodating a flexible seal that is disposed opposite to the fixed seal receiving fin (10), wherein a sheet of glass is mounted on the mounting surface (11) between the fixed seal receiving fin (10) and the tip (15), the first pair of locking fins (19), a fixing provision (26) and the second pair of locking fins (21) in the second clip (5) that form the second locking mechanism with the first pair of locking fins (19) (as shown in Figures 6 and 13). One or more cables/wires are concealed within the twenty first frame (165) before locking the twenty first frame (165) with the second clip (5). Thus, the cables/wires are not visible externally.

The third frame assembly (140) is interchangeable with one of the following:

a fifth frame assembly (150) as shown in Figure 9, said fifth frame assembly (150) comprising of a fifth frame (200) as shown in Figure 8, wherein the fifth frame (200) comprising of the first pair of

door rebating fins (18) and the first pair of locking fins (19), said fifth frame (200) being associated with the second clip (5) to form the fifth frame assembly (150) ; and

a sixth frame assembly (160) as depicted in Figure 11, said sixth frame assembly (160) comprising of a sixth frame (210) as shown in Figure 10, wherein the sixth frame (210) consists essentially of the first pair of door rebating fins (18) and the first pair of locking fins (19), said sixth frame (210) being configured to accommodate greater door width when compared to the fifth frame (200), and the sixth frame (210) is associated with the second clip (5) to form the sixth frame assembly (160).

A first junction frame (220) as shown in Figure 15 is used wherever 90 degree turns are encountered in an interior. The first junction frame (220) comprising of a pair of the mounting surfaces (11) that are at right angles to each other, a pair of the fixed seal receiving fins (10) and a pair of the tips (15) for accommodating a pair of flexible seals, wherein each tip (15) is disposed opposite to a corresponding fixed seal receiving fin (10). A pair of glass sheets at right angles to each other can be disposed within the first junction frame (220), wherein each glass sheet is mounted on an individual mounting surface (11) between an individual fixed seal receiving fin (10) and the corresponding tip (15).

A second junction frame (220a) as shown in Figure 15a is used wherever T-junctions are encountered. The second junction frame (220a) comprising of three of the mounting surfaces (11), wherein two of the mounting surfaces (11) are disposed opposite to one another and the third mounting surface (11) is disposed perpendicular to said two mounting surfaces (11) to form a T-junction, three of the fixed seal receiving fins (10), wherein two of the fixed seal receiving fins (10) are disposed opposite to one another and the third fixed seal receiving fin (10) is disposed at a first end of the second junction frame (220a), three of the tips (15) for accommodating three flexible seals, wherein each tip (15) is disposed opposite to a corresponding fixed seal receiving fin (10). Three glass sheets can be disposed within the second junction frame (220a), wherein each glass sheet is mounted on an individual mounting surface (11) between an individual fixed seal receiving fin (10) and the corresponding tip (15).

A third junction frame (220b) as shown in Figure 15b is used wherever four way junctions are encountered. The third junction frame (220b) comprising of four of the mounting surfaces (11), wherein two of the mounting surfaces (11) are disposed opposite to one another, the third

mounting surface (100) is disposed perpendicular to said two mounting surfaces and the fourth mounting surface (11) that is also perpendicular to said two mounting surfaces (11) is disposed opposite to the third mounting surface (11), four of the fixed seal receiving fins (10), wherein two of the fixed seal receiving fins (10) are disposed at right angles to one another, the third fixed seal receiving fin (10) and the fourth fixed seal receiving fin are disposed at a first end and a second end respectively of the third junction frame (220b), four of the tips (15) for accommodating four flexible seals, wherein each tip (15) is disposed opposite to a corresponding fixed seal receiving fin (10). Four glass sheets can be disposed within the second junction frame (220a), wherein each glass sheet is mounted on an individual mounting surface (11) between an individual fixed seal receiving fin (10) and the corresponding tip (15).

The second clip (5) in the fifth frame assembly is interchangeable with a first overhead panel lock (Figure 16; 810), said first overhead panel lock (810) comprising of the tip (15) for accommodating a flexible seal. The first overhead panel lock (810) is associated with the fifth frame (200) to form a first overhead panel assembly (Figure 16a; 800).

In another embodiment, the frame assembly has a width ranging from 80 mm-100 mm and is used in accommodating glass doors that have a thickness of up to 20 mm or non-glass doors that have a thickness of up to 50 mm (the glass doors/non-glass doors being framed or frameless), and SG glass sheets/SG non-glass sheets (such as wooden sheets) that have a height of up to 4.5 m, wherein the first module is selected from the group consisting of:

a seventh frame (6) as shown in Figure 17, said seventh frame (6) comprising of the first support member (13) at a first end of the seventh frame (6), the fixed seal receiving fin (10), the mounting surface (11) that is associated with the first lock (12), the plurality of support fins (14) that support the seventh frame (6) on an uneven floor and a plurality of grooves (22) within which a plurality of respective screws are disposed;

As shown in Figure 17a, an eighteenth frame (6a) comprising of the tip for accommodating a flexible seal (15) at a first end of the eighteenth frame (6a), the fixed seal receiving fin (10), the mounting surface (11), the plurality of support fins (14) that support the eighteenth frame (6a) on an uneven floor and a plurality of grooves (22) within which a plurality of respective screws are disposed; wherein, the eighteenth frame (17a) is interchangeable with the seventh frame assembly (250).

a twelfth frame (not shown) for rebating of glass doors comprising of an eighth frame (8) as shown in Figure 20, said eighth frame (8) consisting essentially of the first pair of locking fins (19), the pair of mounting fins (20), wherein a glass sheet/non-glass sheet is mounted between the pair of mounting fins (20), and a second pair of door rebating fins (23), wherein the eighth frame (8) is associated with a thirteenth frame (9, Figure 21), said thirteenth frame (9) consisting essentially of a third pair of door rebating fins (24) that form a third locking mechanism with the second pair of door rebating fins (23), and a door supporting clip (not shown) that is mounted between a pair of clip support fins (25);

a fourteenth frame (not shown) for rebating of non-glass doors comprising of the eighth frame (8) as shown in Figure 20, said eighth frame (8) being associated with a fifteenth frame (100, Figure 22), said fifteenth frame (100) consisting essentially of the third pair of door rebating fins (24) that form the third locking mechanism with the second pair of door rebating fins (23), and the door supporting clip (not shown) that is mounted between the pair of clip support fins (25);

a ninth frame (230) as shown in Figure 29, said ninth frame (230) comprising of the first support member (13) at a first end of the ninth frame (230), the fixed seal receiving fin (10), the mounting surface (11) that is associated with the first lock (12), the fixing provision (26) and a third support member (27);

an eleventh frame (240) as shown in Figure 27, said eleventh frame (240) comprising of the first support members (13) at a first end, the first support member (13) at a second end that is disposed opposite to the first end, a pair of fixed seal receiving fins (10) that are disposed opposite to one another, a pair of mounting surfaces that are disposed opposite to one another (11), wherein each mounting surface (11) is individually associated with the first lock (12), and the plurality of grooves (22) within which a plurality of respective screws are disposed; and

the eighth frame (8) as shown in Figure 20, said eighth frame (8) comprising of the first pair of locking fins (19), the pair of mounting fins (20), wherein a glass sheet/non-glass sheet is mounted between the pair of mounting fins (20), and the second pair of door rebating fins (23),

and the second module is respectively selected from the group consisting of:

a third clip (7) as shown in Figure 18, said third clip (7) comprising of the second lock (16) that forms the first locking mechanism with the first lock (12) for holding the third clip (7) in its place

when the third clip (7) is associated with the seventh frame (6) to form the seventh frame assembly (250) as shown in Figure 19, the tip (15) for accommodating a flexible seal that is disposed opposite to the fixed seal receiving fin (10) in the seventh frame assembly (250), wherein a sheet of glass/non-glass is mounted on the mounting surface (11) between the fixed seal receiving fin (10) and the tip (15), and the second support member (17) that supports the seventh frame assembly (250) in conjunction with the first support member (13);

the second clip (5) as shown in Figure 6, said second clip (5) comprising of the second pair of locking fins (21) that form the second locking mechanism with the first pair of locking fins (19) to form the eighth frame assembly (260) as shown in Figure 23, wherein the eighth frame assembly (260) can be used to conceal one or more cables/wires;

the second clip (5) as shown in Figure 6, said second clip (5) comprising of the second pair of locking fins (21) that form the second locking mechanism with the first pair of locking fins (19) to form the ninth frame assembly (270) as shown in Figure 24;

the first clip (2) as shown in Figure 2, said first clip (2) comprising of the second lock (16) that forms the first locking mechanism with the first lock (12) for holding the first clip (2) in its place when the first clip (2) is associated with the ninth frame (230) to form the tenth frame assembly (280) as shown in Figure 30, said tenth frame assembly (280) acting as a frame for glass/non-glass doors, the tip (15) for accommodating a flexible seal that is disposed opposite to the fixed seal receiving fin (10) in the tenth frame assembly (280), wherein a sheet of glass/non-glass is mounted on the mounting surface (11) between the fixed seal receiving fin (10) and the tip (15), and the second support member (17) that supports the tenth frame assembly (280) in conjunction with the first support member (13);

a pair of third clips (7) disposed opposite to one another, wherein each third clip (7) comprising of the second lock (16) that forms the first locking mechanism with the first lock (12) for holding the third clip (7) in its place when the third clip (7) is associated with the eleventh frame (240) to form a twelfth frame assembly (310) as shown in Figure 28, the tip (15) for accommodating a flexible seal that is disposed opposite to the fixed seal receiving fin (10) in the twelfth frame assembly (310), wherein a sheet of glass/non-glass is mounted on the mounting surface (11) between the fixed seal receiving fin (10) and the tip (15), and the second support member (17) that supports the twelfth frame assembly (310) in conjunction with the first support member (13); and

a second overhead panel lock (820) as shown in Figure 24a, said second overhead panel lock (820) comprising of the fixed seal receiving fin (10), the tip (15) for accommodating a flexible seal that is disposed opposite to the fixed seal receiving fin (10), the second pair of locking fins (21) that form the second locking mechanism with the first pair of locking fins (19) in the eighth frame (8) and the third pair of door rebating fins (24) that form the third locking mechanism with the second pair of door rebating fins (23) in the eighth frame (8) to form a second overhead panel assembly (830) as shown in Figure 24b.

In yet another embodiment, the integrated frame assembly is adjustable, has a width ranging from 80 mm-100 mm and is used in accommodating SG glass doors/SG non-glass doors (framed doors or frameless doors) and SG glass sheets/non-glass sheets (such as wooden sheets) that have a height of up to 4.5 m, wherein the integrated frame assembly consists essentially of the seventh frame assembly (250) as shown in Figure 19, said seventh frame assembly (250) being associated with the fifth frame (200, Figure 8) and a fourth clip (290) as shown in Figure 25, said fourth clip (290) comprising of the second pair of locking fins (21) that form the second locking mechanism with the first pair of locking fins (19) to form an eleventh frame assembly (300) as shown in Figure 26. The precise location at which the fifth frame (200) is disposed within the eleventh frame assembly (300) is adjustable depending on user requirement.

In yet another embodiment, the frame assembly has a width ranging from 80 mm-100 mm and is used in accommodating glass doors that have a thickness of up to 20 mm or non-glass doors that have a thickness of up to 50 mm (the glass doors/non-glass doors being framed or frameless) that have a thickness of up to 20 mm, and double glaze (DG) glass sheets/DG non-glass sheets (such as wooden sheets) that have a height of up to 4.5 m, wherein the first module is selected from the group comprising of:

a sixteenth frame (320) as shown in Figure 31, said sixteenth frame (320) comprising of the first support member (13) at a first end of the sixteenth frame (320), the first support member (13) at a second end of the sixteenth frame (320), a pair of the fixed seal receiving fins (10) that are disposed opposite to one another so as to accommodate a pair of glass sheets/non-glass sheets that are parallel to one another, a pair of the mounting surfaces (11), wherein each mounting surface (11) is individually associated with the first lock (12), the plurality of support fins (14) that support the sixteenth frame (320) on an uneven floor;

a twenty second frame (380) as shown in Figure 31a, said twenty second frame (380) comprising of the pair of fixed seal receiving fins (10) that are disposed opposite to one another so as to accommodate a pair of glass sheets/non-glass sheets that are parallel to one another, a pair of the mounting surfaces (11), wherein each mounting surface (11) is individually associated with the tip for accommodating a flexible seal (15), which are disposed opposite to each other, the plurality of support fins (14) that support the twenty second frame (380) on an uneven floor;

a seventeenth frame (not shown) for rebating of glass doors comprising of an eighteenth frame (110) as shown in Figure 33, said eighteenth frame (110) consisting essentially of the first pair of locking fins (19), two pairs of the mounting fins (20) that accommodate two glass sheets/non-glass sheets parallel to one another, wherein an individual glass sheet/non-glass sheet is mounted between each pair of the mounting fins (20), and the second pair of door rebating fins (23), wherein the eighteenth frame (110) is associated with the thirteenth frame (9, Figure 21), said thirteenth frame (9) comprising of the third pair of door rebating fins (24) that form the third locking mechanism with the second pair of door rebating fins (23), and the door supporting clip (not shown) that is mounted between the pair of clip support fins (25);

a nineteenth frame (not shown) for rebating of non-glass doors comprising of the eighteenth frame (110) as shown in Figure 33, said eighteenth frame (110) being associated with the fifteenth frame (100, Figure 22), said fifteenth frame (100) consisting essentially of the third pair of door rebating fins (24) that form the third locking mechanism with the second pair of door rebating fins (23), and the door supporting clip (not shown) that is mounted between the pair of clip support fins (25);

a twentieth frame (120) as shown in Figure 36, said twentieth frame (120) comprising of the first support member (13) at a first end, the first support member (13) at a second end, the first support member (13) at a third end, the first support member (13) at a fourth end, two pairs of the fixed seal receiving fins (10) that are disposed opposite to one another, two pairs of the mounting surfaces (11) that are disposed opposite to one another, wherein each pair of the mounting surfaces (11) are capable of accommodating two glass sheets/non-glass sheets that are parallel to one another and each mounting surface (11) is individually associated with the first lock (12), the plurality of support fins (14) that support the twentieth frame (120) on an uneven floor; and

the eighteenth frame (110) as shown in Figure 33, said eighteenth frame (110) comprising of the first pair of locking fins (19), two pairs of the mounting fins (20) that accommodate two glass sheets/non-glass sheets parallel to one another, wherein an individual glass sheet/non-glass sheet is mounted between each pair of the mounting fins (20), and the second pair of door rebating fins (23);

and the second module is respectively selected from the group comprising of:

a pair of the first clips (2, Figure 2) that are disposed opposite to one another, wherein each first clip (2) comprising of the second lock (16) that forms the first locking mechanism with the first lock (12) for holding the first clip (2) in its place when the first clip (2) is associated with the sixteenth frame (320) to form the thirteenth frame assembly (330) as shown in Figure 32, the tip (15) for accommodating a flexible seal that is disposed opposite to the fixed seal receiving fin (10) in the thirteenth frame assembly (330), wherein a sheet of glass/a sheet of non-glass is mounted on the mounting surface (11) between the fixed seal receiving fin (10) and the tip (15), and the second support member (17) that supports the thirteenth frame assembly (330) in conjunction with the first support member (13);

the second clip (5) as shown in Figure 6, said second clip (5) comprising of the second pair of locking fins (21) that form the second locking mechanism with the first pair of locking fins (19) to form the fourteenth frame assembly (340) as shown in Figure 34;

the second clip (5) as shown in Figure 6, said second clip (5) comprising of the second pair of locking fins (21) that form the second locking mechanism with the first pair of locking fins (19) to form the fifteenth frame assembly (350) as shown in Figure 35;

two pairs of the first clips (2, Figure 2), wherein each first clip (2) comprising of the second lock (16) that forms the first locking mechanism with the first lock (12) for holding the first clip (2) in its place when the first clip (2) is associated with the twentieth frame (120) to form the sixteenth frame assembly (360) as shown in Figure 37; and

a third overhead panel lock (840) as shown in Figure 35a, said third overhead panel lock (840) comprising of a pair of the fixed seal receiving fins (10) that are disposed opposite to one another so as to accommodate a pair of glass sheets/non-glass sheets that are parallel to one another, a pair of the tips (15) for accommodating a pair of flexible seals, the second pair of locking fins (21) that form the second locking mechanism with the first pair of locking fins (19) in the eighteenth

frame (110) and the third pair of door rebating fins (24) that form the third locking mechanism with the second pair of door rebating fins (23) in the eighteenth frame (110) to form a third overhead panel assembly (850) as shown in Figure 35b.

The first junction profile (220), the second junction profile (220a) and the third junction profile (220b) can be adapted to the disclosed embodiments having a width ranging from 80-100mm by accordingly adjusting the width of the first junction profile (220), the second junction profile (220a) and the third junction profile (220b). Similarly, the fourth frame assembly (170) that is capable of concealing one or more cables/wires can also be adapted to the disclosed embodiments having a width ranging from 80-100 mm.

The disclosed embodiments having a width of 45 mm have a maximum sound proofing ability of up to 26 db, while the embodiments having a width ranging from 80-100 mm have a maximum sound proofing ability of up to 45 db.

Preferably, the non-glass doors disclosed above are timber doors.

The disclosed embodiments can be better understood with the help of the following, non-limiting examples. Figures 38-44 depicts examples of the embodiments having a width of 45 mm; Figures 45-53 depict examples of the embodiments having a width ranging from 80mm-100 mm (single glaze), and Figures 54-60 depict examples of the embodiments having a width ranging from 80 mm-100 mm (double glaze).

Example 1:

Figure 38 depicts a first system (400) in which a swing door is mounted in between two pairs of glass sheets. The first system (400) comprising of a plurality of the third frame assemblies (140) that facilitate rebating of the swing door, a surface mounted door closer (700), a plurality of the first frame assemblies (130) at a ceiling end (top of the first system (400)), a plurality of the first frame assemblies (130) at a floor end (bottom of the first system (400)), the second frame (3) at every individual wall end of the first system (400), the first junction frame (220) at ninety degree junctions, the second junction frame (220a) at T-junctions and the second frame assembly (180) to facilitate mounting of two glass sheets.

Example 2:

Figures 39 and 40 depict a second system (410) comprising of a plurality of the third frame assemblies (140) that facilitate rebating of a swing door, the surface mounted door closer (700), a plurality of the first frame assemblies (130) at a ceiling end (top of the second system (410)), a plurality of the first frame assemblies (130) at a floor end (bottom of the second system (410)), the second frame (3) at every individual wall end of the second system (410), the first junction frame (220) at ninety degree junctions, the second junction frame (220a) at T-junctions, an electro magnet (740), the fourth frame assembly (170) that facilitates concealment of one or more cables/wires, the second frame assembly (180) to facilitate mounting of two glass sheets, the fifth frame assembly (150) and an access control (720) such as a card reader or a biometric fingerprint reader.

Example 3:

Figure 41 depicts a third system (420) in which a swing double door is mounted in between two glass sheets. The third system (420) comprising of a plurality of the third frame assemblies (140) that facilitate rebating of the swing double door, a pair of the surface mounted door closers (700), a plurality of the first frame assemblies (130) at a ceiling end (top of the third system (420)), a plurality of the first frame assemblies (130) at a floor end (bottom of the third system (420)) and the second frame (3) at every individual wall end of the third system (420).

Example 4:

Figure 42 depicts a fourth system (430) in which a swing door is mounted in between a pair of glass sheets on one side and a single glass sheet on another side. The fourth system (430) comprising of a plurality of the third frame assemblies (140) that facilitate rebating of the swing door, the surface mounted door closer (not visible), a plurality of the first frame assemblies (130) at a ceiling end (top of the fourth system (430)), a plurality of the first frame assemblies (130) at a floor end (bottom of the fourth system (430)), the second frame (3) at every individual wall end of the fourth system (430), the second frame assembly (180) to facilitate mounting of two glass sheets and the first overhead panel assembly (800) that facilitates mounting of a glass sheet above the swing door.

Example 5:

Figure 43 depicts a fifth system (440) in which an automatic sliding door is mounted in between two glass sheets. The fifth system (440) comprising of a sliding rail (730) that facilitates movement of the automatic sliding door, a plurality of the first frame assemblies (130) at a ceiling end (top of the fifth system (440)), a plurality of the first frame assemblies (130) at a floor end (bottom of the fifth system (440)) and the second frame (3) at every individual wall end of the fifth system (440).

Example 6:

Figure 44 depicts a sixth system (450) in which an automatic swing door is mounted in between two glass sheets. The sixth system comprising of a plurality of the third frame assemblies (140) that facilitate rebating of the automatic swing door, the surface mounted door closer (700), a plurality of the first frame assemblies (130) at a ceiling end (top of the sixth system (450)), a plurality of the first frame assemblies (130) at a floor end (bottom of the sixth system (450)), the second frame (3) at every individual wall end of the first system (400) and the first overhead panel assembly (800) that facilitates mounting of a glass sheet above the swing door.

Example 7:

Figure 45 depicts a seventh system (460) in which a glass swing door is mounted next to a glass sheet. The seventh system (460) comprising of a plurality of the eighth frame assemblies (260) that facilitate rebating of the glass swing door, the surface mounted door closer (700), the seventh frame assembly (250) at a ceiling end (top of the seventh system (460)), the seventh frame assembly (250) at a floor end (bottom of the seventh system (460)) and the seventh frame assembly (250) at every individual wall end of the seventh system (460).

Example 8:

Figure 46 depicts an eighth system (470) in which a glass swing door with an electro magnet (740) and the access control (720) is mounted next to a glass sheet. The eighth system (470) comprising of a plurality of the eighth frame assemblies (260) that facilitate rebating of the glass swing door, the surface mounted door closer (700), the seventh frame assembly (250) at a ceiling end (top of the eighth system (470)), the seventh frame assembly (250) at a floor end (bottom of the eighth system (470)), the seventh frame assembly (250) at every individual wall end of the eighth system (470), the access control (720) and the electro magnet (740).

Example 9:

Figure 47 depicts a ninth system (480) in which a glass swing door with an electric strike (710) and the access control (720) is mounted next to a glass sheet. The ninth system (480) comprising of a plurality of the eighth frame assemblies (260) that facilitate rebating of the glass swing door, the surface mounted door closer (not visible), the seventh frame assembly (250) at a ceiling end (top of the ninth system (480)), the seventh frame assembly (250) at a floor end (bottom of the ninth system (480)), the seventh frame assembly (250) at every individual wall end of the ninth system (480), the access control (720) and the electric strike (710).

Example 10:

Figure 48 depicts a tenth system (490) in which a framed glass swing door is mounted in between a pair of glass sheets on one side and a single glass sheet on another side. The tenth system (490) comprising of a plurality of the ninth frame assemblies (270) that facilitate rebating of the framed glass swing door, a plurality of the tenth frame assemblies (280) that act as a frame for the glass swing door, the surface mounted door closer (not visible), a plurality of the seventh frame assemblies (250) at a ceiling end (top of the tenth system (490)), a plurality of the seventh frame assemblies (250) at a floor end (bottom of the tenth system (250))), the seventh frame assembly (250) at every individual wall end of the tenth system (490), the access control (720) (not visible) and the electric strike (710).

Example 11:

Figure 49 depicts an eleventh system (500) in which a glass swing door is mounted in between two pairs of glass sheets, wherein the two glass sheets of a pair are mounted one below another. The eleventh system (500) consists essentially of a plurality of the eighth frame assemblies (260) that facilitate rebating of the glass swing door, the surface mounted door closer (700), a plurality of the seventh frame assemblies (250) at a ceiling end (top of the eleventh system (500)), a plurality of the seventh frame assemblies (250) at a floor end (bottom of the eleventh system (500)), the seventh frame assembly (250) at every individual wall end of the eleventh system (500), the twelfth frame assembly (310) on either side of the glass swing door that facilitate the two glass sheets of a pair to be mounted one below another and the second overhead panel assembly (830) that facilitates mounting of a glass sheet above the swing door.

Example 12:

Figure 50 depicts a twelfth system (510) in which a wooden swing door is mounted in between a pair of glass sheets on one side and a single glass sheet on another side. The twelfth system (510) comprising of a plurality of the ninth frame assemblies (270) that facilitate rebating of the wooden swing door, a concealed door closer (not visible), a plurality of the seventh frame assemblies (250) at a ceiling end (top of the twelfth system (510)), a plurality of the seventh frame assemblies (250) at a floor end (bottom of the twelfth system (510)) and the seventh frame assembly (250) at every individual wall end of the twelfth system (510).

Example 13:

Figure 51 depicts a thirteenth system (520) in which a swing double door (glass) is mounted next to a single sheet of glass. The thirteenth system (520) comprising of a plurality of the eighth frame assemblies (260) that facilitate rebating of the glass swing double door, a pair of the surface mounted door closers (700), the seventh frame assembly (250) at a ceiling end (top of the thirteenth system (520)), the seventh frame assembly (250) at a floor end (bottom of the thirteenth system (520)) and the seventh frame assembly (250) at every individual wall end of the thirteenth system (520).

Example 14:

Figure 52 depicts a fourteenth system (530) in which an automatic swing door is mounted in between two glass sheets. The fourteenth system (530) comprising of a plurality of the eighth frame assemblies (260) that facilitate rebating of the automatic swing door, the surface mounted door closer (700), a plurality of the seventh frame assemblies (250) at a ceiling end (top of the fourteenth system (530)), a plurality of the seventh frame assemblies (250) at a floor end (bottom of the fourteenth system (530)) and the seventh frame assembly (250) at every individual wall end of the fourteenth system (530).

Example 15:

Figure 53 depicts a fifteenth system (540) in which an automatic sliding door is mounted in between two glass sheets. The fifteenth system (540) comprising of the sliding rail (730) that facilitates movement of the automatic sliding door, a plurality of the seventh frame assemblies

(250) at a ceiling end (top of the fifteenth system (540)), a plurality of the seventh frame assemblies (250) at a floor end (bottom of the fifteenth system (540)) and the seventh frame assembly (250) at every individual wall end of the fifteenth system (540).

Example 16:

Figure 54 depicts a sixteenth system (550) in which a glass swing door is mounted next to a glass sheet. The sixteenth system (550) comprising of a plurality of the fourteenth frame assemblies (340) that facilitate rebating of the glass swing door, the surface mounted door closer (700), the thirteenth frame assembly (330) at a ceiling end (top of the sixteenth system (550)), thirteenth frame assembly (330) at a floor end (bottom of the sixteenth system (550)) and the thirteenth frame assembly (330) at every individual wall end of the sixteenth system (550).

Example 17:

Figure 55 depicts a seventeenth system (560) in which a glass swing double door in mounted in between two glass sheets. The seventeenth system (560) comprising of a plurality of the fourteenth frame assemblies (340) that facilitate rebating of the glass swing double door, a pair of the surface mounted door closers (700), a plurality of the thirteenth frame assemblies (330) at a ceiling end (top of the seventeenth system (560)), a plurality of the thirteenth frame assemblies (330) at a floor end (bottom of the seventeenth system (560)) and the thirteenth frame assembly (330) at every individual wall end of the seventeenth system (560).

Example 18:

Figure 56 depicts an eighteenth system (570) in which a framed swing door (glass) in mounted in between two glass sheets. The eighteenth system (570) comprising of the fifteenth frame assembly (350) on either side of the glass swing door , a plurality of the tenth frame assemblies (280) that act as a frame for the glass swing door, the concealed door closer (not visible), a plurality of the thirteenth frame assemblies (330) at a ceiling end (top of the eighteenth system (570)), a plurality of the thirteenth frame assemblies (330) at a floor end (bottom of the eighteenth system (570)) and the thirteenth frame assembly (330) at every individual wall end of the eighteenth system (570).

Example 19:

Figure 57 depicts a nineteenth system (580) in which a glass swing door is mounted in between two pairs of glass sheets, wherein the two glass sheets of a pair are mounted one below another. The nineteenth system (580) comprising of a plurality of the fourteenth frame assemblies (340) that facilitate rebating of the glass swing door, the surface mounted door closer (700), a plurality of the thirteenth frame assemblies (330) at a ceiling end (top of the nineteenth system (580)), a plurality of the thirteenth frame assemblies (330) at a floor end (bottom of the nineteenth system (580)), the thirteenth frame assembly (330) at every individual wall end of the nineteenth system (580), the sixteenth frame assembly (360) on either side of the glass swing door that facilitates the two glass sheets of a pair to be mounted one below another and the third overhead panel assembly (850) that facilitates mounting of a glass sheet above the swing door.

Example 20:

Figure 58 depicts a twentieth system (590) in which an automatic swing door is mounted in between two glass sheets. The twentieth system (590) comprising of a plurality of the fourteenth frame assemblies (340) that facilitate rebating of the glass swing door, the surface mounted door closer (700), a plurality of the thirteenth frame assemblies (330) at a ceiling end (top of the twentieth system (590)), a plurality of the thirteenth frame assemblies (330) at a floor end (bottom of the twentieth system (590)) and the thirteenth frame assembly (330) at every individual wall end of the twentieth system (590).

Example 21:

Figure 59 depicts a twenty first system (600) in which an automatic sliding door is mounted in between two glass sheets. The twenty first system (600) comprising of the sliding rail (730) that facilitates movement of the automatic sliding door, a plurality of the thirteenth frame assemblies (330) at a ceiling end (top of the twenty first system (600)), a plurality of the thirteenth frame assemblies (330) at a floor end (bottom of the twenty first system (600)) and the thirteenth frame assembly (330) at every individual wall end of the twenty first system (600).

Example 22:

Figure 60 depicts a twenty second system (610) in which a glass swing door is mounted next to a glass sheet. The twenty second system (610) comprising of a plurality of the fourteenth frame

assemblies (340) that facilitate rebating of the glass swing door, the thirteenth frame assembly (330) at a ceiling end (top of the twenty second system (610)), the thirteenth frame assembly (330) at a floor end (bottom of the twenty second system (610)), the thirteenth frame assembly (330) at every individual wall end of the twenty second system (610) and blinds (750) for privacy control.

In addition the examples disclosed above, the disclosed embodiments having a width ranging from 80-100 mm can also be integrated with electrical sockets (Figure 61a and 61b) and furniture (Figure 62). For electrical socket integration, the fourth frame assembly (170) that is capable of concealing one or more cables/wires is adapted to the embodiments having a width ranging from 80-100 mm as discussed above.

Last, but not least, though the disclosure above and the claims below pertain to an interior, the disclosed embodiments having a width ranging from 80-100 mm can also be used in exterior full wall applications such as an atrium (since the embodiments can accommodate glass sheets/non-glass sheets up to a height of 4.5 m), as shown in Figure 63.

Thus, from the above non-limiting examples, it will be clear to a person skilled in the art that the disclosed embodiments can accommodate several types of doors (with either concealed or surface mounted door closer) and several types of integrations are possible (one or more of electric strike, access control, electro magnet, furniture, blinds/privacy control and electrical sockets).

It will be apparent to a person skilled in the art that the above description is for illustrative purposes only and should not be considered as limiting. Various modifications, additions, alterations, and improvements without deviating from the spirit and the scope of the invention may be made by a person skilled in the art.

LIST OF REFERENCE NUMERALS

1- First frame
2- First clip
2a – Fifth clip
3- Second frame
3a – Seventeenth frame
4- Third frame
5- Second clip
5a – Sixth clip
6- Seventh frame
6a – Eighteenth frame
7- Third clip
8- Eighth frame
9- Thirteenth frame
10- Fixed seal receiving fin
11- Mounting surface
12- First lock
13- First support member
14- Plurality of support fins
15- Tip for accommodating a flexible seal
16- Second lock
17- Second support member
18- First pair of door rebating fins
19- First pair of locking fins
20- Mounting fin
21- Second pair of locking fins
22- Plurality of grooves
23- Second pair of door rebating fins
24- Third pair of door rebating fins
25- Pair of clip support fins
26- Fixing provision
27- Third support member

100- Fifteenth frame
110- Eighteenth frame
120- Twentieth frame
130 - First frame assembly
140- Third frame assembly
150- Fifth frame assembly
160- Sixth frame assembly
165- Twenty first frame
170- Fourth frame assembly
180- Second frame assembly
200- Fifth frame
210- Sixth frame
220- First junction frame
220a- Second junction frame
220b- Third junction frame
230- Ninth frame
240- Eleventh frame
250- Seventh frame assembly
260- Eighth frame assembly
270- Ninth frame assembly
280- Tenth frame assembly
290- Fourth clip
300- Eleventh frame assembly
310- Twelfth frame assembly
320- Sixteenth frame
330- Thirteenth frame assembly
340- Fourteenth frame assembly
350- Fifteenth frame assembly
360- Sixteenth frame assembly
370 – Seventeenth frame assembly
380 – Twenty second frame
400- First system
410- Second system

420- Third system
430- Fourth system
440- Fifth system
450- Sixth system
460- Seventh system
470- Eighth system
480- Ninth system
490- Tenth system
500- Eleventh system
510- Twelfth system
520- Thirteenth system
530- Fourteenth system
540- Fifteenth system
550- Sixteenth system
560- Seventeenth system
570- Eighteenth system
580- Nineteenth system
590- Twentieth system
600- Twenty first system
610- Twenty second system
700- Surface mounted door closer
710- Electric strike
720- Access control
730- Sliding rail
740- Electro magnet
750- Blinds
800- First overhead panel assembly
810- First overhead panel lock
820- Second overhead panel lock
830- Second overhead panel assembly
840- Third overhead panel lock
850- Third overhead panel assembly

We Claim:

1. An integrated frame assembly to improve acoustics and aesthetics of an interior, said integrated frame assembly comprising of a first module that is associated with a second module, wherein the first module is selected from the group comprising of:

a first frame (1), said first frame (1) comprising of a first support member (13) at a first end of the first frame (1), a mounting surface (11) that is associated with a first lock (12), a plurality of support fins (14) that support the first frame (1) on an uneven floor and a fixed seal receiving fin (10);

a second frame (3), said second frame (3) comprising of the mounting surface (11), the plurality of support fins (14) that support the second frame (3) on an uneven floor, the fixed seal receiving fin (10) and a tip (15) for accommodating a flexible seal, said tip (15) being disposed opposite to the fixed seal receiving fin (10), wherein a sheet of glass is mounted on the mounting surface (11) between the fixed seal receiving fin (10) and the tip (15); and

a third frame (4), said third frame (4) comprising of a first pair of door rebating fins (18), a first pair of locking fins (19) and a pair of mounting fins (20), wherein a glass door/non-glass door is mounted between the pair of mounting fins (20);

and the second module is respectively selected from the group comprising of:

a first clip (2), said first clip (2) comprising of a second lock (16) that forms a first locking mechanism with the first lock (12) for holding the first clip (2) in its place when the first clip (2) is associated with the first frame (1) to form the first frame assembly (130), the tip (15) for accommodating a flexible seal that is disposed opposite to the fixed seal receiving fin (10) in the first frame assembly (130), wherein a sheet of glass is mounted on the mounting surface (11) between the fixed seal receiving fin (10) and the tip (15), and a second support member (17) that supports the first frame assembly (130) in conjunction with the first support member (13);

the second frame (3) comprising of the mounting surface (11), the plurality of support fins (14) that support the second frame (3) on an uneven floor, the fixed seal receiving fin (10) and the tip (15) for accommodating a flexible seal that is disposed opposite to the

fixed seal receiving fin (10), wherein a sheet of glass is mounted on the mounting surface (11) between the fixed seal receiving fin (10) and the tip (15), said second frame (3) being associated with itself to form a second frame assembly (180); and

a second clip (5), said second clip (5) comprising of a second pair of locking fins (21) that form a second locking mechanism with the first pair of locking fins (19) to form the third frame assembly (140).

2. An integrated frame assembly to improve acoustics and aesthetics of an interior as claimed in claim 1, wherein the frame assembly (130) is interchangeable with the second frame (3).

3. An integrated frame assembly to improve acoustics and aesthetics of an interior as claimed in claim 1, wherein the second frame (3) is interchangeable with a fourth frame assembly (170); said fourth frame assembly (170) comprising of the fixed seal receiving fin (10), the mounting surface (11), the tip (15) for accommodating a flexible seal that is disposed opposite to the fixed seal receiving fin (10), wherein a sheet of glass is mounted on the mounting surface (11) between the fixed seal receiving fin (10) and the tip (15), the first pair of locking fins (19), a fixing provision (26) and the second pair of locking fins (21) in the second clip (5) that form the second locking mechanism with the first pair of locking fins (19).

4. An integrated frame assembly to improve acoustics and aesthetics of an interior as claimed in claim 1, wherein the third frame assembly (140) is interchangeable with a fifth frame assembly (150); said fifth frame assembly (150) comprising of a fifth frame (200), wherein the fifth frame (200) comprising of the first pair of door rebating fins (18) and the first pair of locking fins (19), said fifth frame (200) being associated with the second clip (5) to form the fifth frame assembly (150).

5. An integrated frame assembly to improve acoustics and aesthetics of an interior as claimed in claim 1, wherein the third frame assembly (140) is interchangeable with a sixth frame assembly (160); said sixth frame assembly (160) comprising of a sixth frame (210), wherein the sixth frame (210) comprising of the first pair of door rebating fins (18) and the first pair of locking fins (19), said sixth frame (210) being configured to accommodate

greater door width when compared to the fifth frame (200), and the sixth frame (210) is associated with the second clip (5) to form the sixth frame assembly (160).

6. An integrated frame assembly to improve acoustics and aesthetics of an interior as claimed in claim 1, wherein the integrated frame assembly further comprising of a first junction frame (220), said first junction frame (220) comprising of a pair of the mounting surfaces (11) that are at right angles to each other, a pair of the fixed seal receiving fins (10) and a pair of the tips (15) for accommodating a pair of flexible seals, wherein each tip (15) is disposed opposite to a corresponding fixed seal receiving fin (10); a pair of glass sheets at right angles to each other being disposed within the first junction frame (220), wherein each glass sheet is mounted on an individual mounting surface (11) between an individual fixed seal receiving fin (10) and the corresponding tip (15).

7. An integrated frame assembly to improve acoustics and aesthetics of an interior as claimed in claim 1, wherein the integrated frame assembly further comprising of a second junction frame (220a), said second junction frame (220a) comprising of three of the mounting surfaces (11), wherein two of the mounting surfaces (11) are disposed opposite to one another and the third mounting surface (11) is disposed perpendicular to said two mounting surfaces (11) to form a T-junction, three of the fixed seal receiving fins (10), wherein two of the fixed seal receiving fins (10) are disposed opposite to one another and the third fixed seal receiving fin (10) is disposed at a first end of the second junction frame (220a), three of the tips (15) for accommodating three flexible seals, wherein each tip (15) is disposed opposite to a corresponding fixed seal receiving fin (10); three glass sheets being disposed within the second junction frame (220a), wherein each glass sheet is mounted on an individual mounting surface (11) between an individual fixed seal receiving fin (10) and the corresponding tip (15).

8. An integrated frame assembly to improve acoustics and aesthetics of an interior as claimed in claim 1, wherein the integrated frame assembly further comprising of a third junction frame (220b), said third junction frame (220b) comprising of four of the mounting surfaces (11), wherein two of the mounting surfaces (11) are disposed opposite to one another, the third mounting surface (100) is disposed perpendicular to said two mounting surfaces and the fourth mounting surface (11) that is also perpendicular to said two mounting surfaces (11) is disposed opposite to the third mounting surface (11), four of

the fixed seal receiving fins (10), wherein two of the fixed seal receiving fins (10) are disposed at right angles to one another, the third fixed seal receiving fin (10) and the fourth fixed seal receiving fin are disposed at a first end and a second end respectively of the third junction frame (220b), four of the tips (15) for accommodating four flexible seals, wherein each tip (15) is disposed opposite to a corresponding fixed seal receiving fin (10); four glass sheets being disposed within the second junction frame (220a), wherein each glass sheet is mounted on an individual mounting surface (11) between an individual fixed seal receiving fin (10) and the corresponding tip (15).

9. An integrated frame assembly to improve acoustics and aesthetics of an interior as claimed in claim 1, wherein the second clip (5) in the fifth frame assembly is interchangeable with a first overhead panel lock (810), said first overhead panel lock (810) comprising of the tip (15) for accommodating a flexible seal and the first overhead panel lock (810) is associated with the fifth frame (200) to form a first overhead panel assembly (800).

10. An integrated frame assembly to improve acoustics and aesthetics of an interior as claimed in claim 1, wherein said integrated frame assembly has a width of 45 mm and that accommodates glass doors having a thickness of up to 20 mm or non-glass doors having a thickness of up to 40 mm, wherein the glass/non-glass doors being framed or frameless and SG glass sheets having a height of up to 3 metres.

11. An integrated frame assembly to improve acoustics and aesthetics of an interior, said integrated frame assembly consisting essentially of a first module that is associated with a second module, wherein the first module is selected from the group comprising of:

a seventh frame (6), said seventh frame (6) comprising of the first support member (13) at a first end of the seventh frame (6), the fixed seal receiving fin (10), the mounting surface (11) that is associated with the first lock (12), the plurality of support fins (14) that support the seventh frame (6) on an uneven floor and a plurality of grooves (22) within which a plurality of respective screws are disposed;

a twelfth frame for rebating of glass doors comprising of an eighth frame (8), said eighth frame (8) comprising of the first pair of locking fins (19), the pair of mounting fins (20), wherein a glass sheet/non-glass sheet is mounted between the pair of mounting fins (20), and a second pair of door rebating fins (23), wherein the eighth frame (8) is associated with a thirteenth frame (9), said thirteenth frame (9) comprising of a third pair of door rebating fins (24) that form a third locking mechanism with the second pair of door rebating fins (23), and a door supporting clip that is mounted between a pair of clip support fins (25);

a fourteenth frame for rebating of non-glass doors comprising of the eighth frame (8), said eighth frame (8) being associated with a fifteenth frame (100), said fifteenth frame (100) comprising of the third pair of door rebating fins (24) that form the third locking mechanism with the second pair of door rebating fins (23), and the door supporting clip that is mounted between the pair of clip support fins (25);

a ninth frame (230), said ninth frame (230) comprising of the first support member (13) at a first end of the ninth frame (230), the fixed seal receiving fin (10), the mounting surface (11) that is associated with the first lock (12), the fixing provision (26) and a third support member (27);

an eleventh frame (240), said eleventh frame (240) comprising of the first support members (13) at a first end, the first support member (13) at a second end that is disposed opposite to the first end, a pair of fixed seal receiving fins (10) that are disposed opposite to one another, a pair of mounting surfaces that are disposed opposite to one another (11), wherein each mounting surface (11) is individually associated with the first lock (12), and the plurality of grooves (22) within which a plurality of respective screws are disposed; and

the eighth frame (8), said eighth frame (8) comprising of the first pair of locking fins (19), the pair of mounting fins (20), wherein a glass sheet/non-glass sheet is mounted between the pair of mounting fins (20), and the second pair of door rebating fins (23),

and the second module is respectively selected from the group consisting of:

a third clip (7), said third clip (7) comprising of the second lock (16) that forms the first locking mechanism with the first lock (12) for holding the third clip (7) in its place when the third clip (7) is associated with the seventh frame (6) to form the seventh frame assembly (250), the tip (15) for accommodating a flexible seal that is disposed opposite to the fixed seal receiving fin (10) in the seventh frame assembly (250), wherein a sheet of glass/non-glass is mounted on the mounting surface (11) between the fixed seal receiving fin (10) and the tip (15), and the second support member (17) that supports the seventh frame assembly (250) in conjunction with the first support member (13);

the second clip (5), said second clip (5) comprising of the second pair of locking fins (21) that form the second locking mechanism with the first pair of locking fins (19) to form the eighth frame assembly (260),

the second clip (5), said second clip (5) comprising of the second pair of locking fins (21) that form the second locking mechanism with the first pair of locking fins (19) to form the ninth frame assembly (270);

the first clip (2), said first clip (2) comprising of the second lock (16) that forms the first locking mechanism with the first lock (12) for holding the first clip (2) in its place when the first clip (2) is associated with the ninth frame (230) to form the tenth frame assembly (280), said tenth frame assembly (280) acting as a frame for glass/non-glass doors, the tip (15) for accommodating a flexible seal that is disposed opposite to the fixed seal receiving fin (10) in the tenth frame assembly (280), wherein a sheet of glass/non-glass is mounted on the mounting surface (11) between the fixed seal receiving fin (10) and the tip (15), and the second support member (17) that supports the tenth frame assembly (280) in conjunction with the first support member (13);

12. An integrated frame assembly to improve acoustics and aesthetics of an interior as claimed in claim 11, wherein the integrated frame assembly further comprising of a pair of third clips (7) disposed opposite to one another, wherein each third clip (7) comprising of the second lock (16) that forms the first locking mechanism with the first lock (12) for holding the third clip (7) in its place when the third clip (7) is associated with the eleventh frame (240) to form a twelfth frame assembly (310), the tip (15) for accommodating a

flexible seal that is disposed opposite to the fixed seal receiving fin (10) in the twelfth frame assembly (310), wherein a sheet of glass/non-glass is mounted on the mounting surface (11) between the fixed seal receiving fin (10) and the tip (15), and the second support member (17) that supports the twelfth frame assembly (310) in conjunction with the first support member (13);

13. An integrated frame assembly to improve acoustics and aesthetics of an interior as claimed in claim 11, wherein the integrated frame assembly further comprising of a second overhead panel lock (820), said second overhead panel lock (820) comprising of the fixed seal receiving fin (10), the tip (15) for accommodating a flexible seal that is disposed opposite to the fixed seal receiving fin (10), the second pair of locking fins (21) that form the second locking mechanism with the first pair of locking fins (19) in the eighth frame (8) and the third pair of door rebating fins (24) that form the third locking mechanism with the second pair of door rebating fins (23) in the eighth frame (8) to form a second overhead panel assembly (830).

14. An integrated frame assembly to improve acoustics and aesthetics of an interior as claimed in claim 11, wherein said integrated frame assembly has a width ranging from 80 mm-100 mm and that accommodates glass doors having a thickness of up to 20 mm or non-glass doors having a thickness of up to 50 mm, wherein the glass doors/non-glass doors being framed or frameless and SG glass sheets/SG non-glass sheets (such as wooden sheets) having a height of up to 4.5 m.

15. An integrated frame assembly to improve acoustics and aesthetics of an interior as claimed in claim 11 and claim 14, wherein said seventh frame assembly (250) being associated with the fifth frame (200) and a fourth clip (290), said fourth clip (290) comprising of the second pair of locking fins (21) that form the second locking mechanism with the first pair of locking fins (19) to form an eleventh frame assembly (300).

16. An integrated frame assembly to improve acoustics and aesthetics of an interior as claimed in claim 11 to 15, wherein said integrated frame assembly is adjustable.

17. An integrated frame assembly to improve acoustics and aesthetics of an interior as claimed in claim 11, wherein the first module is selected from the group comprising of:

a sixteenth frame (320), said sixteenth frame (320) comprising of the first support member (13) at a first end of the sixteenth frame (320), the first support member (13) at a second end of the sixteenth frame (320), a pair of the fixed seal receiving fins (10) that are disposed opposite to one another so as to accommodate a pair of glass sheets/non-glass sheets that are parallel to one another, a pair of the mounting surfaces (11), wherein each mounting surface (11) is individually associated with the first lock (12), the plurality of support fins (14) that support the sixteenth frame (320) on an uneven floor;

a seventeenth frame for rebating of glass doors comprising of an eighteenth frame (110), said eighteenth frame (110) comprising of the first pair of locking fins (19), two pairs of the mounting fins (20) that accommodate two glass sheets/non-glass sheets parallel to one another, wherein an individual glass sheet/non-glass sheet is mounted between each pair of the mounting fins (20), and the second pair of door rebating fins (23), wherein the eighteenth frame (110) is associated with the thirteenth frame, said thirteenth frame (9) consisting essentially of the third pair of door rebating fins (24) that form the third locking mechanism with the second pair of door rebating fins (23), and the door supporting clip that is mounted between the pair of clip support fins (25);

a nineteenth frame for rebating of non-glass doors comprising of the eighteenth frame (110), said eighteenth frame (110) being associated with the fifteenth frame (100), said fifteenth frame (100) comprising of the third pair of door rebating fins (24) that form the third locking mechanism with the second pair of door rebating fins (23), and the door supporting clip that is mounted between the pair of clip support fins (25);

a twentieth frame (120), said twentieth frame (120) comprising of the first support member (13) at a first end, the first support member (13) at a second end, the first support member (13) at a third end, the first support member (13) at a fourth end, two pairs of the fixed seal receiving fins (10) that are disposed opposite to one another, two pairs of the mounting surfaces (11) that are disposed opposite to one another, wherein each pair of the mounting surfaces (11) are capable of accommodating two glass

sheets/non-glass sheets that are parallel to one another and each mounting surface (11) is individually associated with the first lock (12), the plurality of support fins (14) that support the twentieth frame (120) on an uneven floor; and

the eighteenth frame (110), said eighteenth frame (110) comprising of the first pair of locking fins (19), two pairs of the mounting fins (20) that accommodate two glass sheets/non-glass sheets parallel to one another, wherein an individual glass sheet/non-glass sheet is mounted between each pair of the mounting fins (20), and the second pair of door rebating fins (23);

and the second module is respectively selected from the group comprising of:

a pair of the first clips (2) that are disposed opposite to one another, wherein each first clip (2) consists essentially of the second lock (16) that forms the first locking mechanism with the first lock (12) for holding the first clip (2) in its place when the first clip (2) is associated with the sixteenth frame (320) to form the thirteenth frame assembly (330), the tip (15) for accommodating a flexible seal that is disposed opposite to the fixed seal receiving fin (10) in the thirteenth frame assembly (330), wherein a sheet of glass/a sheet of non-glass is mounted on the mounting surface (11) between the fixed seal receiving fin (10) and the tip (15), and the second support member (17) that supports the thirteenth frame assembly (330) in conjunction with the first support member (13);

the second clip (5), said second clip (5) comprising of the second pair of locking fins (21) that form the second locking mechanism with the first pair of locking fins (19) to form the fourteenth frame assembly (340);

the second clip (5), said second clip (5) comprising of the second pair of locking fins (21) that form the second locking mechanism with the first pair of locking fins (19) to form the fifteenth frame assembly (350);

two pairs of the first clips (2), wherein each first clip (2) comprising of the second lock (16) that forms the first locking mechanism with the first lock (12) for holding the first clip

(2) in its place when the first clip (2) is associated with the twentieth frame (120) to form the sixteenth frame assembly (360);

18. An integrated frame assembly to improve acoustics and aesthetics of an interior as claimed in claim 17, wherein the integrated frame assembly further comprising of a third overhead panel lock (840), said third overhead panel lock (840) comprising of a pair of the fixed seal receiving fins (10) that are disposed opposite to one another so as to accommodate a pair of glass sheets/non-glass sheets that are parallel to one another, a pair of the tips (15) for accommodating a pair of flexible seals, the second pair of locking fins (21) that form the second locking mechanism with the first pair of locking fins (19) in the eighteenth frame (110) and the third pair of door rebating fins (24) that form the third locking mechanism with the second pair of door rebating fins (23) in the eighteenth frame (110) to form a third overhead panel assembly (850).

19. An integrated frame assembly to improve acoustics and aesthetics of an interior as claimed in claim 17, wherein said integrated frame assembly has a width ranging from 80 mm-100 mm and that accommodates glass doors having a thickness of up to 20 mm or non-glass doors having a thickness of up to 50 mm, wherein the glass doors/non-glass doors being framed or frameless having a thickness of up to 20 mm, and double glaze (DG) glass sheets/DG non-glass sheets such as wooden sheets having a height of up to 4.5 m.

20. An integrated frame assembly to improve acoustics and aesthetics of an interior as claimed in claim 1, wherein the sound proofing ability of said integrated frame assembly is up to 26db.

21. An integrated frame assembly to improve acoustics and aesthetics of an interior as claimed in claim 11 to 17, wherein the sound proofing ability of said integrated frame assembly is up to 45 db.

22. An integrated frame assembly to improve acoustics and aesthetics of an interior as claimed in claim 10 to 19, wherein the non-glass door is a timber door.

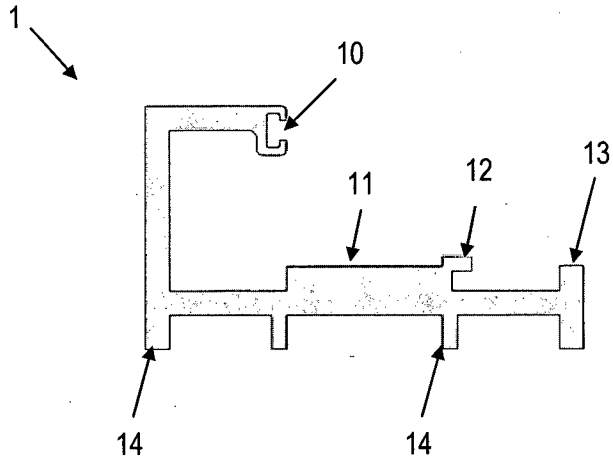


Figure 1

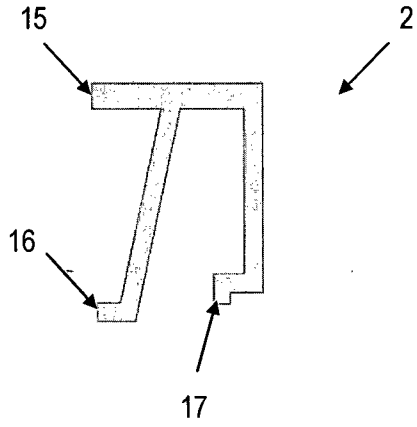


Figure 2

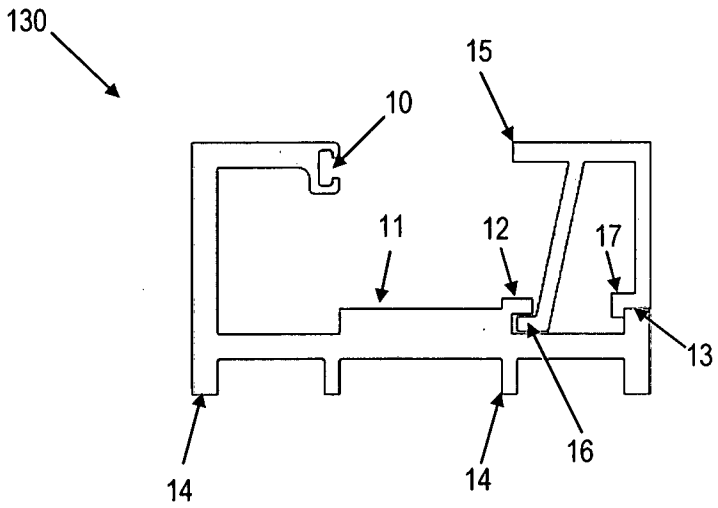


Figure 3

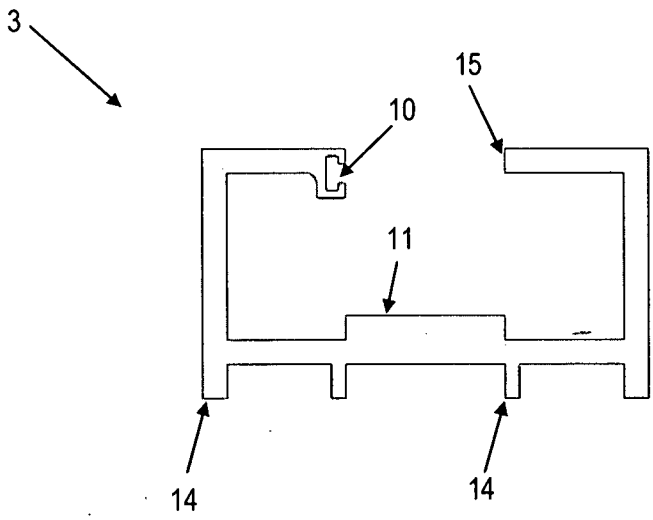


Figure 4

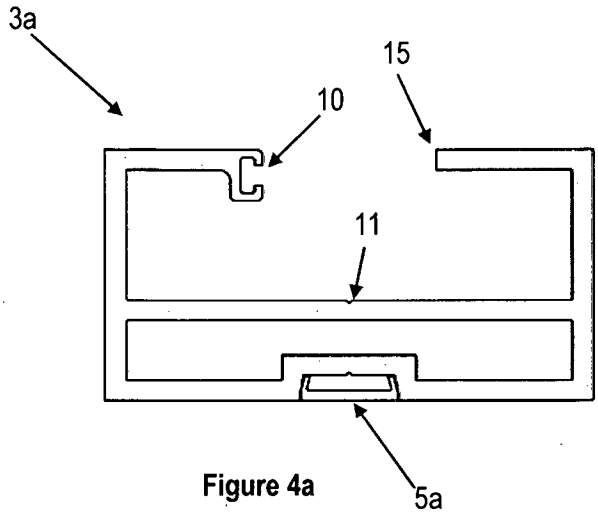


Figure 4a

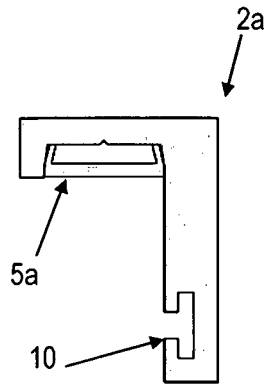


Figure 4b

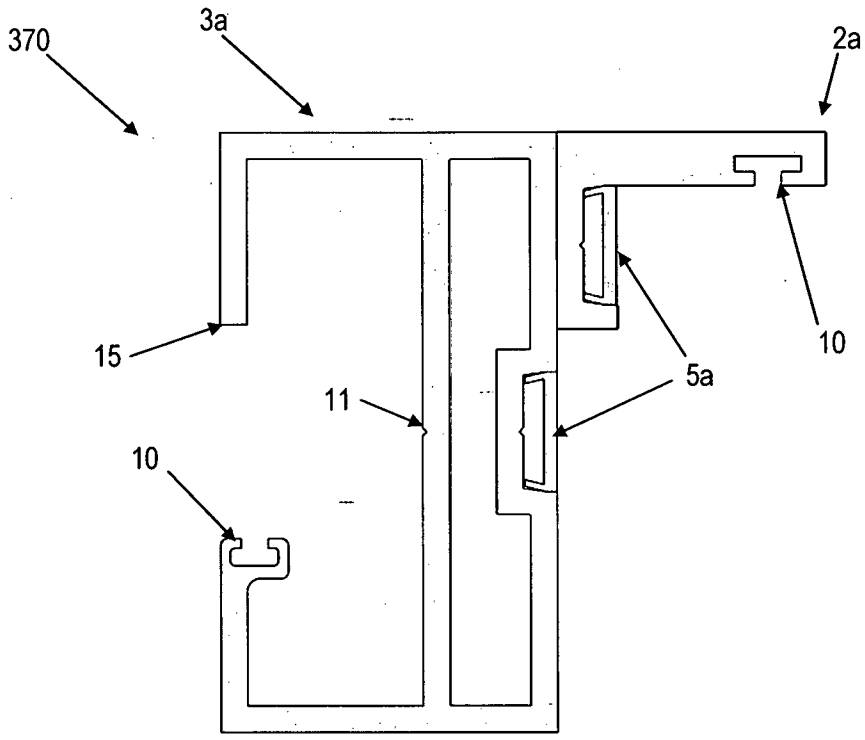


Figure 4c

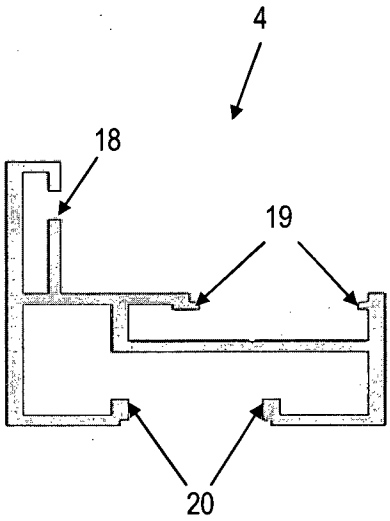


Figure 5

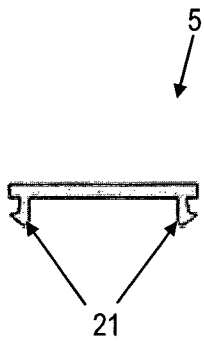
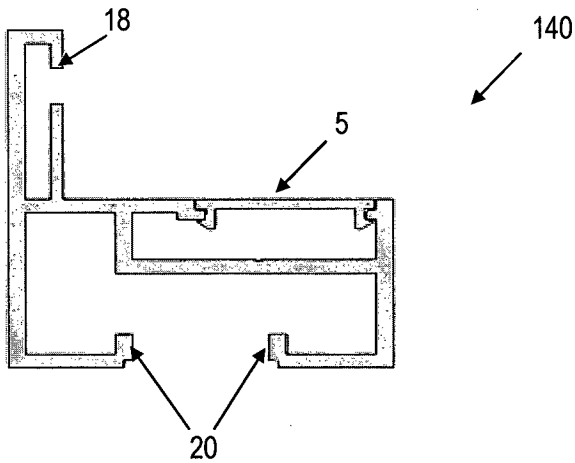


Figure 6



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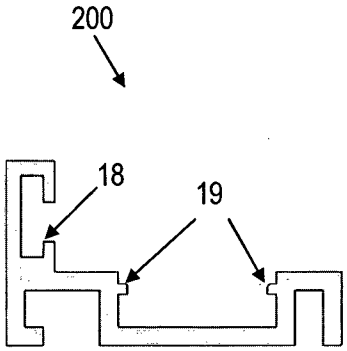


Figure 8

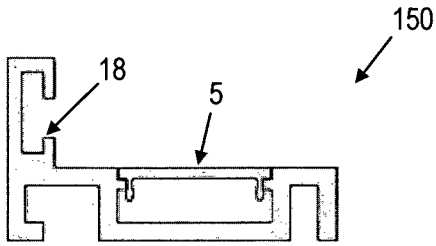


Figure 9

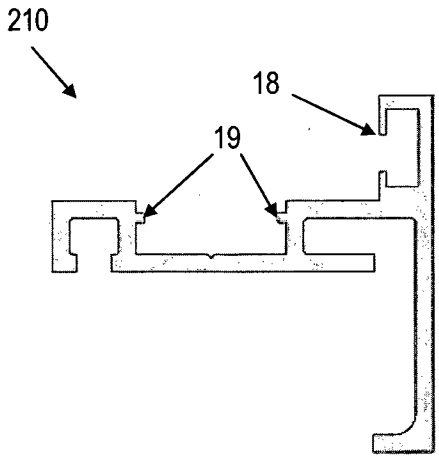


Figure 10

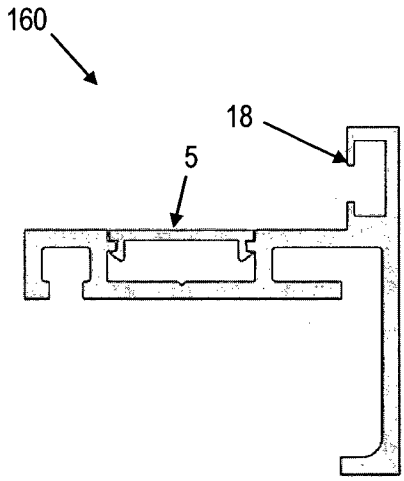
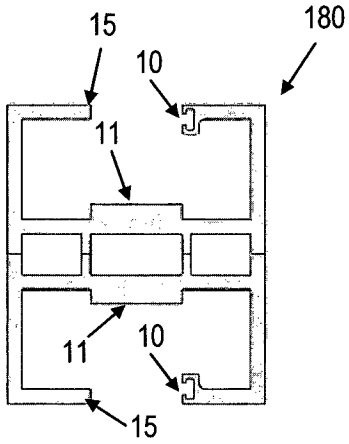


Figure 11



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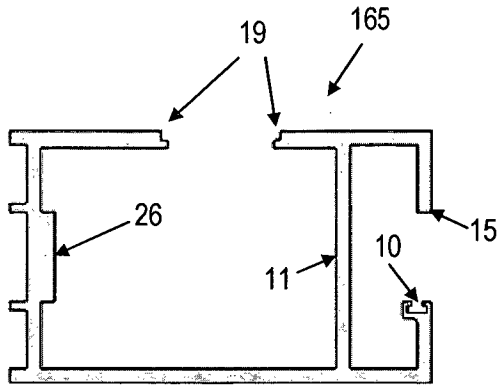


Figure 13

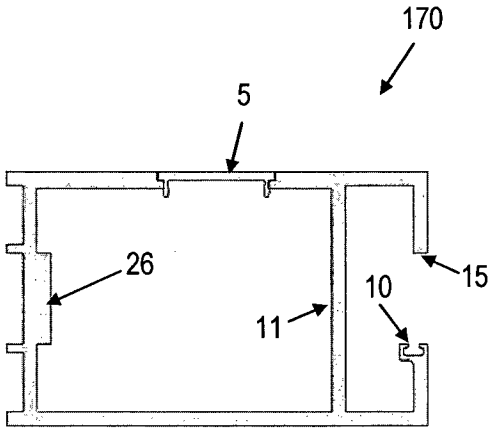


Figure 14

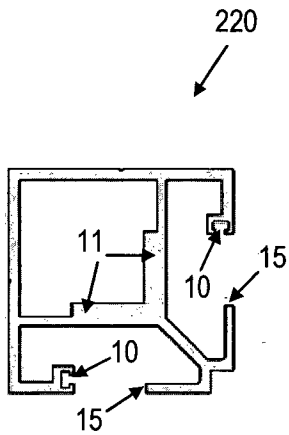


Figure 15

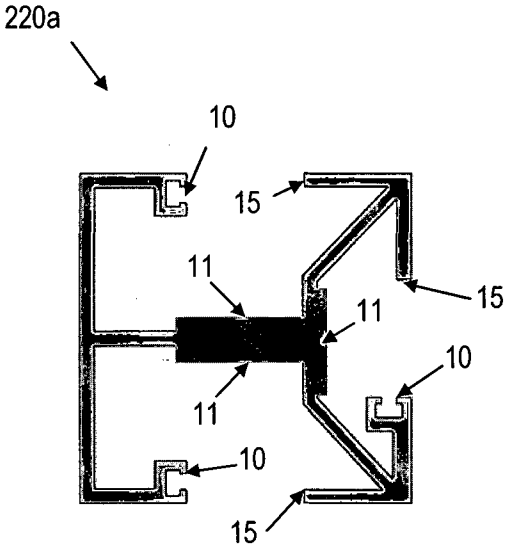


Figure 15a

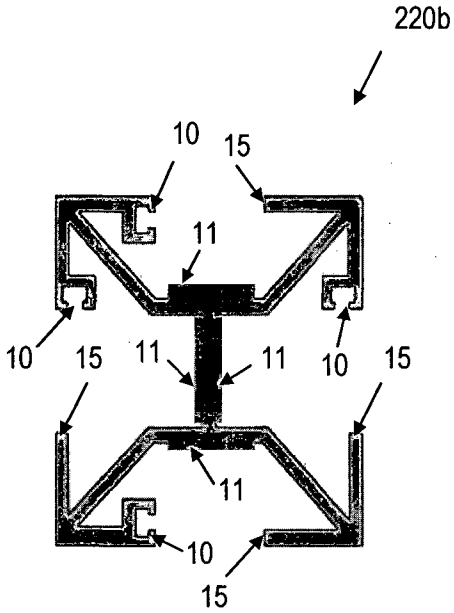


Figure 15b

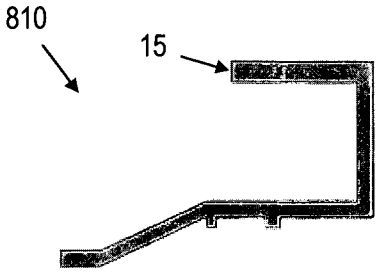


Figure 16

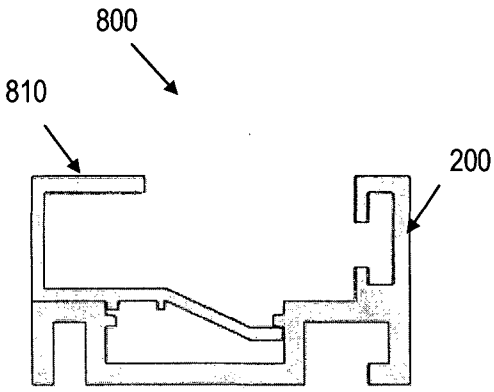
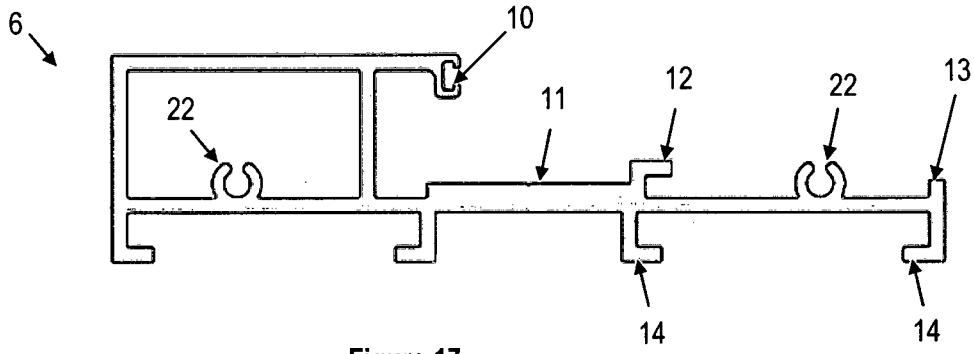


Figure 16a



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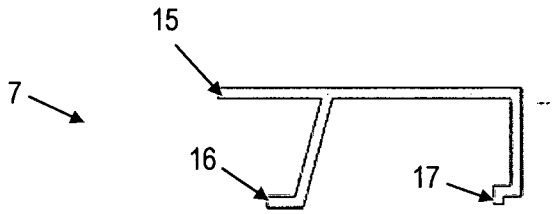


Figure 18

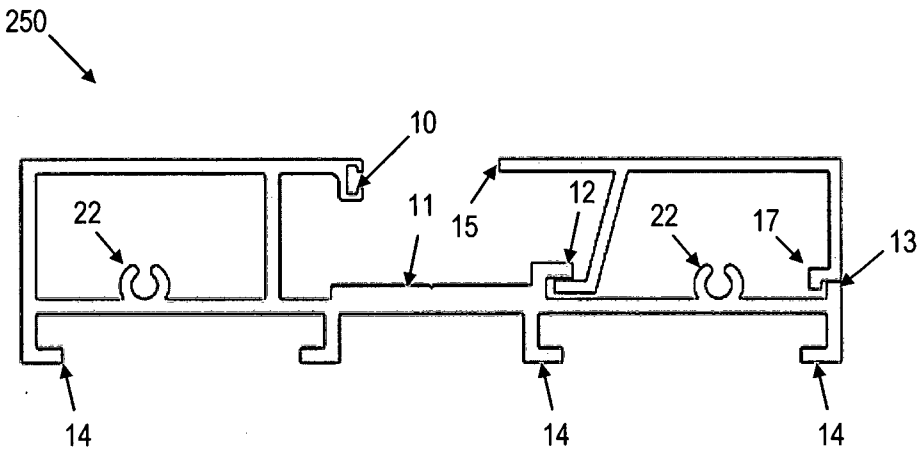


Figure 19

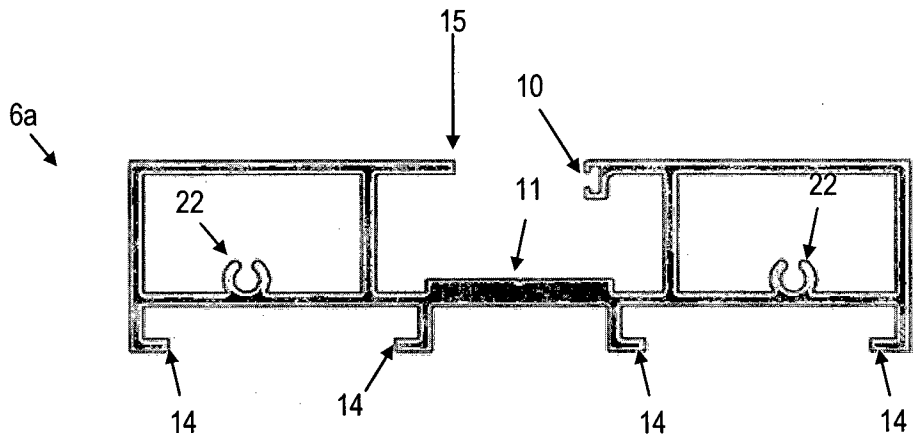


Figure 17a

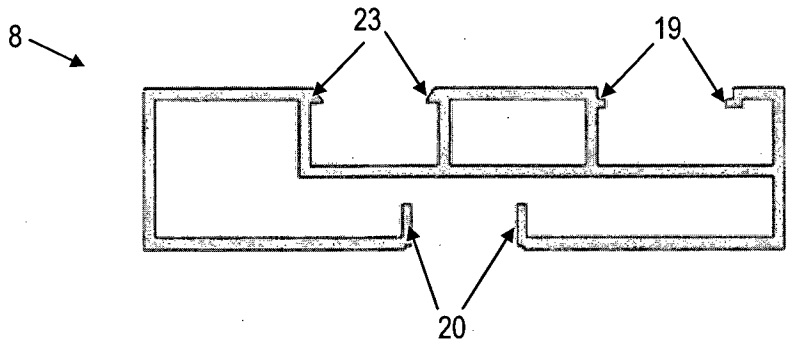


Figure 20

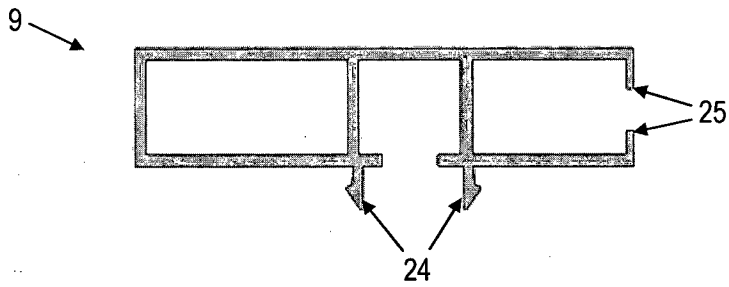


Figure 21

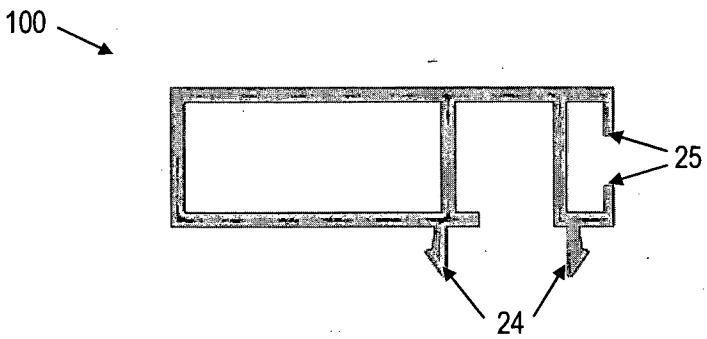


Figure 22

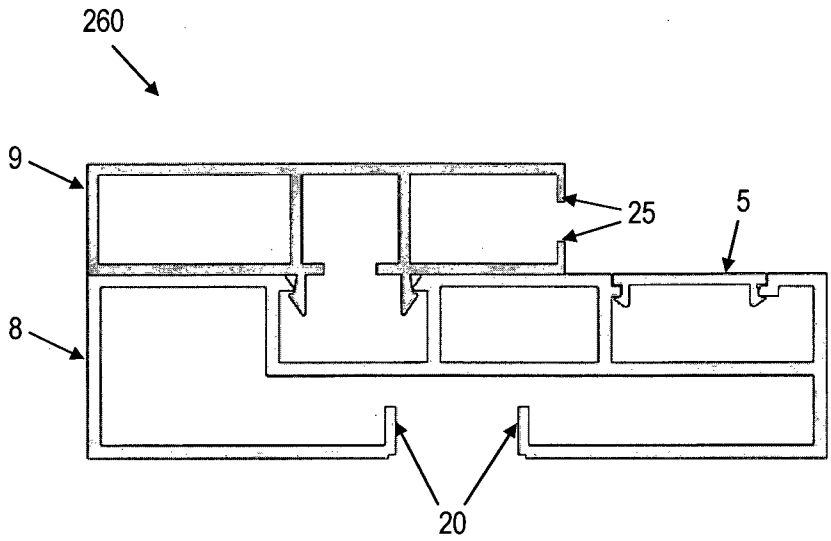


Figure 23

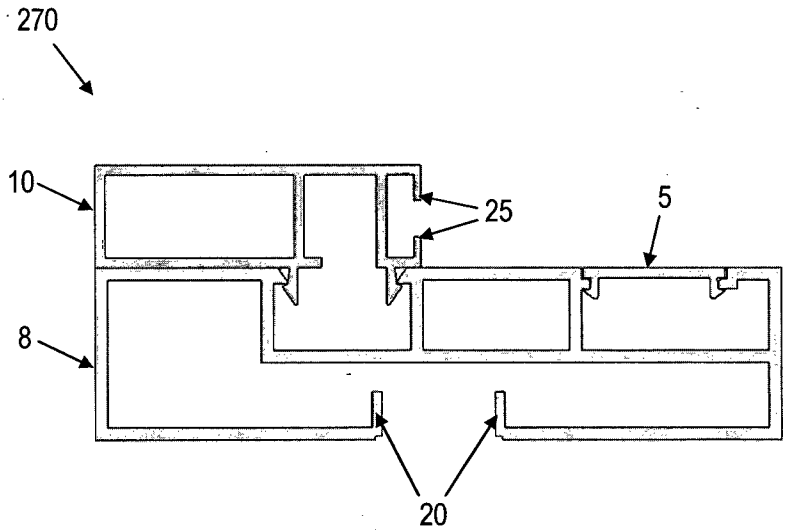


Figure 24

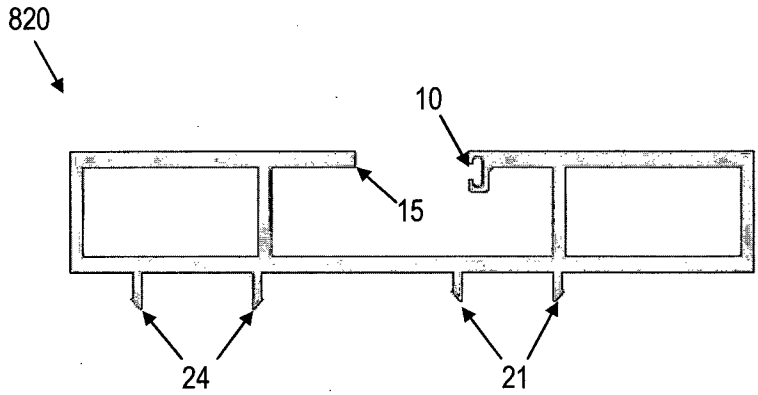


Figure 24a

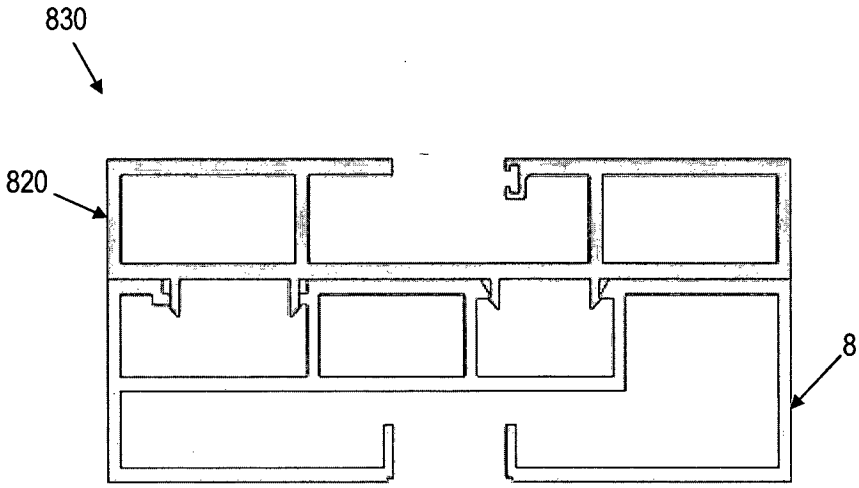


Figure 24b

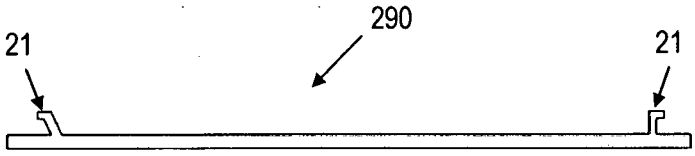


Figure 25

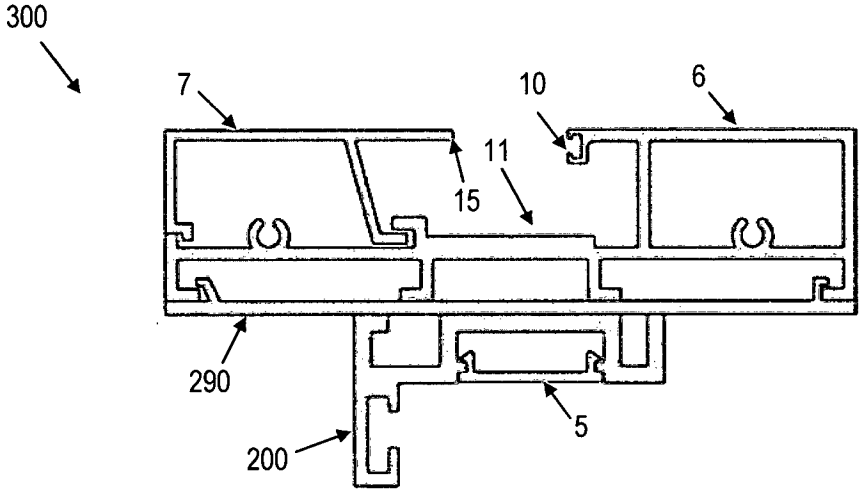
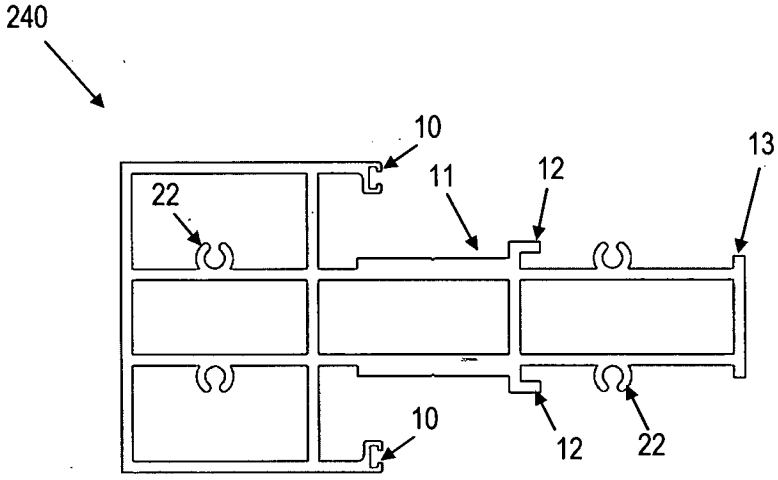


Figure 26



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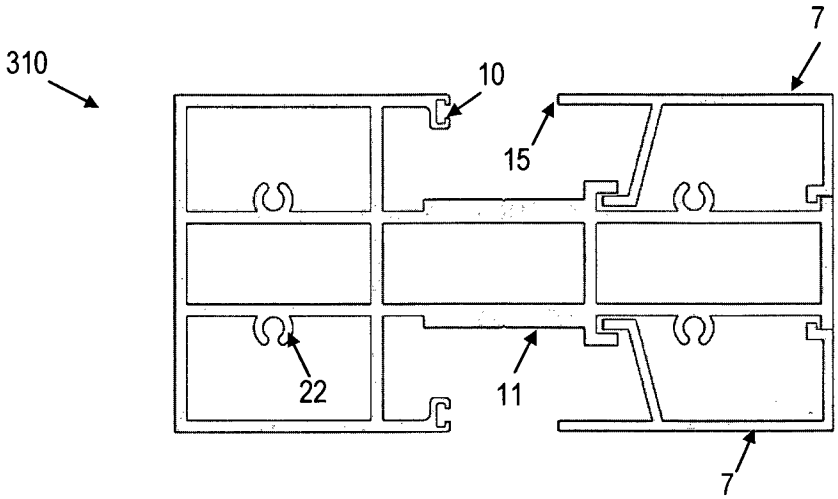
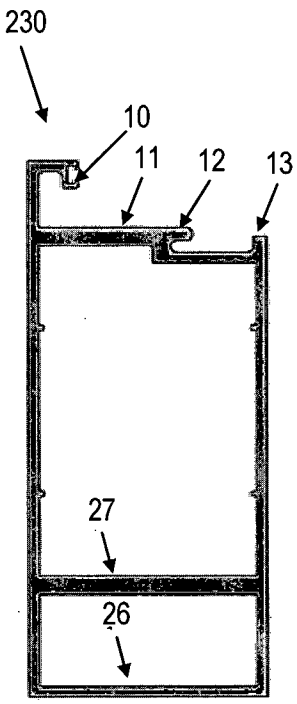


Figure 28



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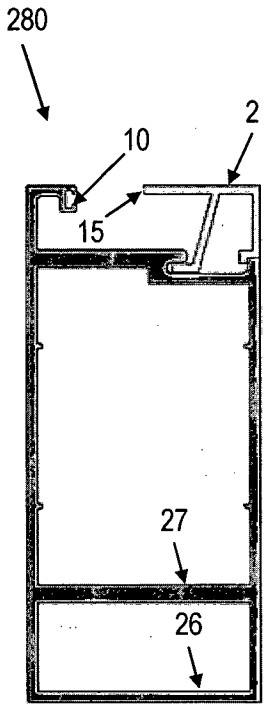


Figure 30

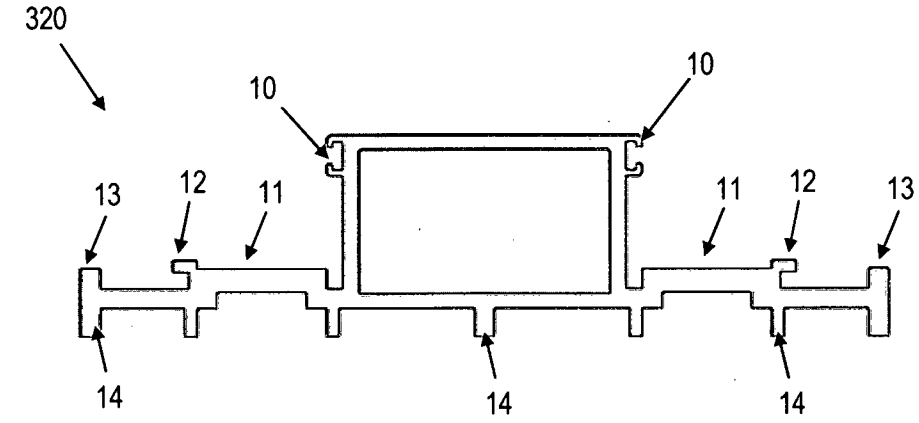


Figure 31

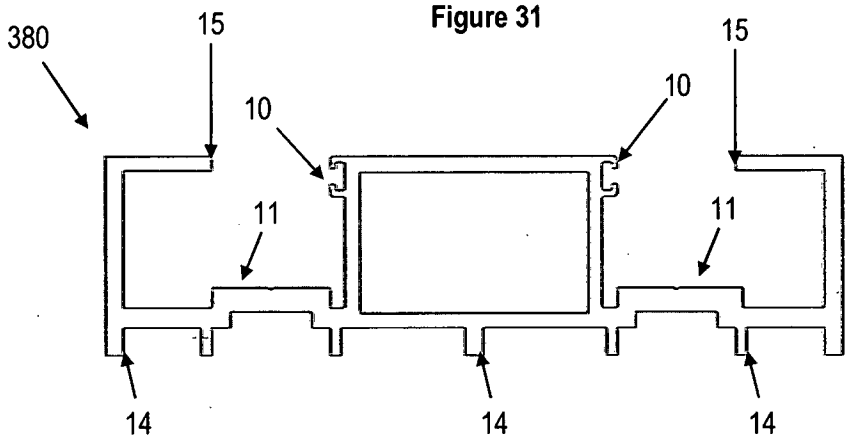


Figure 31a

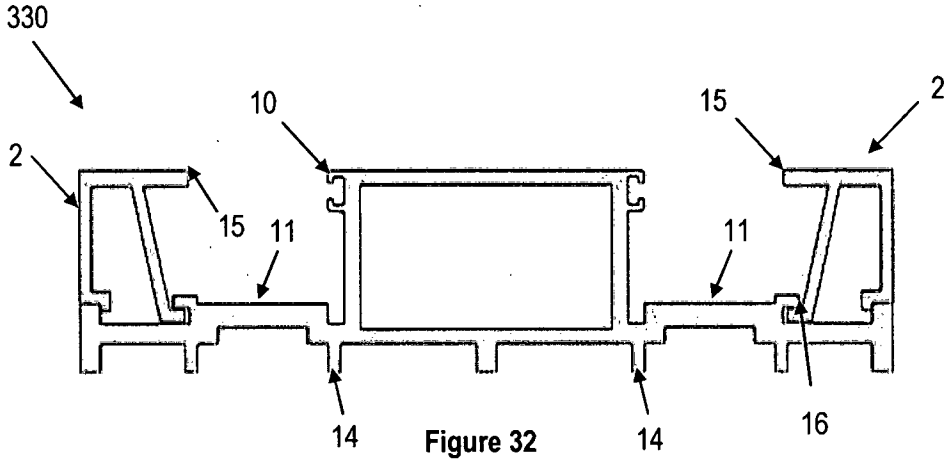


Figure 32

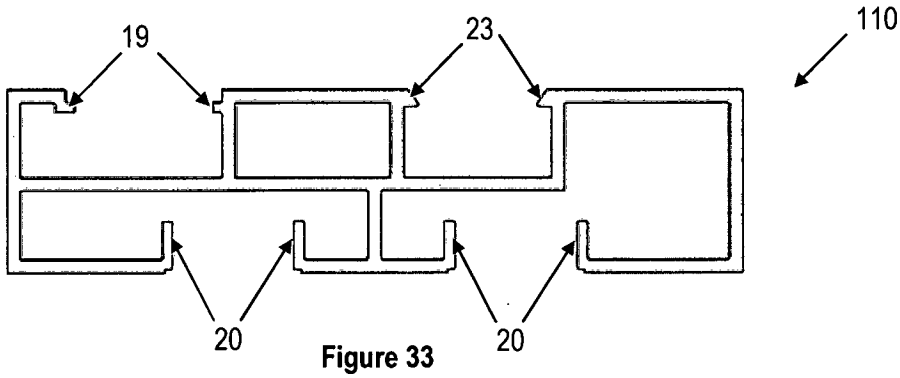


Figure 33

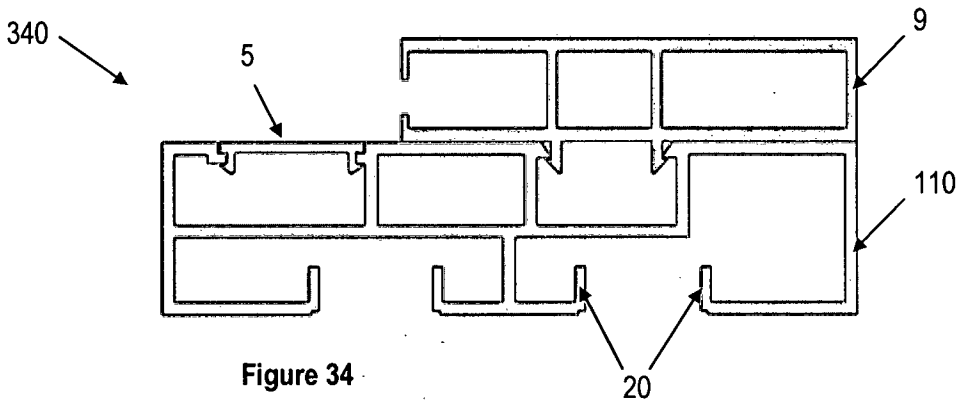


Figure 34

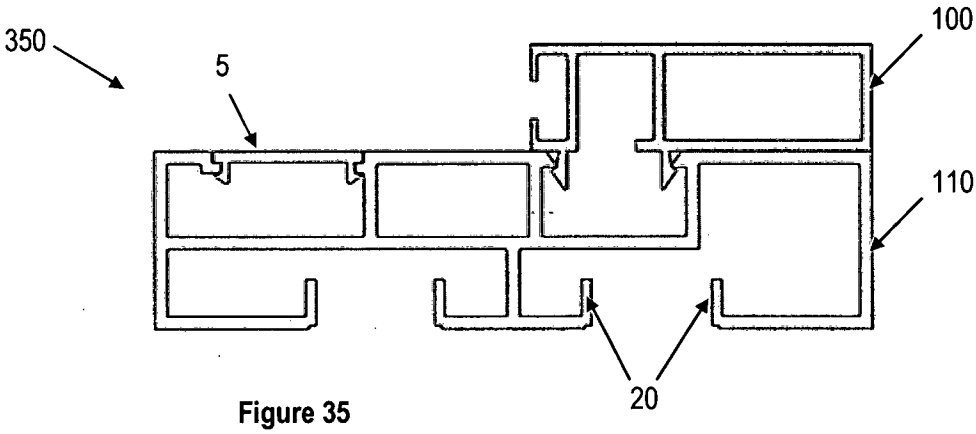


Figure 35

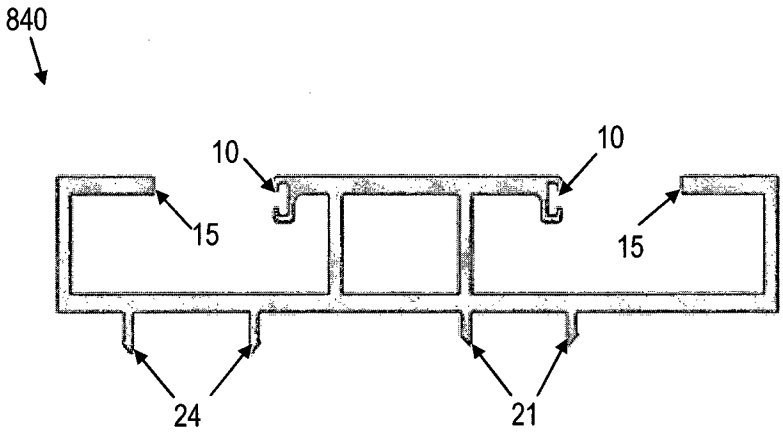


Figure 35a

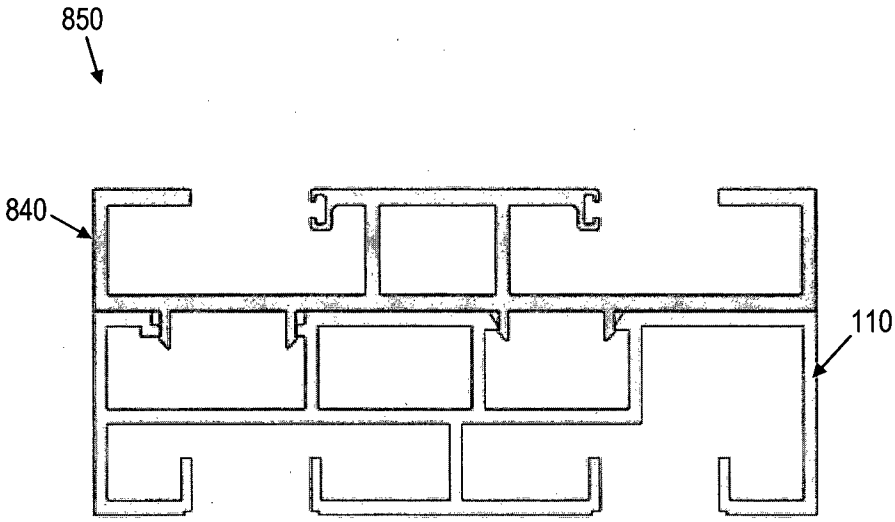
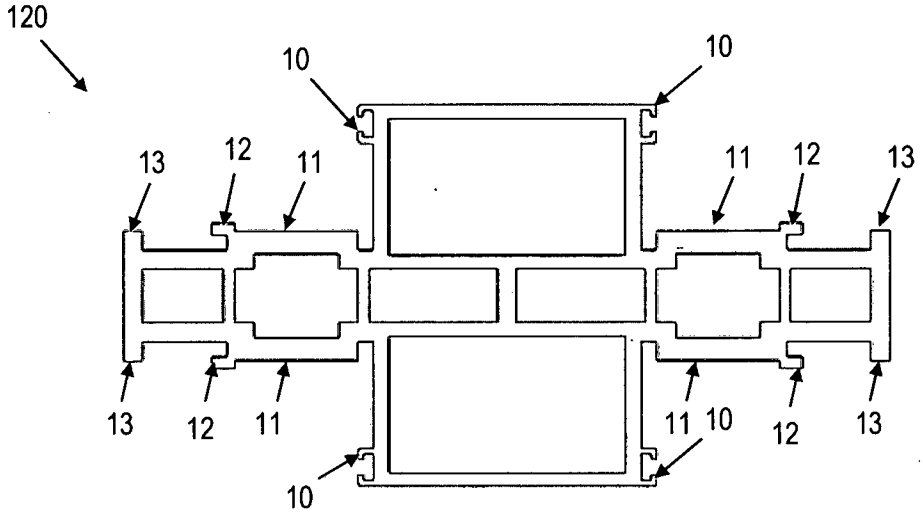


Figure 35b



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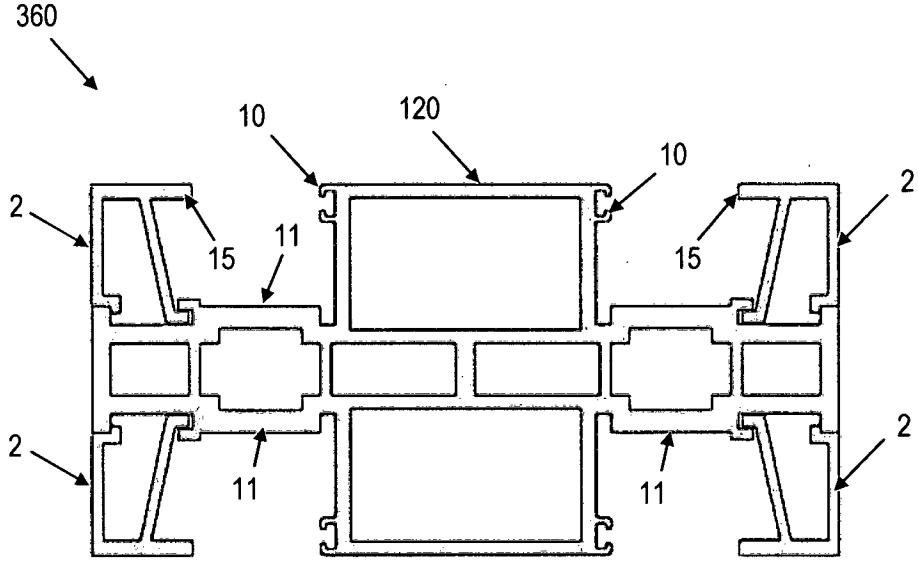

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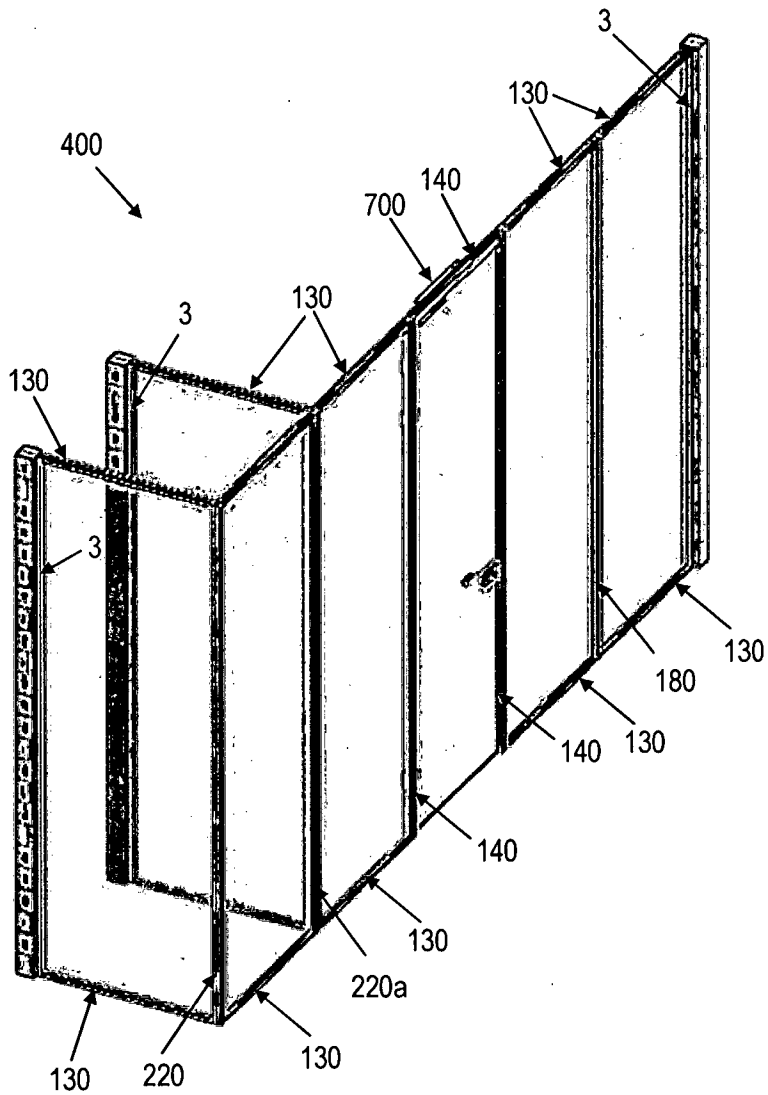
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3
130
180
130
140
130
140
130
220a
130
220
130

Figure 38

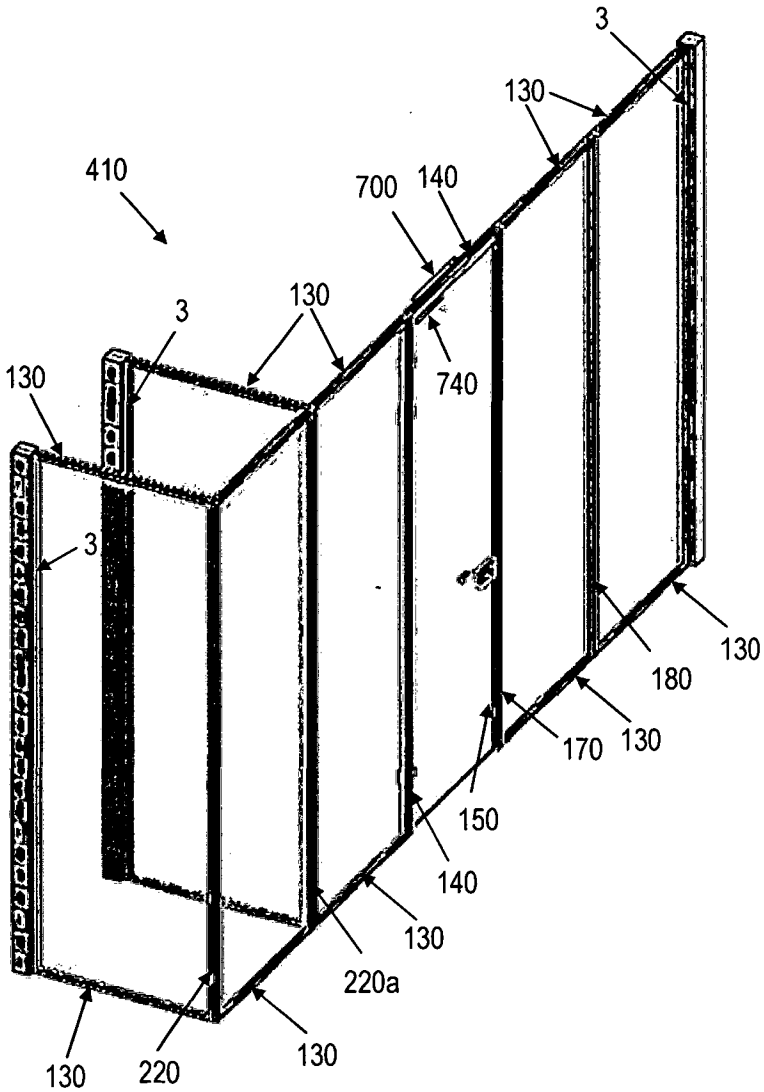
3
130
410
700
140
130
3
740
130
3
130
180
170
130
150
140
130
220a
130
220
130

Figure 39

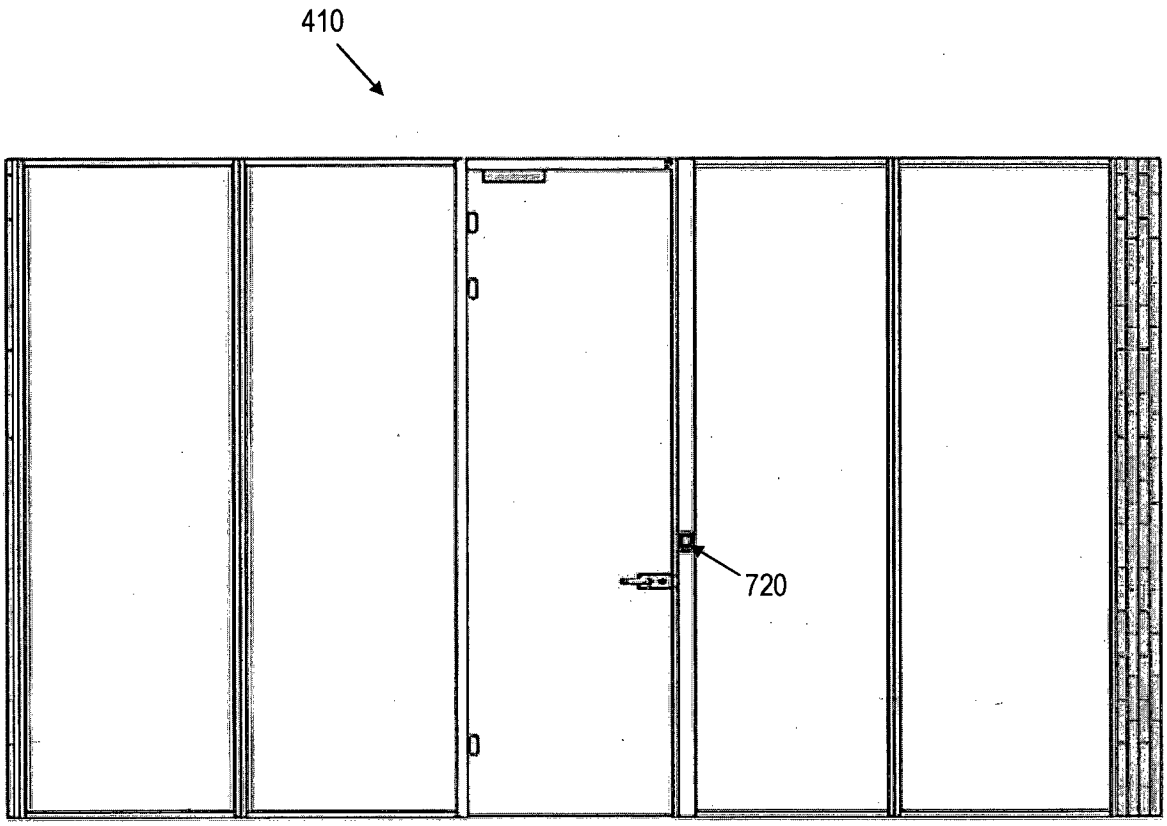

Figure 40

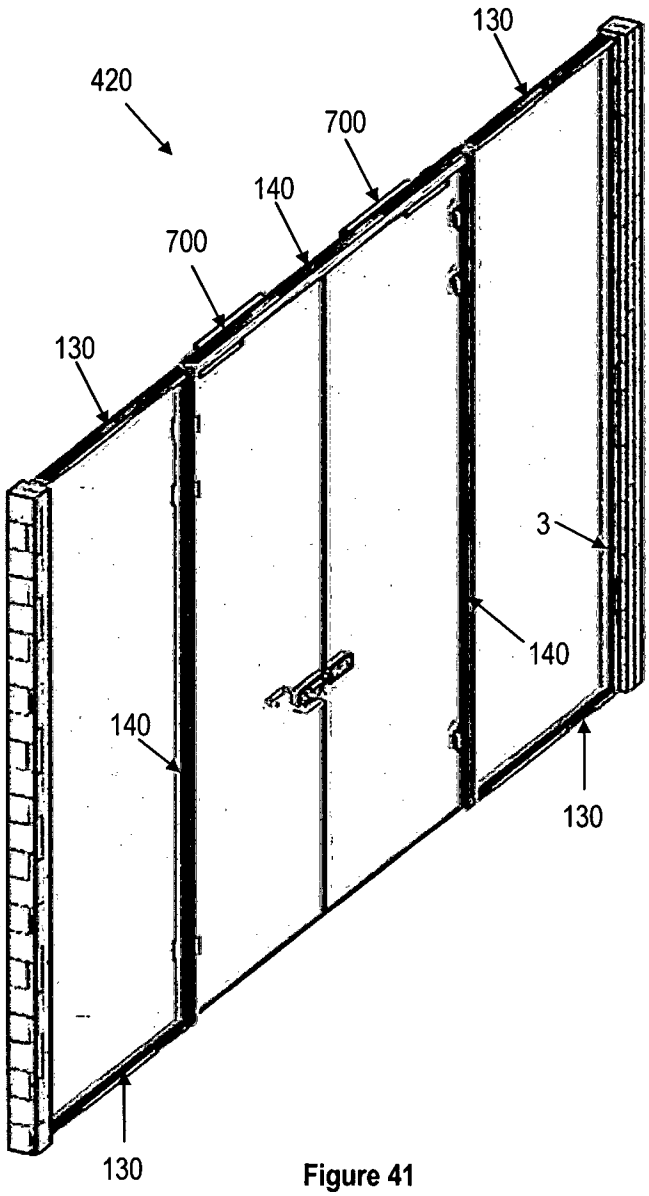

Figure 41

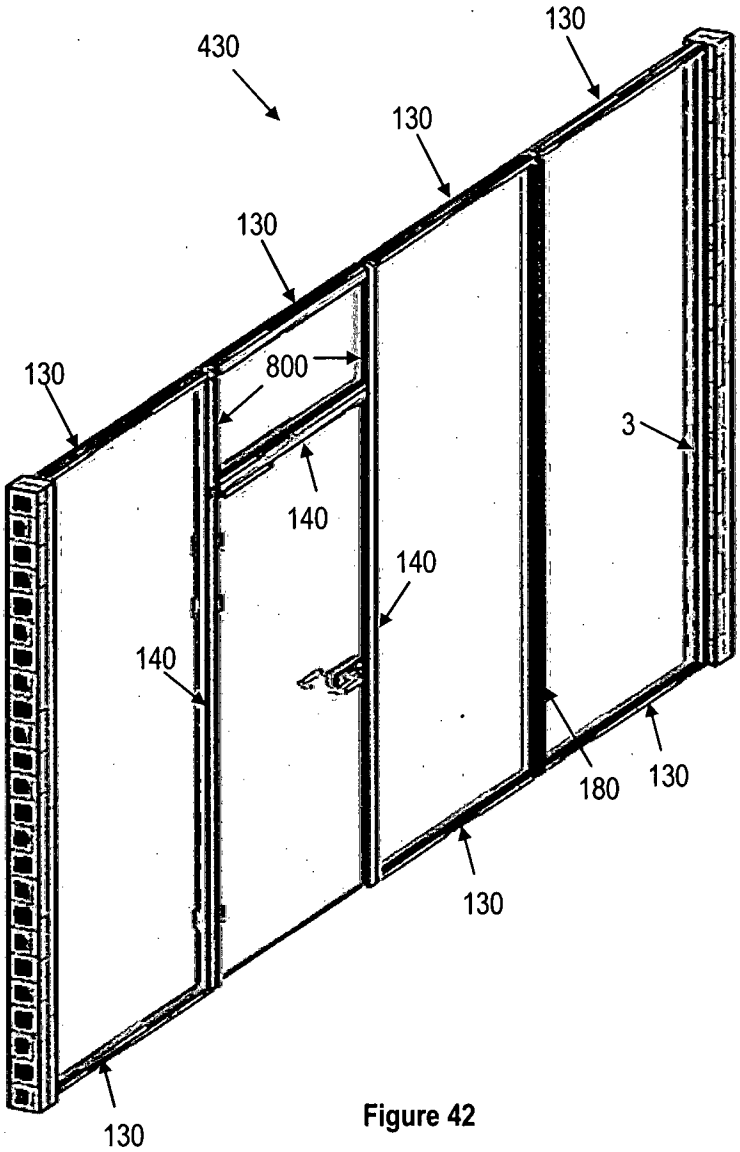

Figure 42

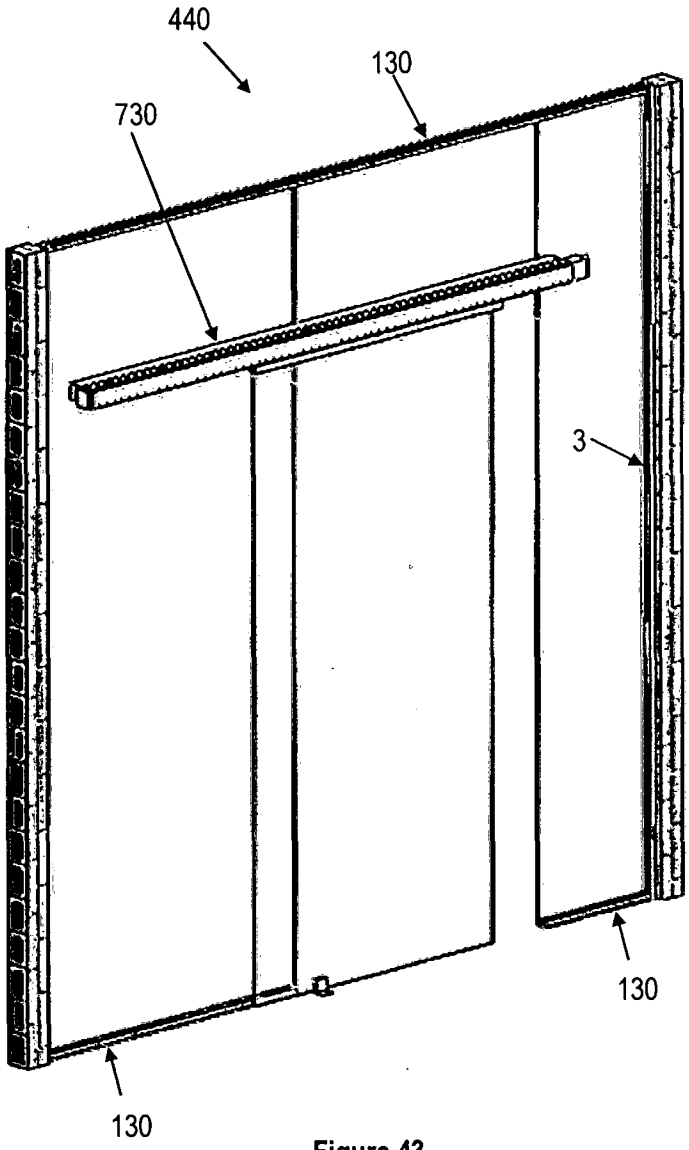

Figure 43

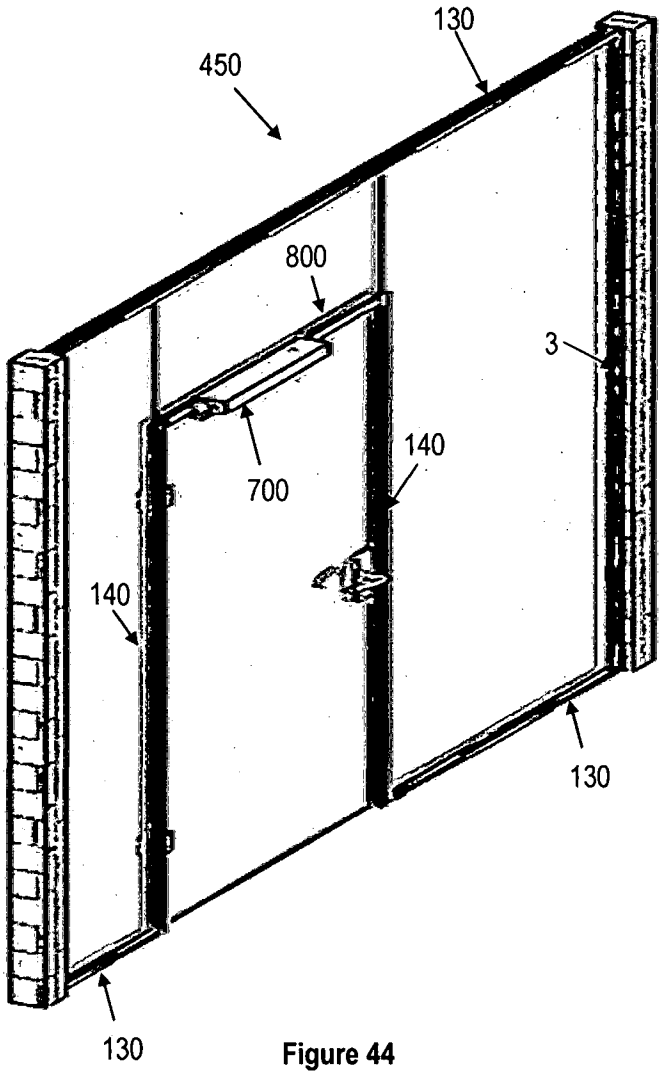

Figure 44

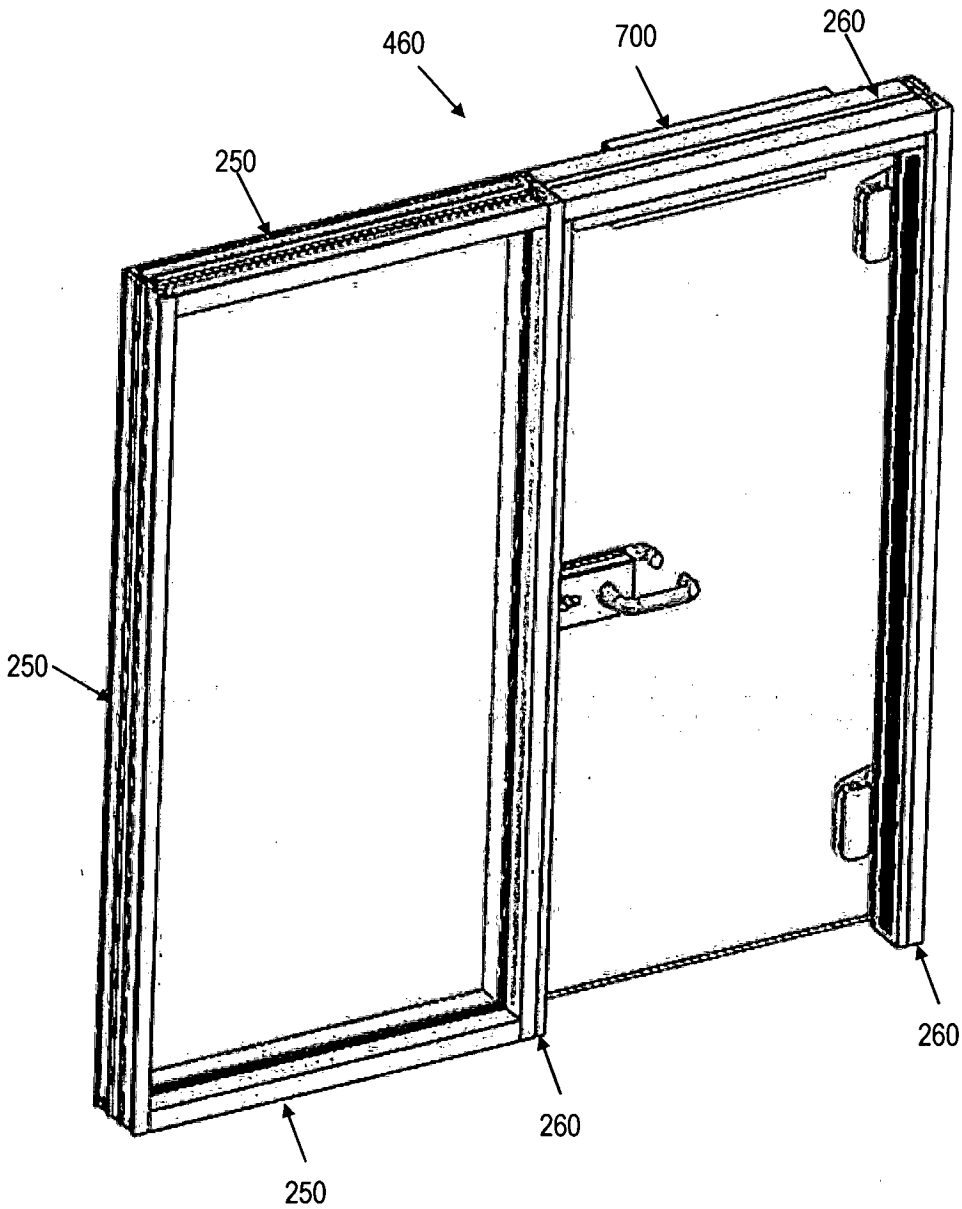

Figure 45

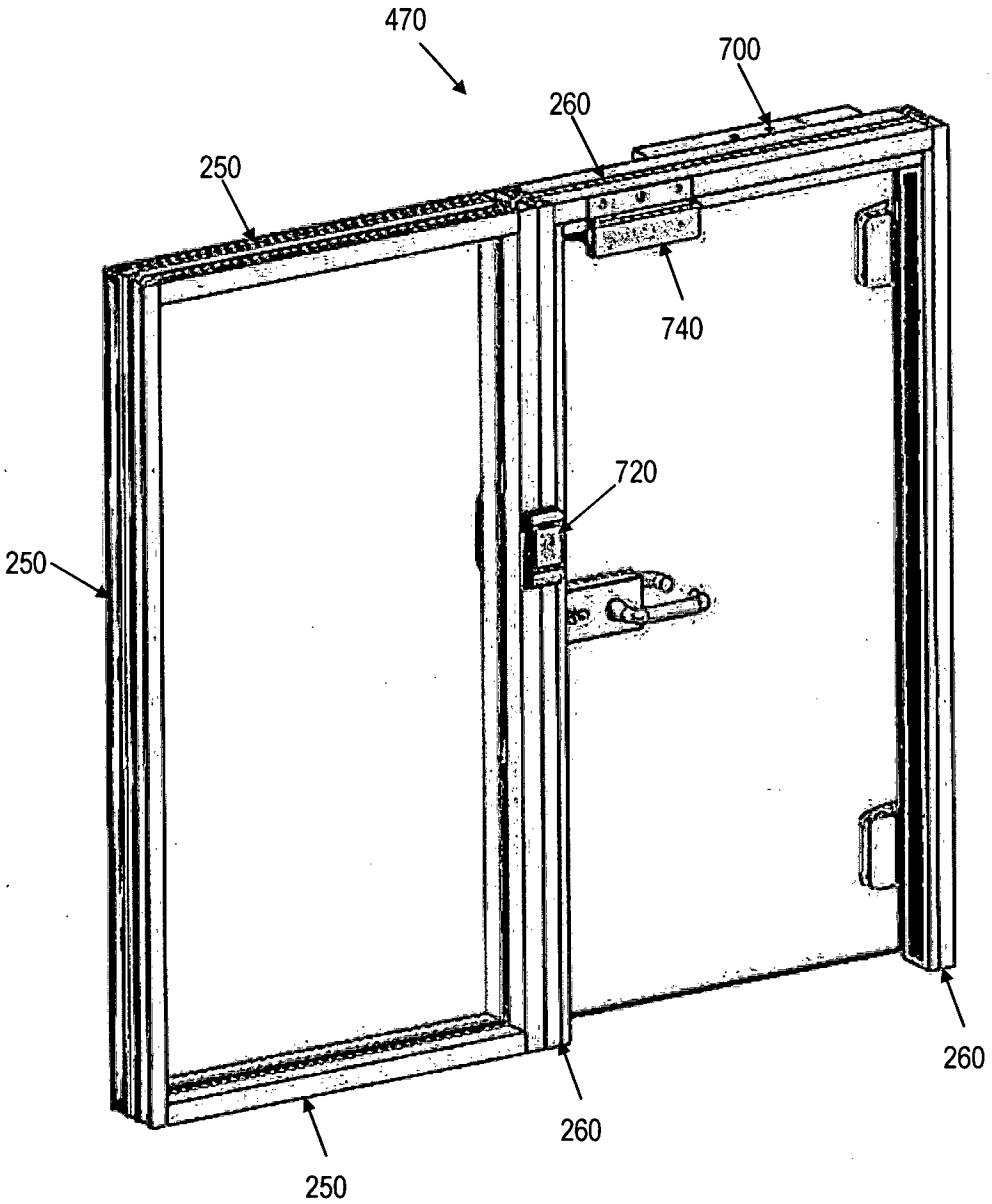

Figure 46

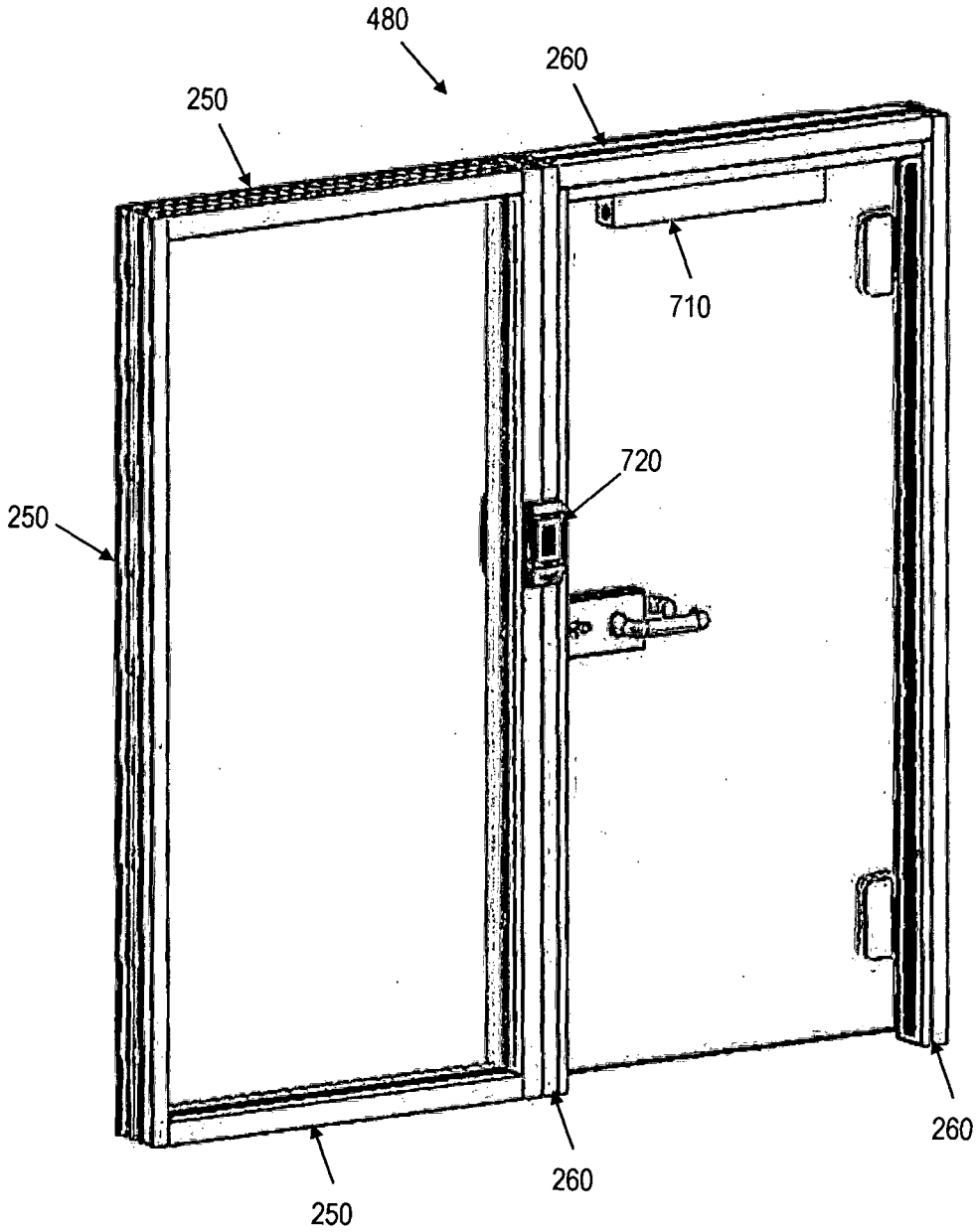

Figure 47

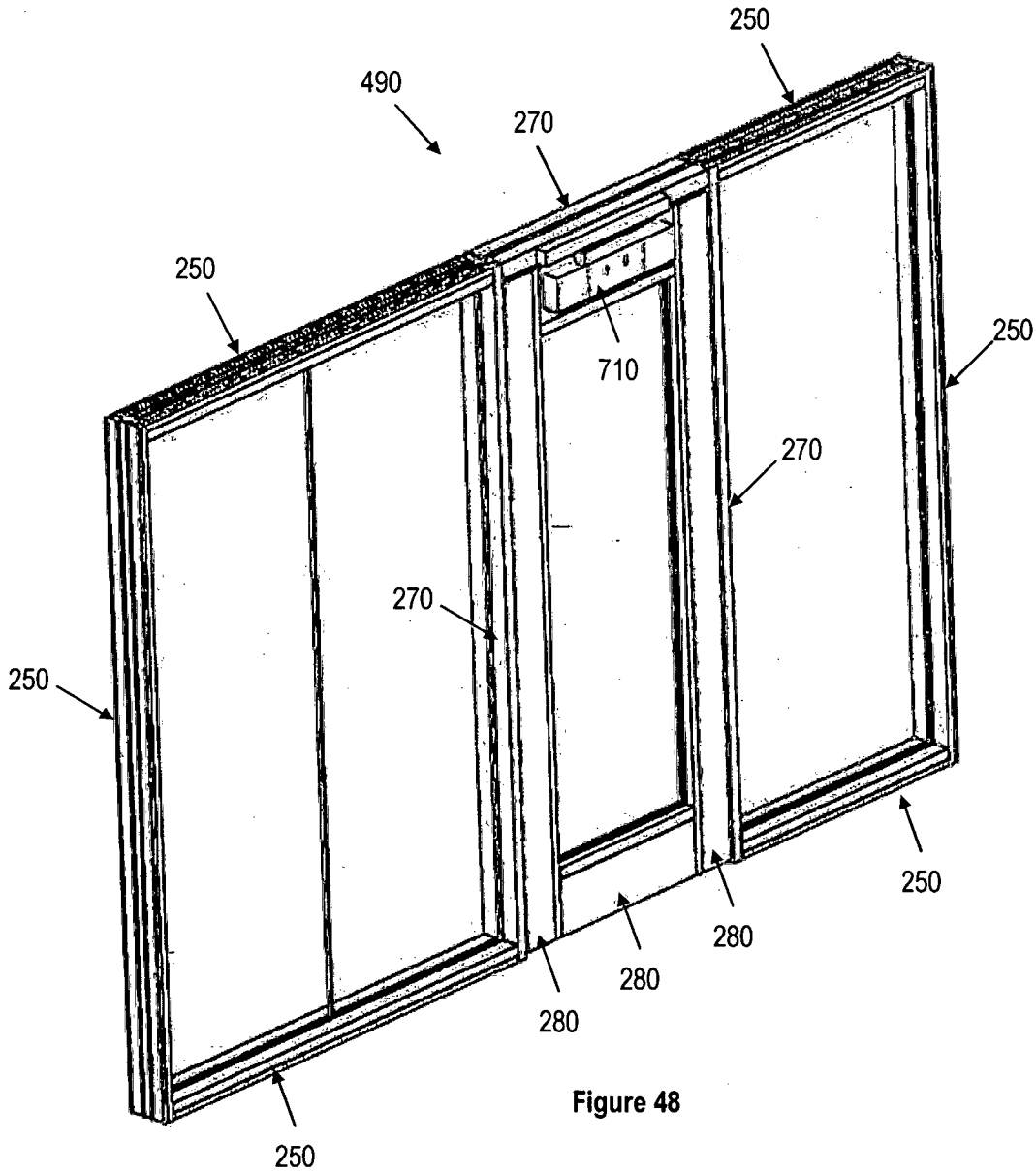

Figure 48

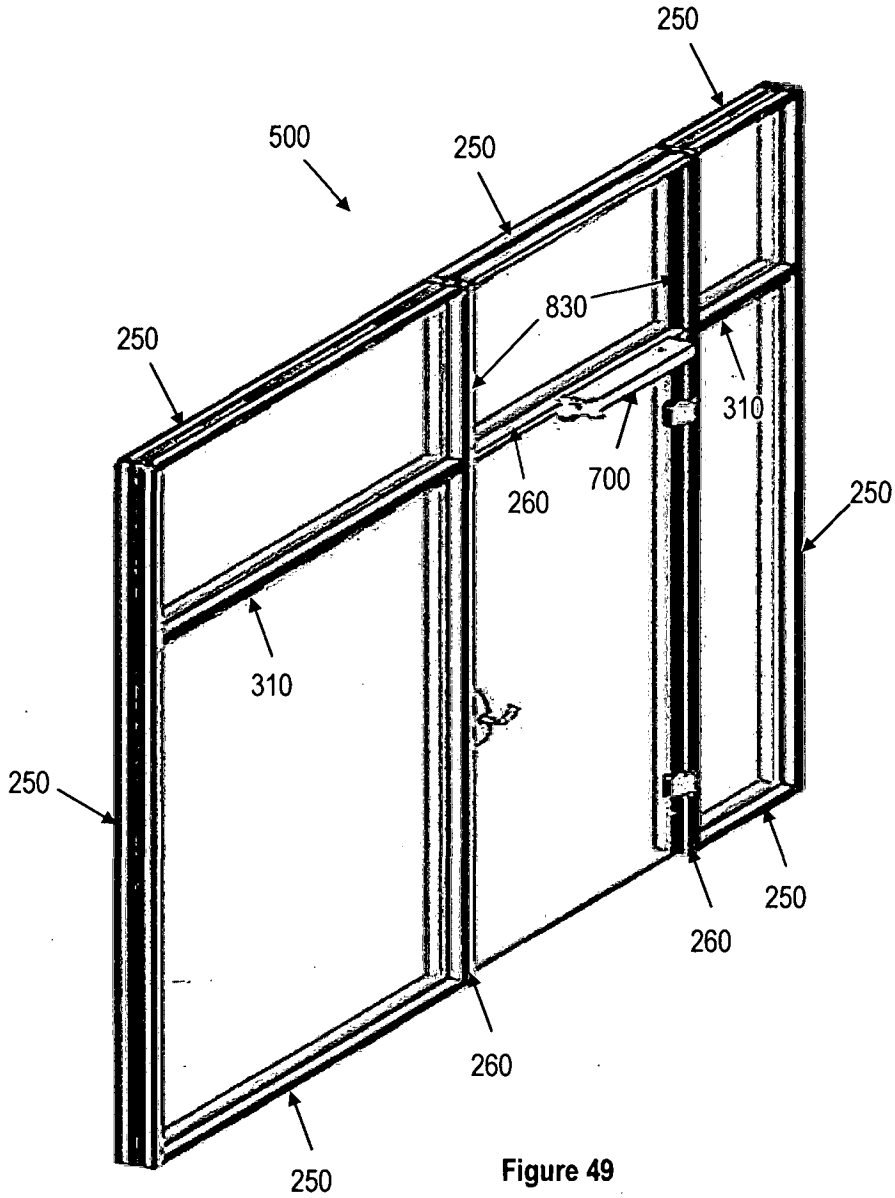

Figure 49

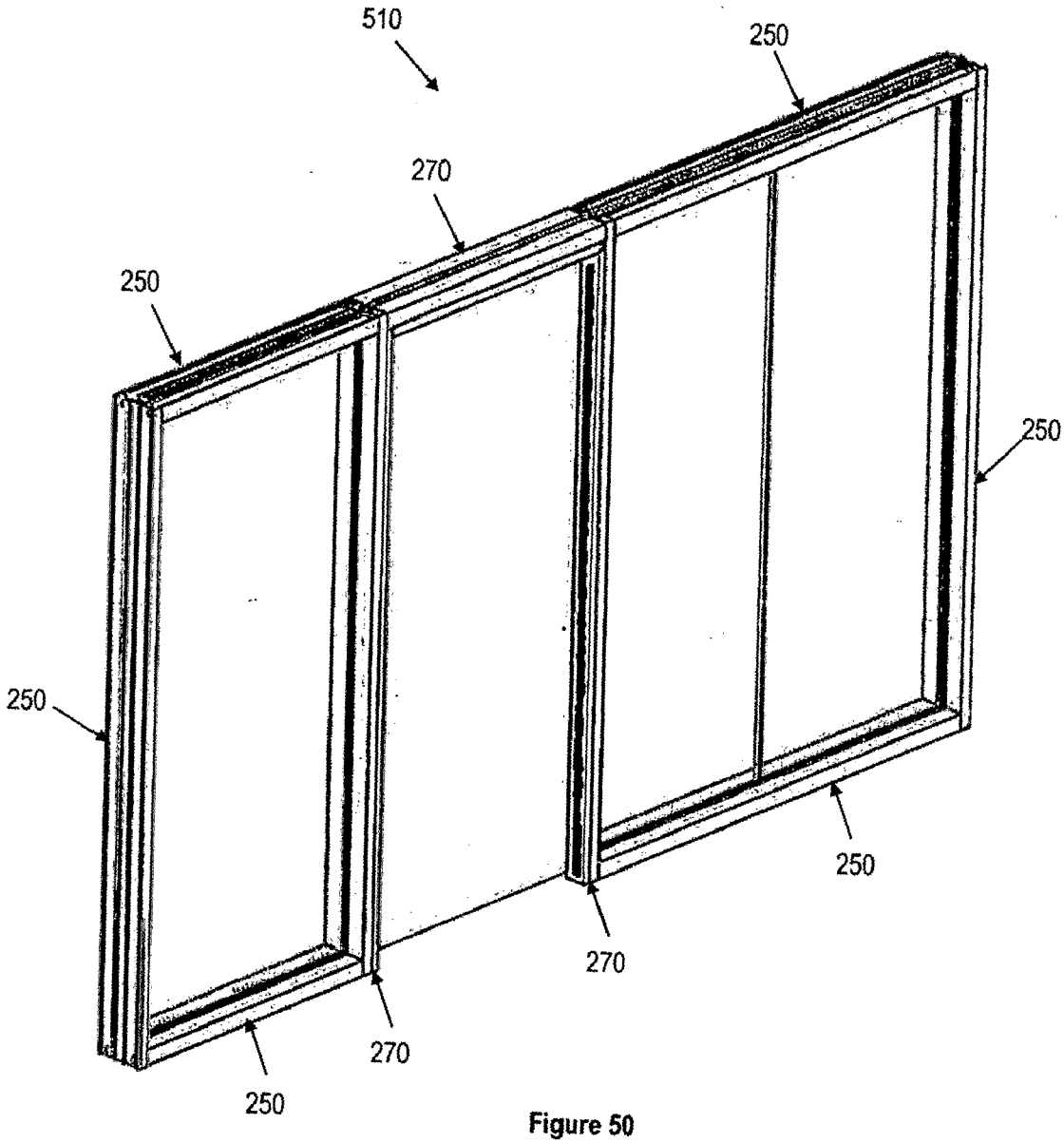

Figure 50

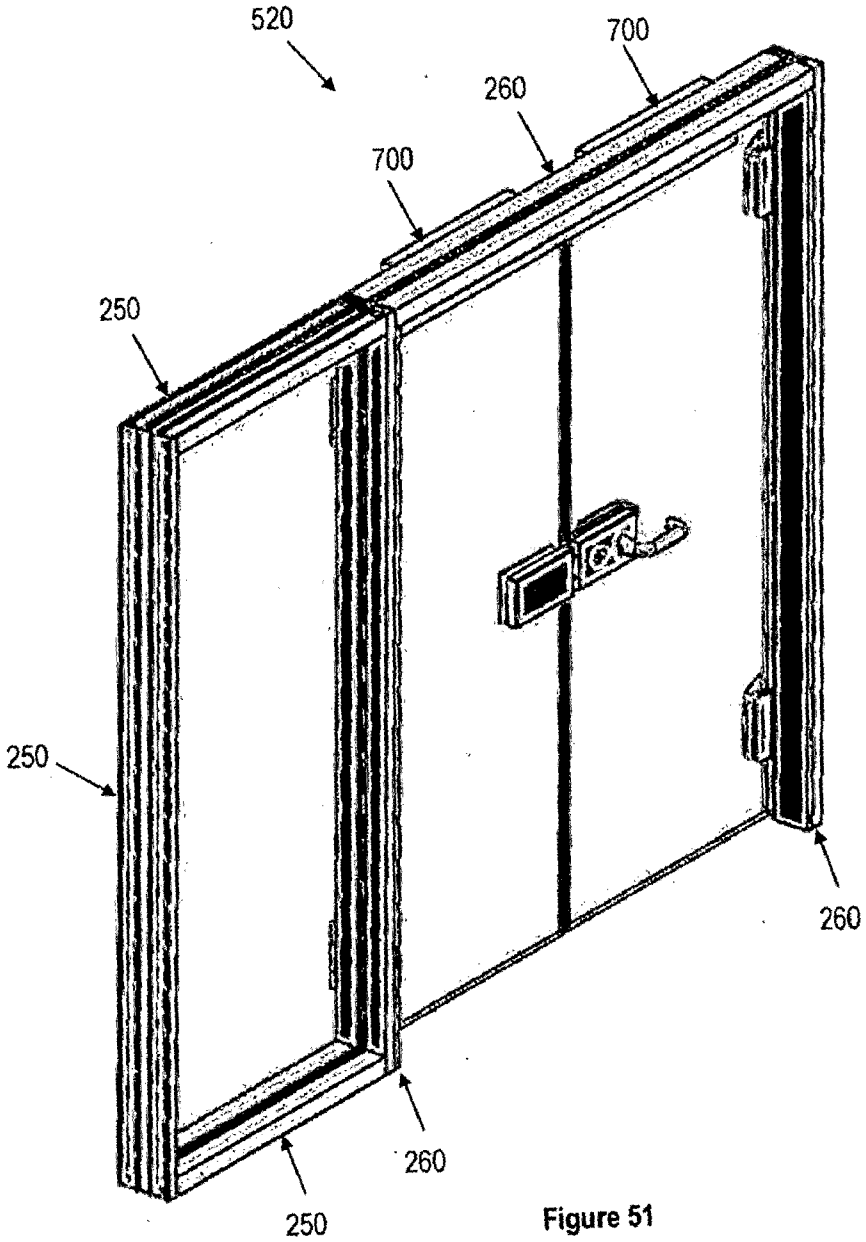

Figure 51

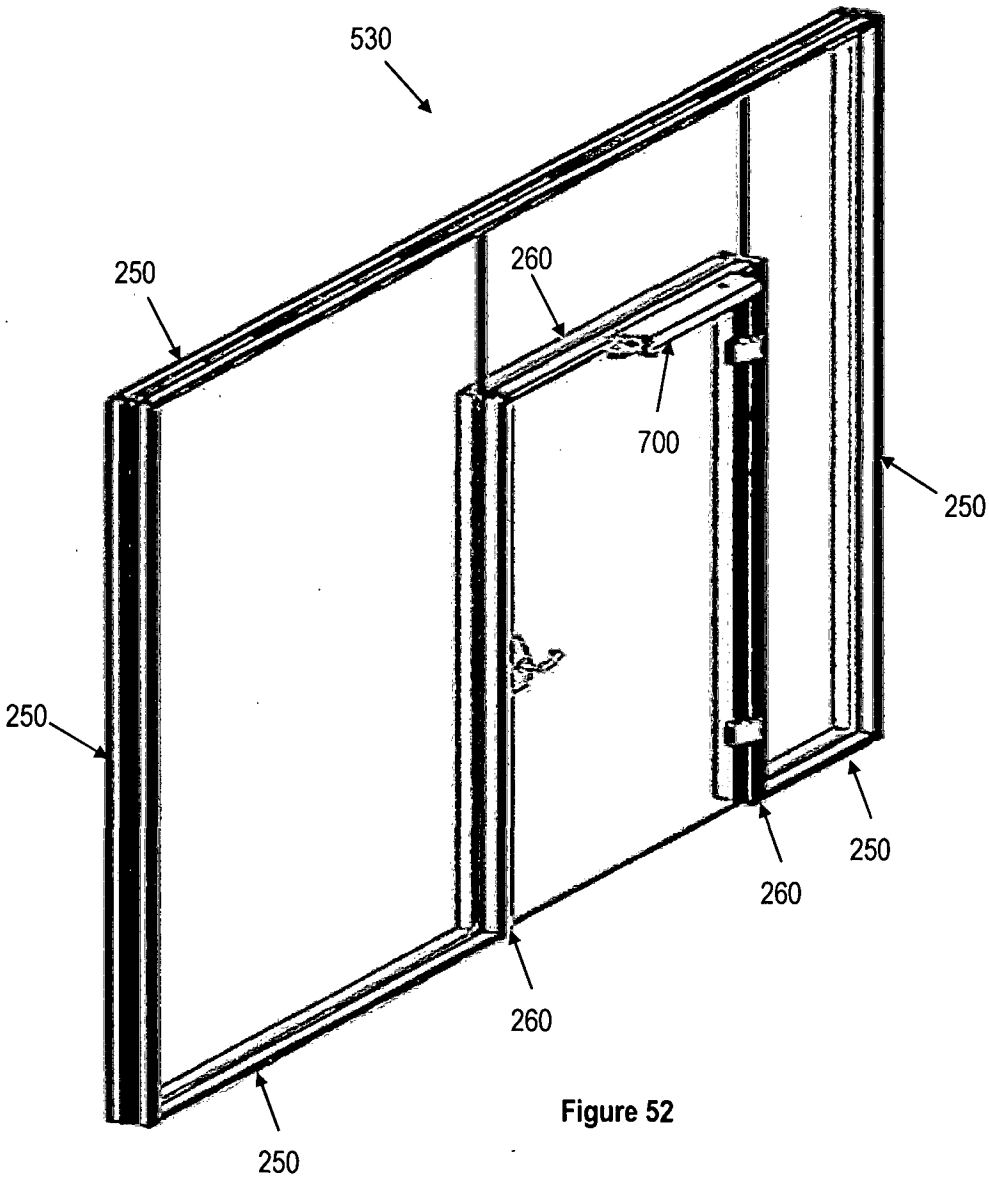

Figure 52

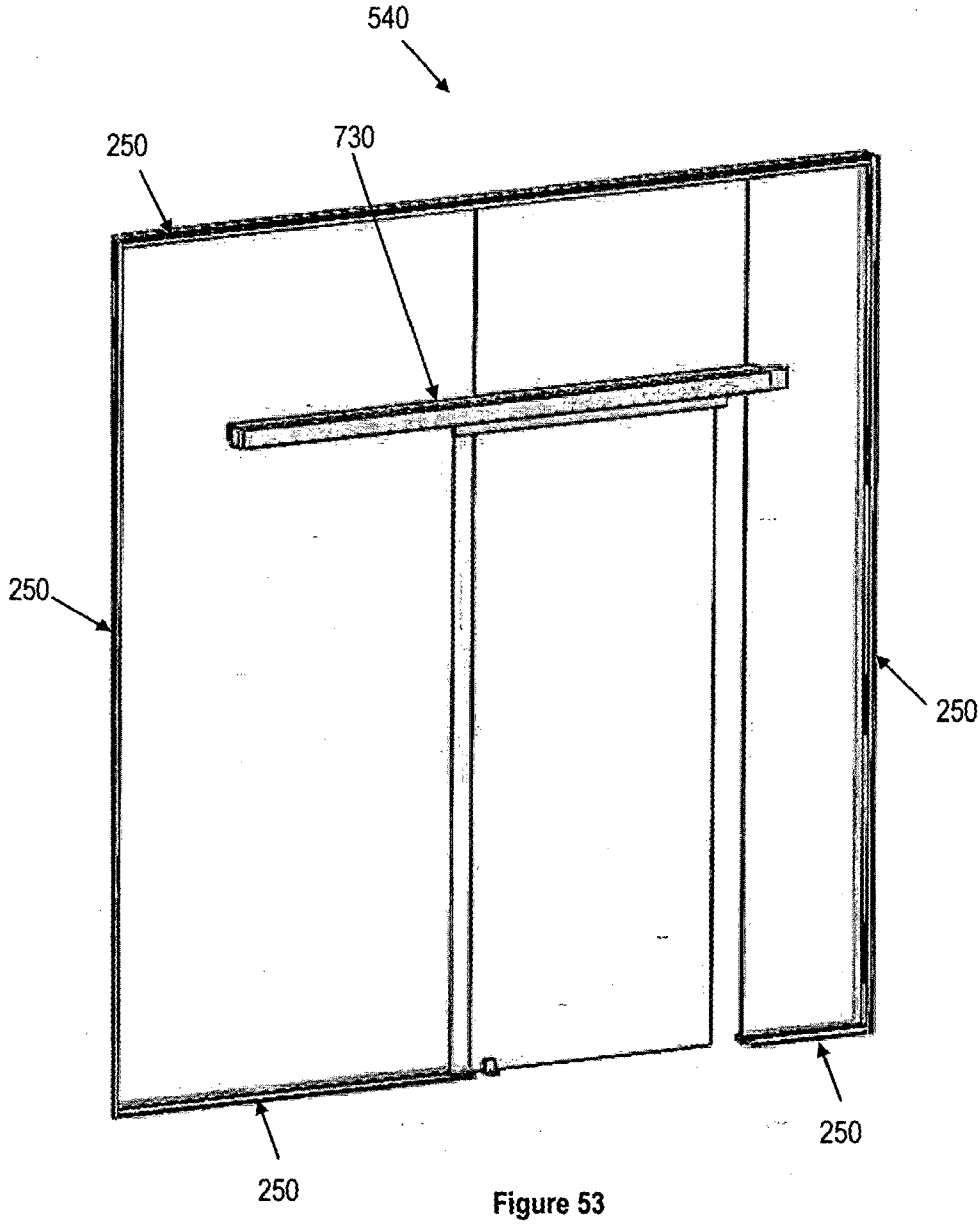

Figure 53

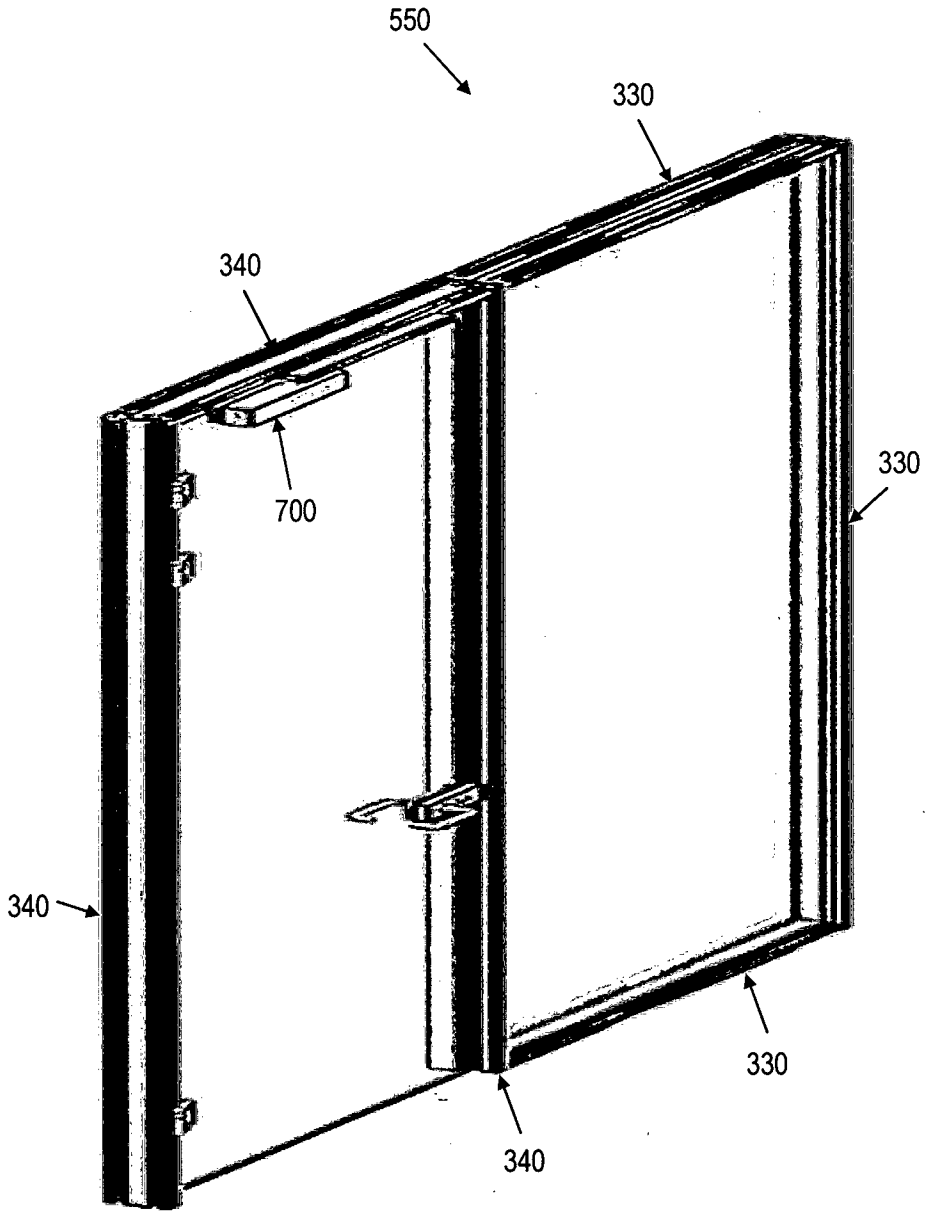

Figure 54

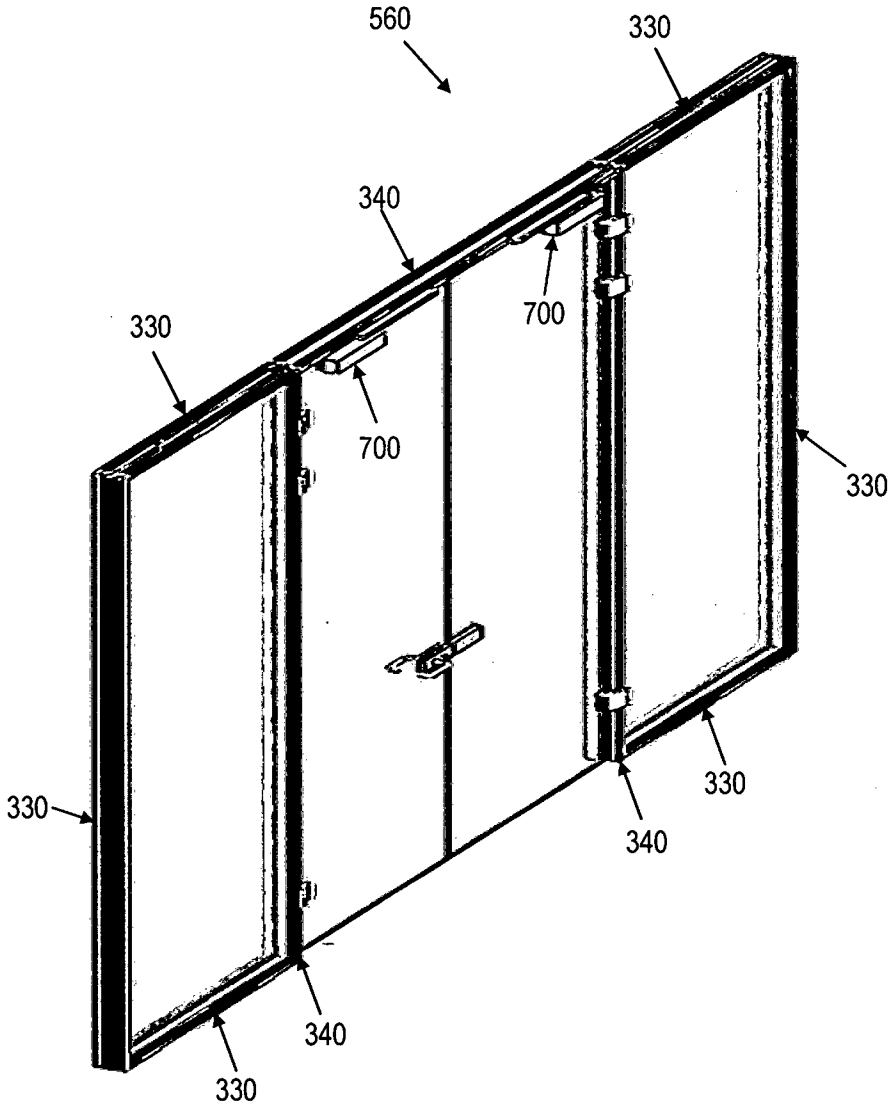

Figure 55

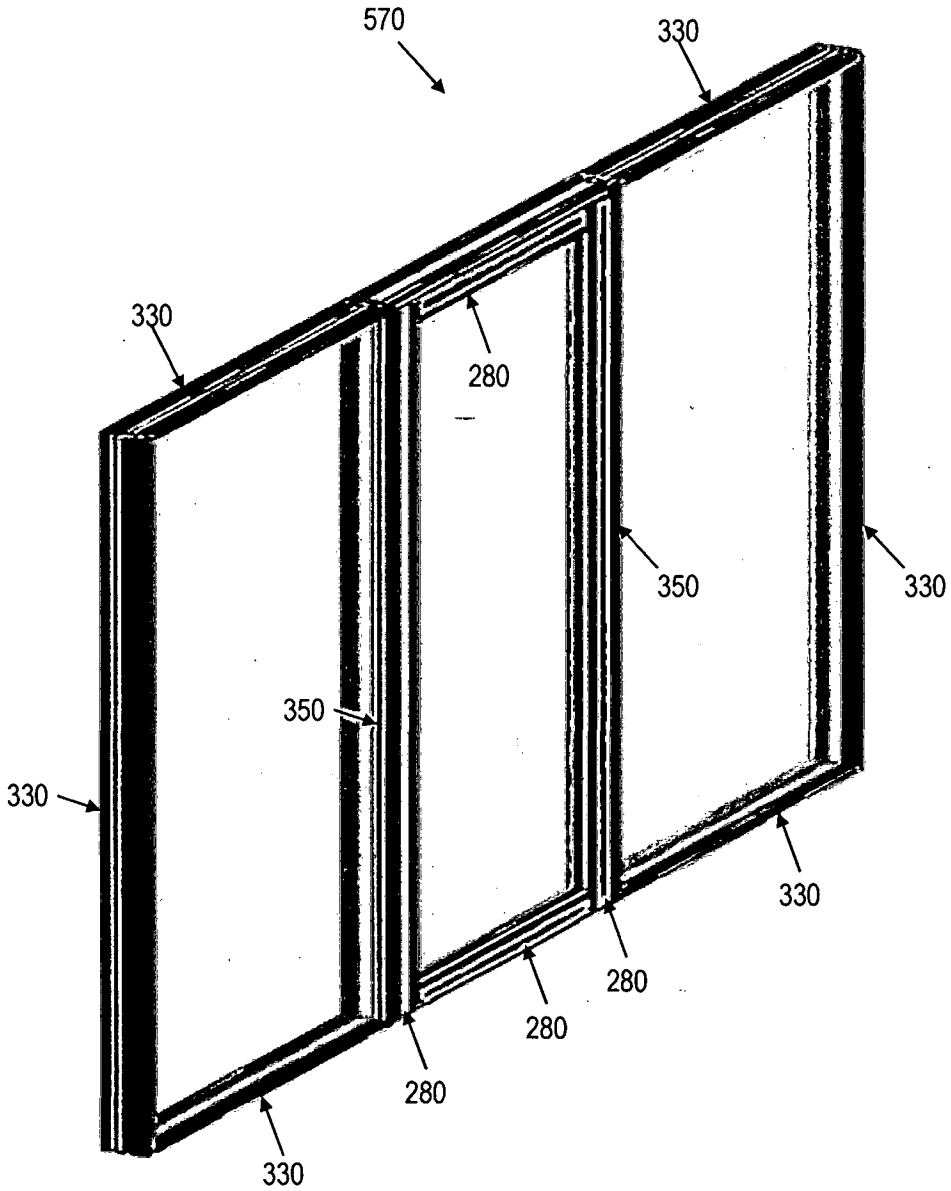

Figure 56

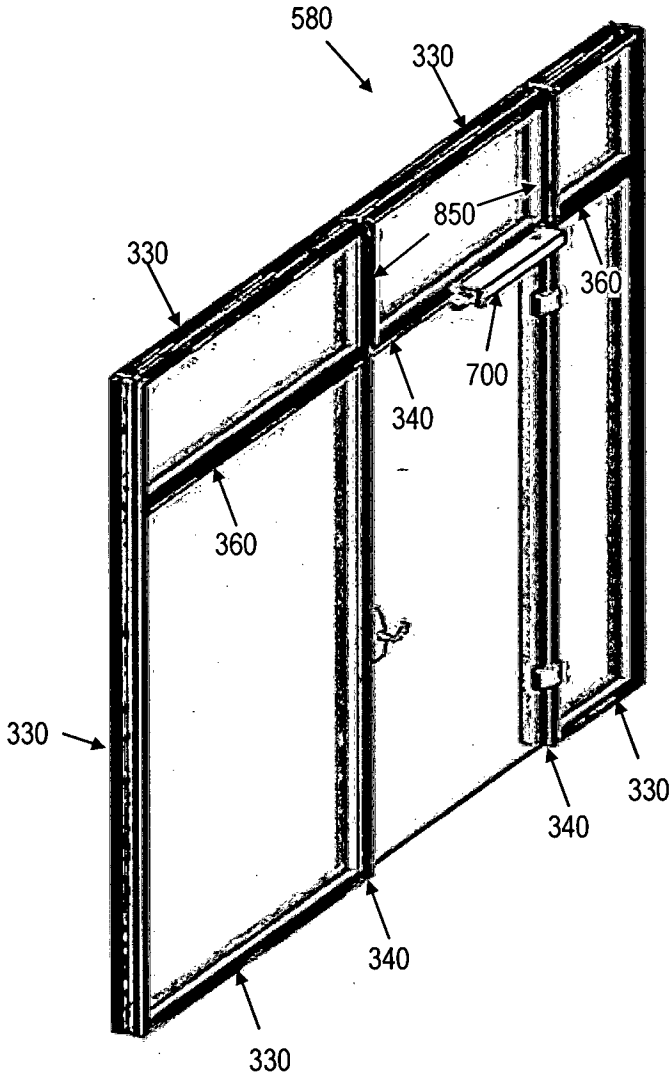

Figure 57

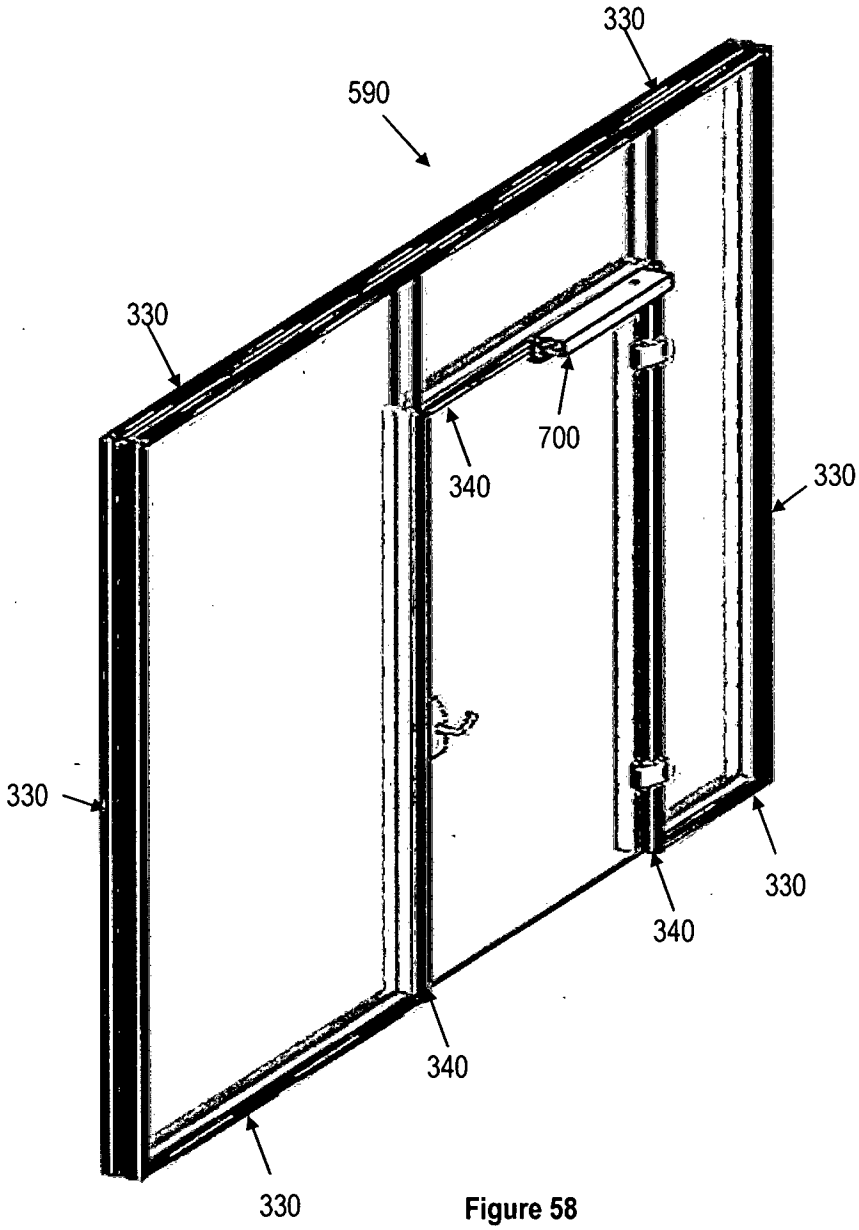

Figure 58

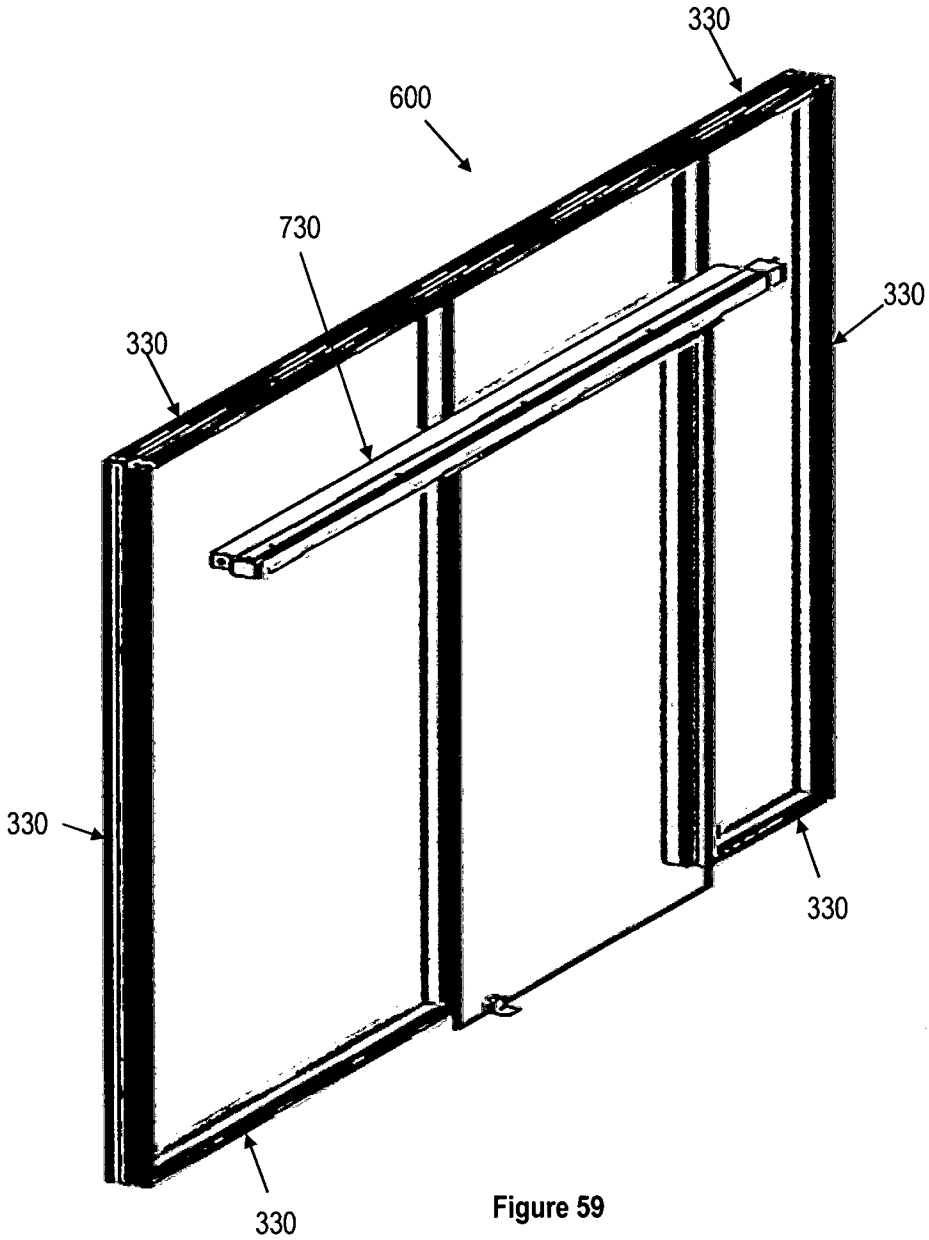

Figure 59

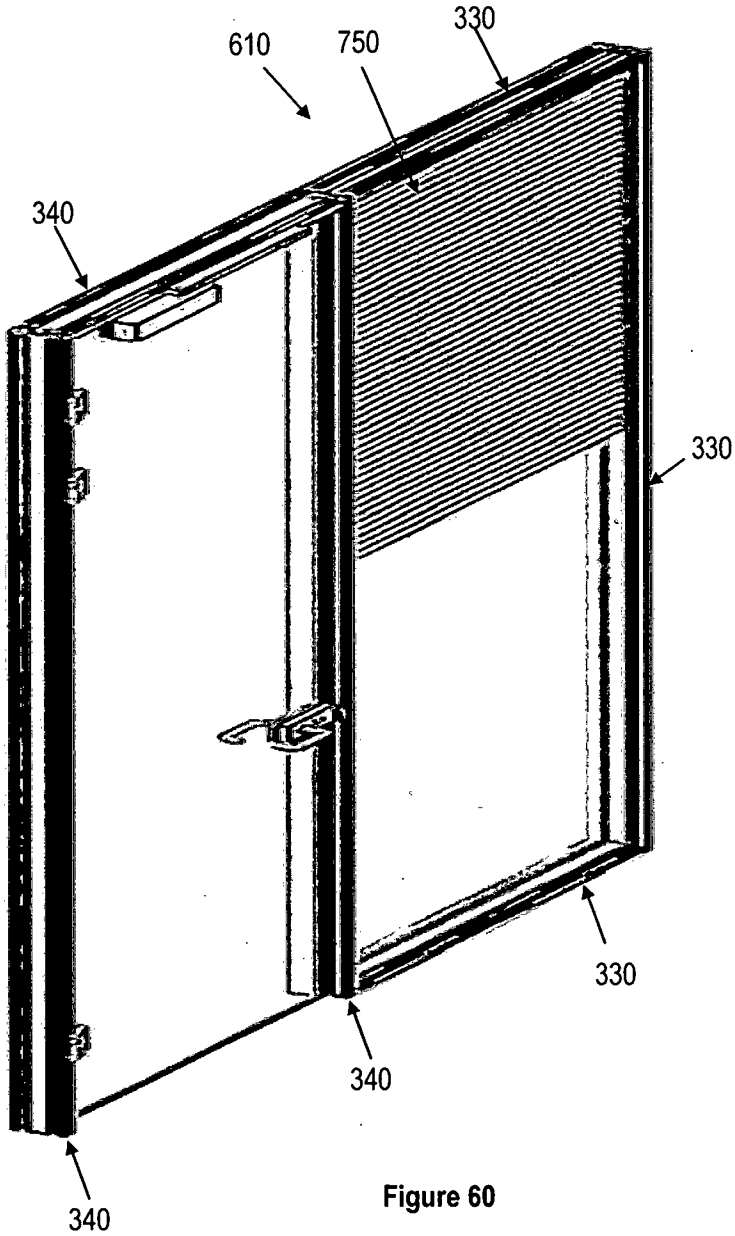

Figure 60

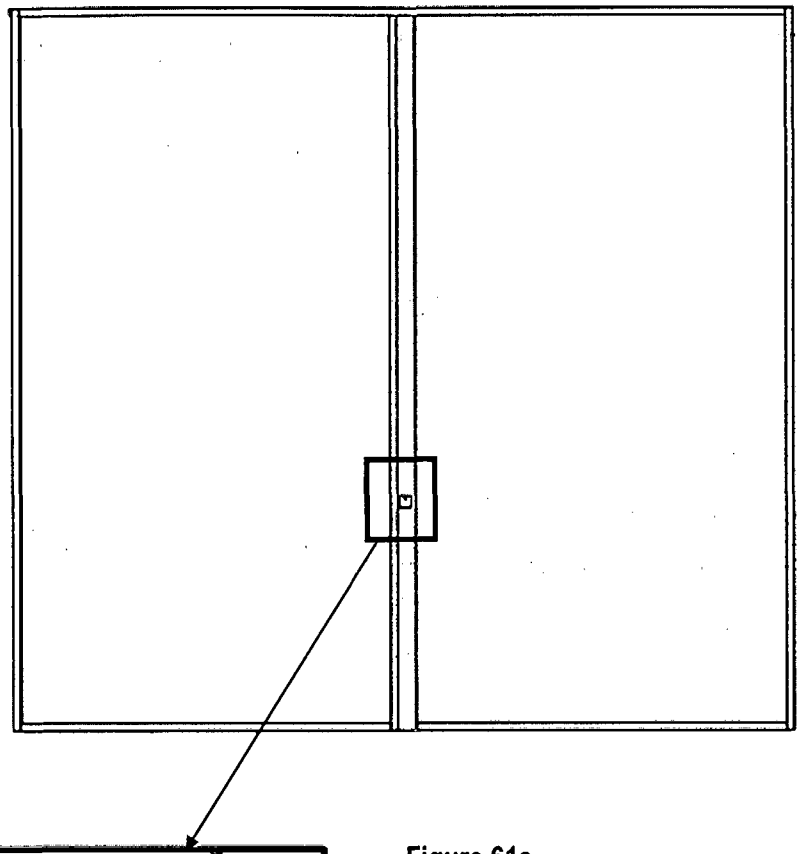

Figure 61a

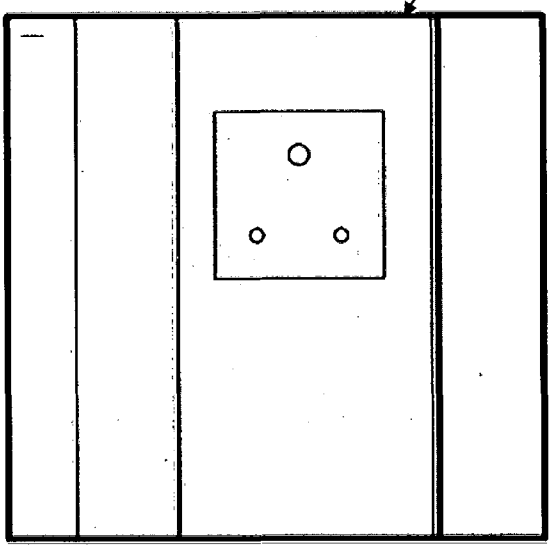

Figure 61b

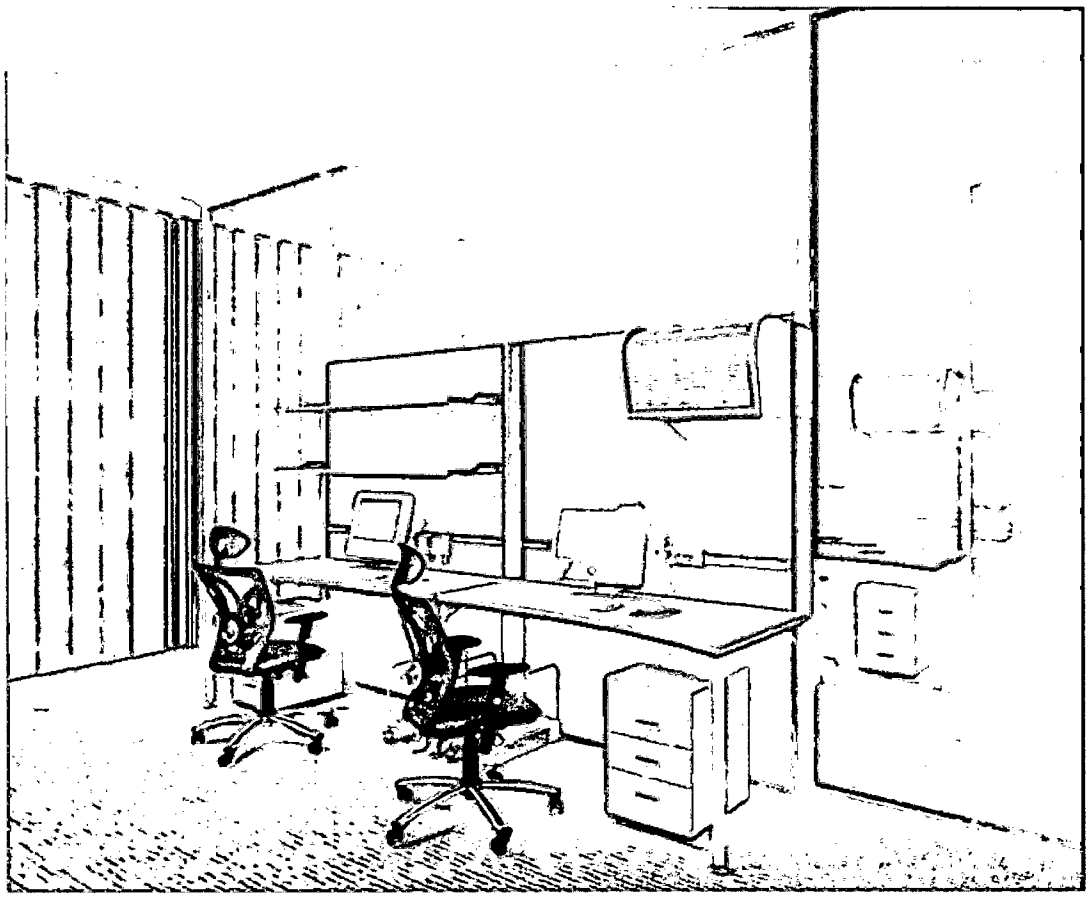

Figure 62

Figure 63