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## (54) Merchandise display unit

(57)The invention provides a merchandise display unit and a merchandise display assembly comprising a plurality of the merchandise display units. The merchandise display unit comprises: a first support member; a second support member spaced from said first support member; a first lateral support member configured for location with respect to said first and second support members to extend transversely therebetween, said first lateral support member configured for releasable coupling, at a first end thereof, to a first end of said first support member and, at a second end thereof, to a first end of said second support member; a second lateral support member configured for location with respect to said first and second support members to extend transversely therebetween, said second lateral support member configured for releasable coupling, at a first end thereof, to a second end of said first support member and, at a second end thereof, to a second end of said second support member; a panel configured for location in a space defined between said first and second support members and said first and second lateral support members, wherein said panel is configured for releasable coupling. at a first edge thereof, to said first lateral support member and, at a second opposite edge thereof, to said second lateral support member.

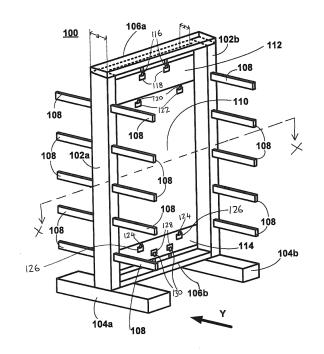


Fig. 2

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**[0001]** The present invention relates to a merchandise display unit and, particularly, but not exclusively, to a merchandise display unit of the gondola type. The present invention also relates to a merchandise display assembly comprising a plurality of merchandise display units.

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[0002] Gondola-type shelving is commonly used in many stores as an arrangement for displaying merchandise. A gondola may have a number of upright posts to which horizontal shelves are attached for displaying merchandise. The gondola may have lateral support bars or members, sometimes known as "tie-bars", which extend between adjacent pairs of upright posts. These tie-bars may be coupled to the tops of the upright posts and extend between adjacent top parts of pairs of posts. Similarly, lower tie-bars may also be provided for coupling to the bottom of the uprights and for extension between adjacent bottom parts of pairs of posts. These tie-bars may increase the lateral stability of the gondola. The gondola conventionally also has a horizontal base support which comprises a number of feet configured for location on a store floor. The horizontal base support extends from the base of each upright post to stabilize the post. A bottom or lower shelf may be placed over the horizontal base support for additional display space. In such a shelving system, shelves and horizontal base supports may extend from two opposite sides of the upright posts, with a central wall or back-panel extending between and connected to pairs of the upright posts. Such an arrangement forms a double-sided gondola system and merchandise can be display on shelves extending from both sides of the central wall or back-panel. This type of shelving system may be modified to form a single-sided gondola system by the removal of shelves and brackets from one side of the central wall or back-panel. A one-sided gondola system may be suitable for positioning against a wall or partition of the premises where the gondola system is located.

[0003] Many types of gondola-type shelving systems comprise a modular construction in which a plurality of upright posts are provided at spaced intervals. Central back-panels are mounted between adjacent pairs of upright posts and are arranged to form a back-wall of a completed merchandise display system. Shelving brackets are mounted on the upright posts and are arranged in pairs. That is, a first shelving bracket of a pair is located at a particular height on a first upright post and a second bracket of a pair is located at a same particular height on a second upright post adjacent to, but spaced from the first upright. Further pairs of shelving brackets are located at other heights on the first and second upright posts respectively, and are similarly arranged on other pairs of upright posts. Each pair of shelving brackets is arranged to receive thereon a shelf which, in turn, is arranged to have merchandise located thereon.

[0004] Upright posts used in gondola-type shelving systems such as those described above generally have

a rectangular cross-section. First and second faces of the upright posts comprise a pair of oppositely disposed faces of the upright post. Third and fourth faces of the upright posts also comprise a pair of oppositely disposed faces of the upright post, but are transverse to the orientation of the first and second faces. The third face joins said first face along a first edge of the first face and joins the second face along a first edge of the second face. Similarly, the fourth face joins said first face along a second edge of the first face and joins the second face along a second edge of the second face.

**[0005]** It is to be mentioned that when reference is made to "rectangular" herein, square, which is one form of rectangle, is specifically to be included.

[0006] In known systems, a pair of faces of the upright post, e.g. the first and second faces or the third and fourth faces, is provided with a plurality of elements configured for releasably engaging cooperating elements of shelving brackets and/or central back-panefs. This arrangement allows a plurality of shelving brackets to be releasably mounted on an upright post to extend transverse therefrom. Additionally, central back-panels can be releasably mounted to extend between a pair of adjacent upright posts. In particular, a first central back-panel may be mounted at a first end thereof to a first face of a first upright post and may be mounted at a second end thereof to a first face of a second upright post spaced from the first upright post. Further, a second central back-panel may be mounted at a first end thereof to a second face of a first upright post and may be mounted at a second end thereof to a second face of a second upright post spaced from the first upright post. In this arrangement, the first and second central back-panels are mounted to opposite faces of each upright post and extend in substantially parallel planes between the first and second upright posts. A gap exists between the planes of the first and second central back-panels and this gap is substantially the same as the depth of the upright posts.

[0007] The plurality of elements configured for releasably engaging cooperating elements of shelving brackets and/or central back-panels may comprise a series of slots formed at spaced intervals along the length of a face of the upright post. A second series of slots may be similarly formed on an opposite face of the upright post. Cooperating elements of shelving brackets and/or central back-panels suitable for releasably engaging the slots may comprise hooks configured for engagement with the slots.

[0008] Conventionally, tie-bars extending between adjacent pairs of upright posts are typically coupled to the upright posts by fixing elements. These fixing elements may comprise screw-type fixing elements such as, for example, a nut and bolt. To fix an end of a tie-bar to the top of a first upright post, an installation operative may be required to drill holes through the upright post and/or an end portion of the tie-bar and then insert a bolt through the holes formed in the upright post and tie-bar. The coupling between upright post and tie-bar can be made se-

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cure by screwing the nut onto the bolt and thereby securing the two parts together. A similar sequence of steps must be conducted by the installation operative to secure the other end of the tie-bar to the top of a second upright post. Further sequences of the same steps must be undertaken to couple further tie-bars to the first and second upright posts.

**[0009]** It will be appreciated that in order to construct gondola-type shelving systems with tie-bars using the above fixing method, an installation operative may be required to carry a number of tools. Furthermore, fixing elements may need to be provided to allow the fixing of the tie-bars to the upright posts. Whilst it may be possible to provide such fixing elements with the other system elements as part of a modular kit-of-parts for the shelving system, it is foreseeable that such parts may become misplaced or lost after unpacking of the modular system and/or during transit and/or insufficient parts may be provided from the manufacturing site.

[0010] A known gondola shelving system (or merchandise display unit) as described above is illustrated in Fig. 1a. The gondola shelving system is denoted using reference numeral 10 and comprises a pair of upright posts 12a, 12b which are spaced apart. The upright posts 12a, 12b each comprise a horizontal base support (14a, 14b respectively) which extends from the base of each upright post 12a, 12b to stabilize the post. A first back-panel 16 is mounted at a first end thereof to a first face of first upright post 12a and at a second end thereof to a first face of second upright post 12b. A second back-panel 12b is mounted at a first end thereof to a second face of first upright post 12a and at a second end thereof to a second face of second upright post 12b. A plurality of shelf supporting brackets 20 (hereinafter "shelving brackets") are mounted on each upright post 12a, 12b and extend transverse therefrom. In the figure, shelving brackets 20 are shown on one side of the gondola system 10 only for clarity purposes. Further, the gondola system 10 is illustrated without shelves and again this is for clarity purposes.

**[0011]** As can be seen, in such an arrangement, there exists a gap (reference "d") between the first and second back-panels 16, 18 and this is approximately the same as the depth of the upright posts 12a, 12b.

**[0012]** In other known gondola-type shelving systems, a single back-panel may be used in place of two back-panels. In such other systems, the single back-panel extends between an inner face of a first upright post and an oppositely facing inner face of a second upright post. Such a system is illustrated in Fig. 1b and features in common with the known system illustrated in Fig. 1a are denoted using like reference numerals.

**[0013]** As can be seen from Fig. 1 b, a single back panel 16 extends between an inner face 22a of first upright post 12a and an inner face 22b of second upright post 12b.

**[0014]** In a system as illustrated in Fig. 1b, a plurality of slots configured for releasably engaging cooperating

hooks of the single back-panel 16 will be required on the inner face 22a of first upright post 12a and the inner face 22b of second upright post 12b. Additionally, in order to extend the gondola system 10 of Fig. 1 b, further slots configured for releasably engaging cooperating elements of other single back-panels will be required on other faces 24a, 24b of the first and second upright posts 12a, 12b respectively. It will be understood that these slots configured for releasably engaging complementary hooks of single back-panels are in addition to similar slots formed in the other faces of the upright posts 12a, 12b for cooperating with complementary hooks of the shelving brackets 20. Thus, in a known system such as that illustrated in Fig. 1 b, slots configured for releasably engaging complementary hooks of shelving brackets and/or central back-panels may be required on all four faces of the upright posts 12a, 12b.

[0015] Whilst the above-described gondola-type shelving systems may have been satisfactory and may continue to be satisfactory for certain operating conditions, it would be desirable to increase an available merchandise holding capacity of a gondola type system without increasing the footprint of the system and without impacting the structural integrity of the system. Furthermore, it would be desirable to eliminate the need for fixing elements used in the construction of such shelving systems or at least reduce the number of fixing elements required for the construction of such shelving systems. Additionally, it would be desirable to provide a mechanism to allow fixing elements, where required, to be retained by at least one of the other elements of the shelving system to reduce the likelihood of separation of the fixing elements from other elements of the shelving system.

**[0016]** Aspects and embodiments of the present invention have been devised with the foregoing considerations in mind.

[0017] According to an aspect of the present invention, there is provided a merchandise display unit comprising: a first support member; a second support member spaced from the first support member; a first lateral support member configured for location with respect to the first and second support members to extend transversely therebetween, the first lateral support member configured for releasable coupling, at a first end thereof, to a first end of the first support member and, at a second end thereof, to a first end of the second support member; a second lateral support member configured for location with respect to the first and second support members to extend transversely therebetween, the second lateral support member configured for releasable coupling, at a first end thereof, to a second end of the first support member and, at a second end thereof, to a second end of the second support member; a panel configured for location in a space defined between the first and second support members and the first and second lateral support members, wherein the panel is configured for releasable coupling, at a first edge thereof, to the first lateral support member and, at a second opposite edge thereof, to the

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second lateral support member.

**[0018]** A merchandise display unit as described above may provide an increase in available merchandise display space in a gondola-type shelving system incorporating the merchandise display unit.

[0019] Optionally, the first lateral support member may comprise at least one engagement member configured for releasable cooperative engagement with one of: at least one complementary engagement member located at, or adjacent, the first edge of the panel; and at least one first engagement member of a first intermediary member configured for location between the first lateral support member and the first edge of the panel, the first intermediary member configured for releasable coupling, at a first edge thereof, to the first lateral support member by releasable cooperative complementary engagement of the at least one first engagement member with the at least one engagement member of the first lateral support member and, at a second opposite edge thereof, to the first edge of the panel by releasable cooperative complementary engagement of at least one second engagement member of the first intermediary member with at least one complementary engagement member of the panel.

[0020] Further optionally, the second lateral support member may comprise at least one engagement member configured for releasable cooperative engagement with one of: at least one complementary engagement member located at, or adjacent, the second edge of the panel; and at least one first engagement member of a second intermediary member configured for location between the second lateral support member and the second edge of the panel, the second intermediary member configured for releasable coupling, at a first edge thereof, to the second edge of the panel by releasable cooperative complementary engagement of at least one second engagement member of the second intermediary member with at least one complementary engagement member of the panel and, at a second opposite edge thereof, to the second lateral support member by releasable cooperative complementary engagement of the at least one first engagement member with the at least one engagement member of the first lateral support member.

**[0021]** Yet further optionally, the at least one engagement member and/or the first and/or second engagement members may comprise a hook, and wherein the at least one complementary engagement member may comprise a slot for receiving a hook.

[0022] The first lateral support member may comprise interengagement formations, at the first and second ends thereof, or adjacent the first and second ends thereof, for slideable engagement with complementary formations at first ends of the first and second support members respectively, and/or the second lateral support member may comprise interengagement formations, at the first and second ends thereof, or adjacent the first and second ends thereof, for slideable engagement with complementary formations at second ends of the first and second

support members respectively.

[0023] Optionally, the first lateral support member may comprise a folded elongate sheet member comprising a middle longitudinal section, a first longitudinal flange section, and a second longitudinal flange section, wherein the middle longitudinal section connectively spaces the first longitudinal flange section from the second longitudinal flange section and/or the second lateral support member may comprise a folded elongate sheet member comprising a middle longitudinal section, a first longitudinal flange section, wherein the middle longitudinal section connectively spaces the first longitudinal flange section from the second longitudinal flange section.

[0024] Optionally, the first longitudinal flange section of the first lateral support member may be formed from a first longitudinal edge region of first lateral support member material folded to extend in a first direction away from and transverse to the middle longitudinal section, and the second longitudinal flange section of the first lateral support member may be formed from a second opposite longitudinal edge region of first lateral support member material folded to extend in the first direction away from and transverse to the middle longitudinal section and/or the first longitudinal flange section of the second lateral support member may be formed from a first longitudinal edge region of second lateral support member material folded to extend in a second direction away from and transverse to the middle longitudinal section, and the second longitudinal flange section of the second lateral support member may be formed from a second opposite longitudinal edge region of second lateral support member material folded to extend in the second direction away from and transverse to the middle longitudinal section.

**[0025]** Optionally, material of the first lateral support member forming the middle longitudinal section may comprise a longitudinal fold so that the middle longitudinal section defines a V-shaped channel and/or material of the second lateral support member forming the middle longitudinal section may comprise a longitudinal fold so that the middle longitudinal section defines a V-shaped channel.

[0026] Optionally, interengagement formations of the first lateral support member and/or the second lateral support member may comprise, adjacent respective first ends thereof: a first slot formed in an edge of the first longitudinal section and extending transverse to the edge of the first longitudinal section; a second slot formed in an edge of the second longitudinal section and extending transverse to the edge of the second longitudinal section, the first and second slots formed opposite one another and spaced from the first end by a same distance; a third slot formed in the middle longitudinal section and extending in both directions transverse to the longitudinal fold over a portion of a width of the middle longitudinal section, the third slot spaced from the first end by a same distance as the first and second slots, and the interengagement

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formations of the first and/or second lateral support members may further comprise a same arrangement of first, second and third slots adjacent respective second ends of the first lateral support member and/or the second lateral support member.

[0027] Optionally, the first, second and third slots adjacent the first end of the first lateral support member may be configured to slideably receive an end portion of a first wall of the first end of the first support member, and further wherein the first, second and third slots adjacent the second end of the first lateral support member may be configured to slideably receive an end portion of a first wall of the first end of the second support member, and/or wherein the first, second and third slots adjacent the first end of the second lateral support member may be configured to slideably receive an end portion of the first wall of the second end of the first support member, and the first, second and third slots adjacent the second end of the second lateral support member may be configured to slideably receive an end portion of a first wall of the second end of the second support member.

[0028] The first wall of the first support member and the first wall of the second support member may each be formed with a first aperture and second walls of the first and second support members may each be formed with a second aperture located opposite the respective first aperture, pairs of first and second apertures located adjacent the first ends and/or the second ends of the first and second support members and spaced therefrom by a same distance, and the pairs of first and second apertures adjacent one end, or both ends, of each support member may each be configured for receiving a releasable locking pin therethrough and for extension therebetween.

[0029] Optionally, the merchandise display unit may further comprise a first releasable locking pin locatable to extend through both the first and second apertures adjacent the first end of the first support member and over a portion of the fold of the middle longitudinal section at the first end of the first lateral support member, and a second releasable locking pin locatable to extend through both the first and second apertures adjacent the first end of the second support member and over a portion of the fold of the middle longitudinal section at the second end of the first lateral support member, and/or may yet further comprise a third releasable locking pin locatable to extend through both the first and second apertures adjacent the second end of the first support member and under a portion of the fold of the middle longitudinal section at the first end of the second lateral support member, and a fourth releasable locking pin locatable to extend through both the first and second apertures adjacent the second end of the second support member and under a portion of the fold of the middle longitudinal section at the second end of the second lateral support member. [0030] Optionally, the first, second, third and/or fourth releasable locking pins may be moveable relative to the

first and/or second support members respectively and/or

said first and/or second lateral support members respectively from a locking position to a release position, and vice versa.

[0031] The merchandise display unit may further comprise: a first biasing means positioned to act upon the first releasable locking pin for urging the first releasable locking pin to the locking position; and/or a second biasing means positioned to act upon the second releasable locking pin for urging the second releasable locking pin to the locking position; and/or a third biasing means positioned to act upon the third releasable locking pin for urging the third releasable locking pin to the locking position; and/or a fourth biasing means positioned to act upon the fourth releasable locking pin for urging the fourth releasable locking pin for urging the fourth releasable locking pin to the locking position.

[0032] Optionally, at least one of the first, second, third and fourth biasing means may comprise a helical spring.
[0033] Optionally, the first releasable locking pin may be retained by the first support member; and/or the second releasable locking pin may be retained by the second support member; and/or the third releasable locking pin may be retained by the first support member; and/or the fourth releasable locking pin may be retained by the second support member.

[0034] Optionally, the first releasable locking pin may retained by the first lateral support member at a first end of the first lateral support member; and/or the second releasable locking pin may be retained by the second lateral support member at a first end of the second lateral support member; and/or the third releasable locking pin may be retained by the first lateral support member at a second end of the first lateral support member; and/or the fourth releasable locking pin may be retained by the second lateral support member at a second end of the second lateral support member.

**[0035]** Optionally, the first and/or second releasable locking pins, and/or the third and/or fourth releasable locking pins may comprise means for engaging, cooperating or interfering with at least one of the apertures or with an associated fold of the first or second lateral support member, and/or wherein formations are provided, on at least one of the releasable locking pins, apertures or the associated fold of the first or second lateral support members for securing the releasable locking pin to at least one of the apertures or with an associated fold of the first or second lateral support member to make it more difficult to release the releasable locking pin.

**[0036]** Optionally, third and fourth opposite walls of each of the first and second support members may be formed with a plurality of engagement elements configured for receiving complementary at least one support member engagement elements of one or more shelving brackets.

[0037] The merchandise display unit of one or more embodiments of the present invention requires slots (i.e. engagement elements) only in one pair of opposite faces of each support member. These slots are configured for receiving cooperative engagement elements of the

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shelving brackets. By fixing the panel to upper and lower lateral support members, slots are not required in a second pair of opposite faces of each support member (i.e. the upright posts). Where the upright support members are of approximately equivalent dimensions to other support members having slots formed in all four longitudinal faces thereof (and where the slot dimensions are similar), it will be understood that, due to the other support members requiring more slots than the support members having slots formed in only two faces thereof, more material is removed from the other slot members. It follows that those other support member types may be weaker than support members of similar dimensions but in which slots are formed in only two faces.

**[0038]** The merchandise display unit may further comprise a plurality of shelving brackets removably mounted on both the first and second support members through releasable cooperative engagement of the at least one support member engagement element of each of the shelving brackets with corresponding complementary ones of the engagement elements of the first and second support members.

**[0039]** Optionally, the first and second support members may each comprise an elongate upright member; and optionally, the elongate upright member may comprise a hollow bar having a substantially rectangular cross-section.

**[0040]** According to another aspect of the present invention, there is provided a merchandise display assembly comprising a plurality of merchandise units comprising one or more of the features as described above and hereinafter, wherein the plurality of merchandise display units are arranged linearly. Optionally, adjacent pairs of merchandise display units may share a common support member from which panels of the merchandise display units extend in opposite directions.

**[0041]** According to another aspect of the present invention, there is provided a panel suitable for use in the merchandise display unit as described above and hereinafter.

**[0042]** According to yet another aspect of the present invention, there is provided a lateral support member for a merchandise display unit as described above and hereinafter.

**[0043]** According to another aspect of the present invention, there is provided a lateral support member for a merchandise display unit, the lateral support member configured, at ends thereof, for coupling to respective support members of a merchandise display unit, wherein the lateral support member is provided with, at least at one end thereof, a releasable locking pin moveable: from a locking position in which it is received in apertures formed in a respective support member to which the at least one end of the lateral support member is coupled; to a release position in which the releasable locking pin is disengaged from the apertures, and further wherein the releasable locking pin, or pins, is/are retained by the lateral support member.

**[0044]** Optionally, the lateral support member may further comprise a biasing means positioned to act upon the releasable locking pin for urging the releasable locking pin to the locking position.

[0045] Optionally, the releasable locking pin may comprise means for engaging, cooperating or interfering with a region of material of the lateral support member or with associated apertures of a support member coupled to the lateral support member, and/or wherein formations may be provided, on at least one of the releasable locking pin, region of material of the lateral support member, or the associated apertures of the support member for securing the releasable locking pin to at least one of the region of material of the lateral support member, or the associated apertures of the support member to make it more difficult to release the releasable locking pin.

[0046] According to another aspect of the present invention, there is provided a support member for a merchandise display unit, the support member comprising an elongate upright member comprising a hollow bar having a substantially rectangular cross-section, wherein a first pair of walls of the elongate upright member are formed, adjacent at least one end thereof, with a first aperture in a first wall of the first pair of walls, and with a second aperture in a second wall of the first pair of walls, the second aperture located opposite the first aperture, the first and second apertures configured for receiving a releasable locking pin therethrough and for extension therebetween, and further comprising a releasable locking pin for each pair of apertures, the releasable locking pin moveable relative to the first and second walls from a locking position to a release position and vice versa, and further wherein the releasable locking pin for each pair of apertures is configured for retention by the support member.

**[0047]** Optionally, the support member may further comprise a biasing means positioned to act upon the releasable locking pin for urging the releasable locking pin to the locking position.

[0048] Optionally, the releasable locking pin may comprise means for engaging, cooperating or interfering with the pair of apertures or with an associated fold of a lateral support member coupled to the support member, and/or wherein formations are provided, on at least one of the releasable locking pin, apertures or the associated fold of the lateral support member for securing the releasable locking pin to at least one of the apertures or with an associated fold of the lateral support member to make it more difficult to release the releasable locking pin.

50 [0049] Retaining the releasable locking pin by one of the support member or the lateral support member may prevent complete removal of the locking pin from the support member or lateral support member (or at least reduce the likelihood of its removal from those elements).
 55 This may help to reduce the likelihood of loss of the locking pin when the parts of the merchandise display unit are in storage or transit, and also during an installation or dismantling process.

**[0050]** One or more embodiments of the present invention are described further hereinafter, by way of example only, with reference to the accompanying drawings in which:

Figs. 1a and 1b schematically illustrate perspective views of known merchandise display assemblies comprising gondola-type shelving systems;

Fig. 2 schematically illustrates a perspective view of a merchandise display unit according to one or more embodiments of the present invention;

Fig. 3 schematically illustrates a top plan view of a cross-section of the merchandise display unit of Fig. 2 as viewed along line X-X of Fig. 2;

Fig. 4 schematically illustrates a side view of the merchandise display unit illustrated in Figs. 2, 3 and 4;

Fig. 5 schematically illustrates a top perspective view of a portion of a merchandise display unit in an optional arrangement;

Fig. 6 schematically illustrates a cross-sectional side view of the merchandise display unit of Fig. 5 as viewed along line Z-Z of Fig. 5;

Fig. 7 schematically illustrates a perspective view of a portion of a lateral support member of the merchandise display unit of Fig. 5;

Fig. 8 schematically illustrates a perspective top view of a portion of the merchandise display unit of Fig. 5 in an optional arrangement and in a first configuration;

Fig. 9 schematically illustrates a perspective top view of a portion of the merchandise display unit of Fig. 5 in an optional arrangement and in a second configuration; and

Fig. 10 schematically illustrates a perspective top view of a portion of the merchandise display unit of Fig. 5 in another optional arrangement.

[0051] Referring now to the drawings, Fig. 2 illustrates a merchandise display unit 100 comprising first and second support members 102a, 102b, first and second support member base elements 104a, 104b, first and second lateral support members 106a, 106b, a plurality of shelving brackets 108 releasably mounted on each of the first and second support members 102a, 102b, a back-panel 110 supported by the first and second lateral support members 102a, 102b and coupled, at an upper edge thereof, to the first lateral support member 106a by a first coupling panel 112, and, at a lower edge thereof, to the second lateral support member 106b by a second cou-

pling panel 114.

**[0052]** The back-panel 110 comprises a planar element formed from rigid material (e.g. sheet metal). Edges of the sheet material forming the back-panel may be folded to improve stiffness of the back-panel 110.

**[0053]** The back-panel 110 is releasably mounted at a first (upper) edge thereof to the first (top) lateral support member 106a via optional intermediary first coupling panel 112. The back-panel 110 is releasably mounted at a second (lower) edge thereof to the second (bottom) lateral support member 106b via optional intermediary second coupling panel 114.

The first and second coupling panels 112, 114 themselves are releasably mounted to the first and second lateral support members 106a, 106b respectively.

**[0054]** Similar to the back-panel 110, the first and second coupling panels 112, 114 comprise planar elements formed from rigid material (e.g. sheet metal).

**[0055]** The first coupling panel 112 is formed with engagement elements for cooperative engagement with complementary engagement elements of both the first lateral support member 106a and the back-panel 110.

[0056] In the illustrated arrangement, a first set of these engagement elements of the first coupling panel 112 comprise at least one aperture 118 formed adjacent a first (upper) edge of the first coupling panel 112. A second set of these engagement elements of the first coupling panel 112 comprise at least one hook 120 extending transversely from a second (lower) edge of the first coupling panel 112. A set of engagement elements of the first lateral support member 106a comprise at least one hook 116 extending transversely (i.e. depending) from a lower surface of the first lateral support member 106a. Engagement elements of the back-panel 110 comprise: a first set of engagement elements (e.g. at least one aperture 122) formed adjacent a first (upper) edge of the back-panel 110; and a second set of engagement elements (e.g. at least one hook 124) extending transversely from a second (lower) edge of the back-panel 110. Engagement elements of the second coupling panel 114 comprise: at least one aperture 126 formed adjacent a first (upper) edge of the second coupling panel 114; and at least one aperture 128 formed adjacent a second (lower) edge of the second coupling panel 114. A set of engagement elements of the second lateral support member 106b comprise at least one hook 130 extending transversely (i.e. upstanding) from an upper surface of the second lateral support member 106b.

[0057] Releasable mounting of the first coupling panel 112 to the first lateral support member 106a is achieved through cooperative engagement of the engagement elements of the first coupling panel 112 (i.e. apertures 118) with complementary engagement elements (i.e. hooks 116) of the first lateral support member 106a.

[0058] Similarly, releasable mounting of the first (upper) edge of the back-panel 110 to the first coupling panel 112 is achieved through cooperative engagement of the engagement elements of the back-panel 110 (i.e. aper-

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tures 122) with complementary engagement elements (i.e. hooks 120) of the first coupling panel 112.

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[0059] Releasable mounting of the second coupling panel 114 to the second lateral support member 106b is achieved through cooperative engagement of the engagement elements of the second coupling panel 114 (i.e. apertures 128) with complementary engagement elements (i.e. hooks 130) of the second lateral support member 106b.

[0060] Similarly, releasable mounting of the second (lower) edge of the back-panel 110 to the second coupling panel 114 is achieved through cooperative engagement of the engagement elements of the back-panel 110 (i.e. hooks 124) with complementary engagement elements (i.e. apertures 126) of the second coupling panel 114.

[0061] The shelving brackets 108 may be releasably mounted on the first and second support members 102a, 102b using conventional elements, e.g. a "hook and slot" type arrangement.

[0062] The pair of first and second support members 102a, 102b may suitably comprise hollow tubular posts having a rectangular cross-section. Each lateral support member 106a, 106b may be coupled to the first and second support members 102a, 102b by engagement of formations on the first and second lateral support members 106a, 106b with complementary engagement formations on walls of the posts forming said first and second support members 102a, 102b.

[0063] As illustrated in Fig. 2, the first and second support members 102a, 102b are spaced by a distance which is approximately the same as the length of the back-panel 110. Thus, in a normal operational configuration, a lefthand end of back-panel 110 will be located adjacent a left-hand one of the support members (i.e. first support member 102a), and a right-hand end of that back-panel 110 will be located adjacent a right-hand one of the support members (i.e. second support member 102b). The terms "left-hand" and "right-hand" are applicable when the merchandise display unit 100 is viewed in the direction indicated by arrow Y in Fig. 2.

[0064] Each of the support members 102a, 102b is provided with a base element (104a, 104b respectively) which serves to maintain the support members in a substantially upright orientation. The provision of base elements 104a, 104b allows the merchandise display unit 100 to be free-standing. Of course, in other arrangements, the support members 102a, 102b may be fixed directly to a wall or other secondary support element. Further, the support members 102a, 102b may themselves be part of a wall to which the back-panel 110 can be directly mounted.

[0065] A depth dimension "x" at which the back-panel is set-back from the front faces of the first and second support members 102a, 102b is approximately equal to half the depth "a" of the support members 102a, 102b in some arrangements of the present invention. That is, x=a/2. However, it may differ in optional arrangements.

[0066] In the above described arrangement, and in the other arrangements illustrated in other figures, and as described further below, the back-panels 106 may be formed of sheet material (e.g. sheet metal). In optional arrangements, the thickness of the sheet may suitably be about 0.7mm. However, other suitable thicknesses of sheet material may be employed in other optional arrangements. The choice of panel thickness may be influenced by, for example, the type of merchandise to be displayed. Those skilled in the art will appreciate that heavier articles may require greater support, which may be provided by using thicker panels in the merchandise display unit 100 to provide greater rigidity of the overall unit.

[0067] In other optional arrangements, different materials may be used to form the panels. Again, the choice of material may be influenced by the type of merchandise to be displayed.

[0068] In yet further optional arrangements, the backpanel may comprise a sheet of mesh material, e.g. a wire mesh sheet-material. The size of the apertures of the mesh material may be influenced by the intended use of the merchandise display unit in which the mesh material back-panel is incorporated - e.g. the type of merchandise to be displayed.

[0069] Fig. 3 illustrates a top-plan view of the merchandise display unit 100 of Fig. 2. Again, like features are denoted by like reference numerals.

[0070] If the merchandise display unit 100 of Fig. 3 is compared with the gondola shelving system 10 of Fig. 1a it can be seen that a single back-panel 110 replaces the first and second back-panels 16, 18 of the gondola shelving system 10 of Fig. 1 a. Further, and as a consequence of the configuration of the back-panel 110 of the merchandise display unit 100, available merchandise display space on both a side B and a side C of the merchandise display unit 100 is increased by areas denoted by shaded regions B' and C' (compared with the system of Fig. 1a). This increase in available merchandise display space is approximately equivalent to the area of width "d" defined by the gap between first and second back-panels 16, 18 of the gondola shelving system 10 of Fig. 1 a. This increase is also approximately equivalent to an area of width dimension "x" (referred to in relation to Fig. 2) on both sides of the back-panel 110, i.e. the increase in area has a width dimension "2x".

[0071] As has been discussed above in the description relating to the known system illustrated in Fig. 1 b, the upright posts 12a, 12b have slots formed in four longitudinal faces thereof. Slots on a pair of opposite faces are configured for receiving cooperative engagement elements (e.g. hooks) of back panel 16 and slots on the other pair of opposite faces are configured for receiving cooperative engagement elements (e.g. hooks) of shelving brackets 20.

[0072] In the arrangement illustrated in Figs. 2 and 3, slots are required only in one pair of opposite faces of each support member 102a, 102b. The cooperative en-

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gagement elements of the back-panel 110 do not engage with the first and second support members 102a, 102b directly, but instead engage with the first and second support members 102a, 102b indirectly (i.e. via engagement with first coupling panel 112 and first lateral support member 106a at the top and second coupling panel 114 and second lateral support member 106b at the bottom).

**[0073]** Where the support members 102a, 102b are of approximately equivalent dimensions to the upright posts 12a, 12b of Fig. 1 b, it will be understood that, due to the upright posts 12a, 12b requiring more slots than the support members 102a, 102b, more material is removed from upright posts 12a, 12b compared with support members 102a, 102b. It follows that upright posts 12a, 12b may be weaker than support members 102a, 102b of similar dimensions.

**[0074]** Fig. 4 schematically illustrates a side view of the merchandise display unit illustrated in Fig. 2.

[0075] Fig. 5 schematically illustrates a top perspective view of a portion of a merchandise display unit in an optional arrangement and Fig. 6 schematically illustrates a cross-sectional side view of the merchandise display unit of Fig. 5 as viewed along line Z-Z of Fig. 5. Fig. 7 illustrates a perspective view of a portion of a lateral support member of the merchandise display unit of Figs. 5 and 6.

**[0076]** Features illustrated in Figs. 5, 6 and 7 which are common to the merchandise display unit 100 illustrated in Figs. 2, 3 and 4 (and as discussed above) are denoted using like reference numerals.

[0077] Fig. 5 illustrates a top-portion of left-hand support member 102a (i.e. first support member 102a), and a left-hand end of upper lateral support member 106a (i.e. first lateral support member 106a) to show the engagement of the first lateral support member 106a with the first support member 102a. This engagement of the first lateral support member 106a with the first support member 102a is further illustrated in the cut-away cross-section view of Fig. 6. Furthermore, Fig. 7 illustrates the left-hand end of the first lateral support member 106a in the absence of the first support member 102a to more clearly illustrate the particular features thereof which are configured for engagement with a portion of the first support member 102a.

[0078] In the illustrated arrangement, the first support member 102a comprises a hollow tubular post having a rectangular cross-section. The post comprises a first pair of faces (i.e. front face 132a and back face 132b) and a second pair of faces (i.e. first side face 134a and second side face 134b). Each of the first pair of faces 132a, 132b is provided with a series of slots 136. These slots 136 comprise engagement elements for receiving complimentary engagement elements (i.e. hooks) of shelving brackets. Therefore, shelving brackets can be mounted to each of the first pair of faces 132a, 132b through interengagement of the hooks of the shelving brackets with the slots in the faces 132a, 132b.

**[0079]** The first lateral support member 106a is formed from an elongate planar member which is folded such

that a cross-sectional shape thereof approximates the letter "M". In particular, the first lateral support member 106a comprises three distinct sections (one of which comprises two subsections). These sections, or sub-sections are linked to adjacent sections, or subsections, by folded regions of the material forming the first lateral support member 106a.

**[0080]** The first lateral support member 106a comprises: a middle section (itself comprising first and second sub-sections 138a, 138b); a first flange section 140; and a second flange section 142. The middle section is formed from the first and second sub-sections 138a, 139b being folded about a fold 144 which extends along the longitudinal axis of the elongate planar member.

[0081] Viewed from either end thereof (see, for example, Fig. 6), the middle section defines a V-shaped channel.

[0082] The middle section connectively spaces the first flange section 140 from the second flange section 142. [0083] First flange section 140 is formed from a first edge region of first lateral support member material folded about a fold 146 to extend in a direction away from and transverse to the first sub-section 138a of the middle section. Fold 146 extends along the longitudinal axis of the elongate planar member and is spaced from fold 144 in a first direction.

[0084] Similarly, second flange section 142 is formed from a second opposite edge region of first lateral support member material folded about a fold 148 to extend in a direction away from and transverse to the second subsection 138b of the middle section. The direction in which the second flange section 142 extends away from second sub-section 138b is the same direction as that in which the first flange section 140 extends away from first subsection 138a.

[0085] Lateral slots are formed in each of the middle section and first and second flange sections 140, 142 adjacent an end of the first lateral support member 106a. A first lateral slot (not shown) is formed in first flange section 140. This first lateral slot extends from, and transverse to (optionally perpendicular to), an edge of the first flange section toward said fold 146. A second lateral slot 150 (see Figs. 5 and 7 - not shown in Fig. 6) is formed in second flange section 142. This second lateral slot 150 extends from, and transverse to (optionally perpendicular to), an edge of the second longitudinal section toward said fold 148. These first and second slots are formed opposite one another and spaced from the end of the first lateral support member 106a by a same distance. A third lateral slot 152 is formed in the middle section and extends in both directions from, and transverse to (optionally perpendicular to), the fold 144. That is, the third lateral slot 152 extends from the fold 144 into the first sub-section 138a in one direction and from the fold 144 into the second sub-section 138b in the opposite direction. The third lateral slot 152 extends by an equal amount in each direction from the fold 144 but the third lateral slot need not extend laterally across the entirety of the

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middle section. The third lateral slot 152 is spaced from the end of the first lateral support member 106a by the same amount as the first and second slots.

It should be appreciated that similar arrangements of first, second and third lateral slots are formed adjacent a second (right-hand) end of the first lateral support member 106a and also that similar arrangement of first, second and third lateral slots are formed at either end of the second lateral support member 106b.

[0086] The first, second and third lateral slots are configured to slideably receive and interengage with an upper end portion of second side face 134b. The width of the slots is slightly larger than the depth of the material forming the faces of the first support member 102a to ease the sliding movement of the upper end portion of second side face 134b into the first, second and third slots during an installation process. Thus, during such an installation process the first lateral support member 106a is positioned so that the first, second and third slots thereof are located in alignment directly above second side face 134b of the first support member 102a. When the first, second and third slots and the second side face 134b are aligned in this manner, the first lateral support member 106a can be lowered (or the first support member 102a raised) so that the upper end portion of second side face 134b enters the first, second and third slots. Continued movement of the first lateral support member 106a relative to the first support member 102a allows the upper end portion of second side face 134b to slide further into said first, second and third slots.

**[0087]** Upon completion of this part of an installation exercise, the above-defined interengagement of the first lateral support member 106a and the first support member 102a may serve to inhibit relative horizontal movement between these elements.

[0088] Relative vertical movement between the first lateral support member 106a and the first support member 102a may be inhibited by the inclusion of an optional locking pin 154. In the illustrated arrangement (see Figs. 5 and 6), the locking pin comprises a cylindrical shaft which is bent at one end thereof to form a handle 156. The cylindrical shaft portion of the locking pin 154 is configured for: insertion into a first aperture 158 provided in said first side face 134a and extension therethrough; extension across a space between said first side face 134a and said second side face 134b; insertion into a second aperture 160 provided in said second side face 134B and extension therethrough (and located directly opposite said first aperture 158).

[0089] It will be apparent from viewing Fig. 5 that the position at which fold 144 is located when the first lateral support member 106a is located in engagement with the first support member 102a is lower than the bottom of each aperture 158, 160. This means that, when the locking pin 154 is inserted through the apertures 158, 160, the cylindrical shaft portion of the locking pin 154 lies above the fold 144 of the first lateral support member 106a. Thus, when the locking pin 154 is inserted in the

manner described above, it serves to limit vertical movement of the first lateral support member 106a relative to the first support member 102a (e.g. in the direction denoted by arrow N in the figure).

[0090] The locking pin 154 is slidable relative to the first support member 102a in a direction denoted by arrow D and also in an opposite direction to that denoted by arrow D. For example, in an installation process where the first lateral support member 106a is to be coupled to the first support member 102a, a first step would involve location of the upper portion of the second side face 134b in the first, second and third slots in the manner described above. After completion of this first step, the locking pin 154 may then be inserted into first aperture 158 and moved through the first support member 102a in the direction denoted by arrow D. Continued movement in this direction would cause the locking pin 154 to pass over the fold 144 of the first lateral support member 106a and then through second aperture 160. Further movement of the locking pin 154 in the direction denoted by arrow D would be prevented when the handle 156 abuts the first side face 134a. In a dismantling process where the interengaged first lateral support member 106a and first support member 102a are to be separated, the locking pin 154 would be moved in a direction opposite to that denoted by arrow D in the figure so that the end of the locking pin 154 passes through second aperture 160 and over and end region of fold 144 until the locking pin 154 no longer is located above the fold 144. At that point, the first lateral support member 106a could be moved in a vertical direction denoted by arrow N relative to the first support member 102a so that the two elements can be separated.

**[0091]** The handle 156 of the locking pin 154 provides a means via which a person can manipulate the locking pin 154 to move the locking pin 154 as required during an installation and/or dismantling process.

[0092] The locking pin 154 optionally may be provided with a retention element to prevent complete removal of the locking pin 154 from the first support member 102a. This may help to reduce the likelihood of loss of the locking pin 154 when the parts of the merchandise assembly unit are in storage or transit, and also during an installation or dismantling process. Further optionally, the support member in which the locking pin 154 is located may comprise a retention element to prevent complete removal of the locking pin 154 from the support member 102a, 102b.

**[0093]** It will be appreciated that the provision of a retained locking pin obviates the requirement for separate fixing elements to be provided. The interengaging arrangement of the slots of the lateral support members with corresponding walls of the support members and the interaction of the locking pins with both the lateral support members and the support members may provide a suitable fixing arrangement which does not require separate fixing elements for fixing the lateral support members to the support members.

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[0094] Figs. 8 and 9 illustrate the first support member 102a and locking pin 154 in an optional arrangement in which the locking pin 154 is retentively held within the first support member 102a and in which a biasing member 162 (e.g. a helical spring as illustrated) is provided to urge the locking pin 154 to a locked position. Fig. 8 illustrates the locking pin 154 in the locked position (i.e. a position in which vertical movement of a first lateral support member 106a, when present, relative to the first support member 102a is limited by the locking pin 154). Fig. 9 illustrates the locking pin in an unlocked position (i.e. a position suitable to allow an installation or dismantling process to take place and in which the locking pin 154 is removed from the region where the first lateral support member 106a is located or is to be located).

[0095] As can be seen from Figs. 8 and 9, a protrusion 164 is formed on a surface of the cylindrical shaft region of the locking pin 154. This protrusion is configured for engagement with a portion of the biasing member 162 so that the biasing member 162 can interact with the locking pin 154 and vice versa. The biasing member 162 is arranged to act upon the locking pin 154 via protrusion 164 to bias or urge the locking pin in a direction denoted by arrow P, i.e. toward the locked position (see Fig. 8). In order to overcome the effect of the biasing member 162 on the locking pin 154 so that the locking pin 154 can be moved to the unlocked position, a pulling force in a direction denoted by arrow Q (see Fig. 9) must be applied to the locking pin 154. Typically, this pulling force may be applied by a person pulling the locking pin 154 via handle 156. Upon release of the pulling force, the locking pin 154 is returned to the locked position under the influence of the biasing member 162.

[0096] Therefore, in an installation process, an installation operative carrying out steps to join the first lateral support member 106a to the first support member 102a would need to pull the locking pin 154 from the locked position illustrated in Fig. 8 to the unlocked position illustrated in Fig. 9. With the locking pin 154 in this unlocked position, the first lateral support member 106a could be brought into engagement with the first support member 102a in the above described manner, whereupon, the installation operative could release the locking pin 154 to allow it to return to the locked position and thereby secure the first lateral support member 106a to the first support member 102a.

[0097] Fig. 10 illustrates another optional arrangement for releasably coupling a support member to a lateral support member. In this figure, the top of the first support member 102a is shown coupled to the left-hand end of the first lateral support member 106a. In this optional arrangement, locking pin 154 is retentively held by first lateral support member 106a. Also in this optional arrangement, the biasing member 162 (e.g. a helical spring as illustrated) is located on the first lateral support member 106a (instead of the first support member 102a). As with the previous optional arrangement, the biasing member 162 is provided to urge the locking pin 154 to a

locked position (i.e. the position as illustrated) and in which the locking pin extends from the first lateral support member 106a and through the apertures 158, 160 formed in the walls of the first support member 102a. When the locking pint 154 is in the locked position, movement of the first lateral support member 106a relative to the first support member 102a is limited.

[0098] The biasing member 162 is arranged to act upon the locking pin 154 via, for example, a protrusion formed on a surface of the cylindrical shaft region of the locking pin 154. The biasing member 162 is arranged to bias or urge the locking pin in a direction denoted by arrow R, i.e. toward the locked position. In order to overcome the effect of the biasing member 162 on the locking pin 154 so that the locking pin 154 can be moved to the unlocked position, a pulling force in a direction opposite to that denoted by arrow R must be applied to the locking pin 154. Typically, this pulling force may be applied by a person pulling the locking pin 154 via handle 156. Upon release of the pulling force, the locking pin 154 is returned to the locked position under the influence of the biasing member 162.

[0099] Therefore, in an installation process, an installation operative carrying out steps to join the first lateral support member 106a to the first support member 102a would need to pull the locking pin 154 from the locked position as illustrated in Fig. 10 to the unlocked position. With the locking pin 154 in this unlocked position, the first lateral support member 106a could be brought into engagement with the first support member 102a in the above described manner, whereupon, the installation operative could release the locking pin 154 to allow it to return to the locked position and thereby secure the first lateral support member 106a to the first support member 102a.

**[0100]** In this optional arrangement, the locking pin 154 is retentively held by the first lateral support member 106a by a retaining element 166. This retaining element 166 is formed from a portion of the material of first and second sub-sections 138a, 138b of middle section of the first lateral support member 106a being cut from the middle section and folded away in a direction opposite to that of the fold 144. This folding of a portion of the material of the middle section away from the middle section itself defines a gap between the folded portion of material and the middle section. The locking pin 154 can be passed through the gap for retention between the upwardly folded material of the retaining element 166 and the material around the fold 144.

**[0101]** In an optional arrangement, the means for releasably coupling lateral support members to support members may comprise a combination of the arrangements illustrated in Figs. 5, 8, 9 and 10 and as described above. That is, for example, at the top of a left-hand upright post (i.e. support member), the upright post may be coupled to left-hand end of a top tie-bar (i.e. lateral support member) by the arrangement illustrated in Figs. 5, 8 and 9. However, at the top of a right-hand upright post,

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the upright post may be coupled to the right-hand end of the top tie-bar by the arrangement illustrated in Fig. 10. [0102] In the above described one or more embodiments of the present invention, a single back-panel is located between each pair of adjacent upright posts. The height of these single back-panels is approximately the same as the height of the upright posts. However, in optional arrangements of the above described one or more embodiments, a plurality of back-panels may be located between each pair of adjacent upright posts. These plural back-panels will be of shorter height than the back-panels in the single-panel arrangements. A plurality of back-panels of the shorter height type may be located between adjacent upright posts in a stacked arrangement to provide a full-height composite panel between adjacent upright posts. In such cases, each back-panel may be coupled to adjacent panels by the engagement elements described above.

**[0103]** Any references made herein to orientation (e.g. top, bottom, upper, lower, front, back, left and right) are made for the purposes of describing relative spatial arrangements of the features of the apparatus, and are not intended to be limiting in any sense.

**[0104]** As used herein, the terms "comprises," "comprising," "includes," "including," "has," "having" or any other variation thereof, are intended to cover a non-exclusive inclusion. For example, a process, method, article, or apparatus that comprises a list of elements is not necessarily limited to only those elements but may include other elements not expressly listed or inherent to such process, method, article, or apparatus. Further, unless expressly stated to the contrary, "or" refers to an inclusive or and not to an exclusive or. For example, a condition A or B is satisfied by any one of the following: A is true (or present) and B is true (or present), and both A and B are true (or present).

**[0105]** In addition, the terms "a" or "an" are employed to describe elements and components of the invention. This is done merely for convenience and to give a general sense of the invention. This description should be read to include one or at least one and the singular also includes the plural unless it is obvious that it is means otherwise.

**[0106]** In view of the foregoing description it will be evident to a person skilled in the art that various modifications may be made within the scope of the invention. For example, embodiments in accordance with the invention are not limited to any of the particular materials disclosed herein. Other materials suitable for performing the function described herein for a particular material may also be utilized in embodiments of the invention.

**[0107]** The scope of the present disclosure includes any novel feature or combination of features disclosed therein either explicitly or implicitly or any generalisation thereof irrespective of whether or not it relates to the claimed invention or mitigate against any or all of the problems addressed by the present invention. The ap-

plicant hereby gives notice that new claims may be formulated to such features during prosecution of this application or of any such further application derived therefrom. In particular, with reference to the appended claims, features from dependent claims may be combined with those of the independent claims and features from respective independent claims may be combined in any appropriate manner and not merely in specific combinations enumerated in the claims.

#### **Claims**

- 1. A merchandise display unit comprising: a first support member; a second support member spaced from said first support member; a first lateral support member configured for location with respect to said first and second support members to extend transversely therebetween, said first lateral support member configured for releasable coupling, at a first end thereof, to a first end of said first support member and, at a second end thereof, to a first end of said second support member; a second lateral support member configured for location with respect to said first and second support members to extend transversely therebetween, said second lateral support member configured for releasable coupling, at a first end thereof, to a second end of said first support member and, at a second end thereof, to a second end of said second support member; a panel configured for location in a space defined between said first and second support members and said first and second lateral support members, wherein said panel is configured for releasable coupling, at a first edge thereof, to said first lateral support member and, at a second opposite edge thereof, to said second lateral support member.
- 2. A merchandise display unit according to Claim 1, wherein said first lateral support member comprises at least one engagement member configured for releasable cooperative engagement with one of:

at least one complementary engagement member located at, or adjacent, said first edge of said panel; and

at least one first engagement member of a first intermediary member configured for location between said first lateral support member and said first edge of said panel, said first intermediary member configured for releasable coupling, at a first edge thereof, to said first lateral support member by releasable cooperative complementary engagement of said at least one first engagement member with said at least one engagement member of said first lateral support member and, at a second opposite edge thereof, to said first edge of said panel by releasable co-

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operative complementary engagement of at least one second engagement member of said first intermediary member with at least one complementary engagement member of said panel.

3. A merchandise display unit according to Claim 1 or 2, wherein said second lateral support member comprises at least one engagement member configured for releasable cooperative engagement with one of:

said panel; and at least one first engagement member of a second intermediary member configured for location between said second lateral support member and said second edge of said panel, said second intermediary member configured for releasable coupling, at a first edge thereof, to said second edge of said panel by releasable cooperative complementary engagement of at least one second engagement member of said second intermediary member with at least one complementary engagement member of said panel and, at a second opposite edge thereof, to said

second lateral support member by releasable

cooperative complementary engagement of

said at least one first engagement member with

said at least one engagement member of said

at least one complementary engagement mem-

ber located at, or adjacent, said second edge of

4. A merchandise display unit according to claims 2 or 3, wherein said at least one engagement member and/or said first and/or second engagement members comprises a hook, and wherein said at least one complementary engagement member comprises a slot for receiving a hook.

first lateral support member.

- 5. A merchandise display unit according to any one of the preceding claims, wherein said first lateral support member comprises interengagement formations, at said first and second ends thereof, or adjacent said first and second ends thereof, for slideable engagement with complementary formations at first ends of said first and second support members respectively, and/or wherein said second lateral support member comprises interengagement formations, at said first and second ends thereof, or adjacent said first and second ends thereof, for slideable engagement with complementary formations at second ends of said first and second support members respectively.
- 6. A merchandise display unit according to Claim 5, wherein said first lateral support member comprises a folded elongate sheet member comprising a middle longitudinal section, a first longitudinal flange section, and a second longitudinal flange section,

wherein said middle longitudinal section connectively spaces said first longitudinal flange section from said second longitudinal flange section and/or wherein said second lateral support member comprises a folded elongate sheet member comprising a middle longitudinal section, a first longitudinal flange section, wherein said middle longitudinal flange section, wherein said middle longitudinal flange section from said second longitudinal flange section.

- 7. A merchandise display unit according to Claim 6, wherein said first longitudinal flange section of said first lateral support member is formed from a first longitudinal edge region of first lateral support member material folded to extend in a first direction away from and transverse to said middle longitudinal section, and further wherein said second longitudinal flange section of said first lateral support member is formed from a second opposite longitudinal edge region of first lateral support member material folded to extend in said first direction away from and transverse to said middle longitudinal section and/or wherein said first longitudinal flange section of said second lateral support member is formed from a first longitudinal edge region of second lateral support member material folded to extend in a second direction away from and transverse to said middle longitudinal section, and further wherein said second longitudinal flange section of said second lateral support member is formed from a second opposite longitudinal edge region of second lateral support member material folded to extend in said second direction away from and transverse to said middle longitudinal section.
- 8. A merchandise display unit according to Claim 6 or Claim 7, wherein material of said first lateral support member forming said middle longitudinal section comprises a longitudinal fold so that said middle longitudinal section defines a V-shaped channel and/or wherein material of said second lateral support member forming said middle longitudinal section comprises a longitudinal fold so that said middle longitudinal section defines a V-shaped channel.
- 9. A merchandise display unit according to Claim 8, wherein interengagement formations of said first lateral support member and/or said second lateral support member comprise, adjacent respective first ends thereof:

a first slot formed in an edge of said first longitudinal section and extending transverse to said edge of said first longitudinal section; a second slot formed in an edge of said second longitudinal section and extending transverse to

said edge of said second longitudinal section,

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said first and second slots formed opposite one another and spaced from said first end by a same distance;

- a third slot formed in said middle longitudinal section and extending in both directions transverse to said longitudinal fold over a portion of a width of said middle longitudinal section, said third slot spaced from said first end by a same distance as said first and second slots, and said interengagement formations of said first and/or second lateral support members further comprising a same arrangement of first, second and third slots adjacent respective second ends of said first lateral support member and/or said second lateral support member.
- 10. A merchandise display unit according to Claim 9, wherein said first, second and third slots adjacent said first end of said first lateral support member are configured to slideably receive an end portion of a first wall of said first end of said first support member, and further wherein said first, second and third slots adjacent said second end of said first lateral support member are configured to slideably receive an end portion of a first wall of said first end of said second support member, and/or wherein said first, second and third slots adjacent said first end of said second lateral support member are configured to slideably receive an end portion of said first wall of said second end of said first support member, and further wherein said first, second and third slots adjacent said second end of said second lateral support member are configured to slideably receive an end portion of a first wall of said second end of said second support member.
- 11. A merchandise display unit according to Claim 10, wherein said first wall of said first support member and said first wall of said second support member are each formed with a first aperture and second walls of said first and second support members are each formed with a second aperture located opposite said respective first aperture, pairs of first and second apertures located adjacent said first ends and/or said second ends of said first and second support members and spaced therefrom by a same distance, and said pairs of first and second apertures adjacent one end, or both ends, of each support member are each configured for receiving a releasable locking pin therethrough and for extension therebetween.
- 12. A merchandise display unit according to Claim 11, further comprising a first releasable locking pin locatable to extend through both said first and second apertures adjacent said first end of said first support member and over a portion of said fold of said middle longitudinal section at said first end of said first lateral support member, and further comprising a second

releasable locking pin locatable to extend through both said first and second apertures adjacent said first end of said second support member and over a portion of said fold of said middle longitudinal section at said second end of said first lateral support member, and/or further comprising a third releasable locking pin locatable to extend through both said first and second apertures adjacent said second end of said first support member and under a portion of said fold of said middle longitudinal section at said first end of said second lateral support member, and further comprising a fourth releasable locking pin locatable to extend through both said first and second apertures adjacent said second end of said second support member and under a portion of said fold of said middle longitudinal section at said second end of said second lateral support member.

- 13. A merchandise display unit according to claim 12, wherein said first, second, third and/or fourth releasable locking pins are moveable relative to said first and/or second support members respectively and/or said first and/or second lateral support members respectively from a locking position to a release position, and vice versa.
- **14.** A merchandise display unit according to Claim 13, further comprising:

a first biasing means positioned to act upon said first releasable locking pin for urging said first releasable locking pin to said locking position; and/or

a second biasing means positioned to act upon said second releasable locking pin for urging said second releasable locking pin to said locking position; and/or

a third biasing means positioned to act upon said third releasable locking pin for urging said third releasable locking pin to said locking position; and/or

a fourth biasing means positioned to act upon said fourth releasable locking pin for urging said fourth releasable locking pin to said locking position.

- **15.** A merchandise display unit according to any one of claims 12 to 14, wherein:
  - said first releasable locking pin is retained by the first support member; and/or said second releasable locking pin is retained by the second support member; and/or said third releasable locking pin is retained by the first support member; and/or said fourth releasable locking pin is retained by the second support member.

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**16.** A merchandise display unit according to any one of claims 12 to 14, wherein:

said first releasable locking pin is retained by said first lateral support member at a first end of said first lateral support member; and/or said second releasable locking pin is retained by the second lateral support member at a first end of said second lateral support member; and/or said third releasable locking pin is retained by the first lateral support member at a second end of said first lateral support member; and/or said fourth releasable locking pin is retained by the second lateral support member at a second end of said second lateral support member.

- 17. A merchandise display unit according to any one of claims 12 to 16, wherein said first and/or second releasable locking pins, and/or said third and/or fourth releasable locking pins comprise means for engaging, cooperating or interfering with at least one of said apertures or with an associated fold of said first or second lateral support member, and/or wherein formations are provided, on at least one of said releasable locking pins, apertures or said associated fold of said first or second lateral support members for securing the releasable locking pin to at least one of said apertures or with an associated fold of said first or second lateral support member to make it more difficult to release the releasable locking pin.
- 18. A merchandise display unit according to any one of claims 12 to 17, wherein third and fourth opposite walls of each of said first and second support members are formed with a plurality of engagement elements configured for receiving complementary at least one support member engagement elements of one or more shelving brackets.
- 19. A merchandise display unit according to Claim 18, further comprising a plurality of shelving brackets removably mounted on both said first and second support members through releasable cooperative engagement of said at least one support member engagement element of each of said shelving brackets with corresponding complementary ones of said engagement elements of said first and second support members.
- 20. A merchandise display unit according to any of the preceding claims, wherein said first and second support members each comprise an elongate upright member; and optionally, wherein said elongate upright member comprises a hollow bar having a substantially rectangular cross-section.
- 21. A merchandise display assembly comprising a plu-

rality of merchandise units according to any one of the preceding claims, wherein said plurality of merchandise display units are arranged linearly.

- 22. A merchandise display assembly according to Claim 21, wherein adjacent pairs of merchandise display units share a common support member from which panels of said merchandise display units extend in opposite directions.
- **23.** A panel for a merchandise display unit according to any one of claims 1 to 20.
- 24. A lateral support member for a merchandise display unit, the lateral support member configured, at ends thereof, for coupling to respective support members of a merchandise display unit, wherein said lateral support member is provided with, at least at one end thereof, a releasable locking pin moveable:

from a locking position in which it is received in apertures formed in a respective support member to which the at least one end of the lateral support member is coupled;

to a release position in which the releasable locking pin is disengaged from said apertures, and

further wherein said releasable locking pin, or pins, is/are retained by the lateral support member.

- **25.** A lateral support member according to claim 24, further comprising a biasing means positioned to act upon said releasable locking pin for urging said releasable locking pin to said locking position.
- 26. A lateral support member according to claim 24 or 25, wherein said releasable locking pin comprises means for engaging, cooperating or interfering with a region of material of said lateral support member or with associated apertures of a support member coupled to said lateral support member, and/or wherein formations are provided, on at least one of said releasable locking pin, region of material of said lateral support member, or said associated apertures of said support member for securing the releasable locking pin to at least one of said region of material of said lateral support member, or said associated apertures of said support member to make it more difficult to release the releasable locking pin.
- 27. A support member for a merchandise display unit, the support member comprising an elongate upright member comprising a hollow bar having a substantially rectangular cross-section, wherein a first pair of walls of said elongate upright member are formed, adjacent at least one end thereof, with a first aperture in a first wall of said first pair of walls, and with a

second aperture in a second wall of said first pair of walls, said second aperture located opposite said first aperture, said first and second apertures configured for receiving a releasable locking pin therethrough and for extension therebetween, and further comprising a releasable locking pin for each pair of apertures, said releasable locking pin moveable relative to said first and second walls from a locking position to a release position and vice versa, and further wherein said releasable locking pin for each pair of apertures is configured for retention by the support member.

**28.** A support member according to claim 27, further comprising a biasing means positioned to act upon said releasable locking pin for urging said releasable locking pin to said locking position.

29. A support member according to claim 27 or 28, wherein said releasable locking pin comprises means for engaging, cooperating or interfering with said pair of apertures or with an associated fold of a lateral support member coupled to said support member, and/or wherein formations are provided, on at least one of said releasable locking pin, apertures or said associated fold of said lateral support member for securing the releasable locking pin to at least one of said apertures or with an associated fold of said lateral support member to make it more difficult to release the releasable locking pin.

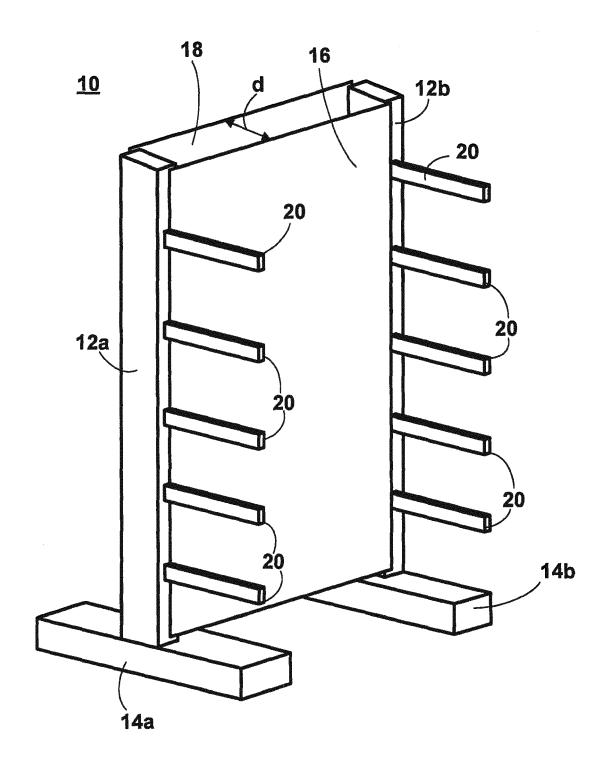


Fig. 1a (PRIOR ART)

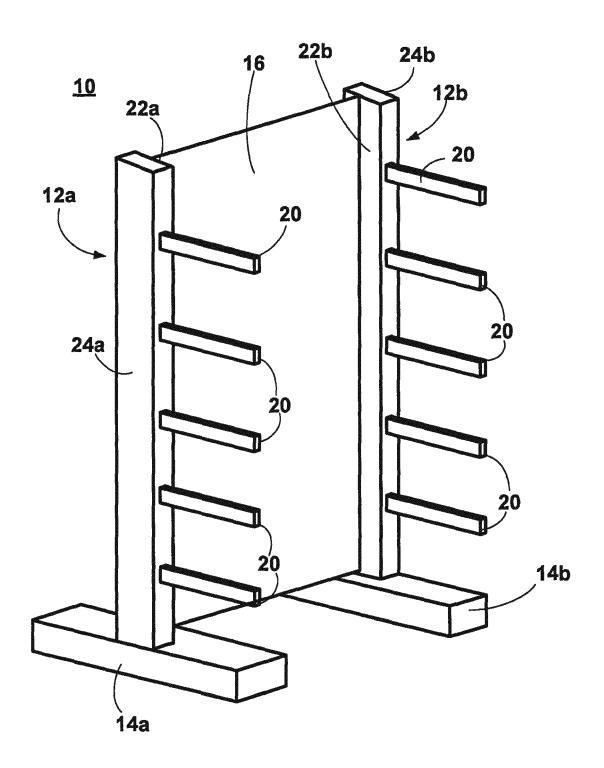


Fig. 1b (PRIOR ART)

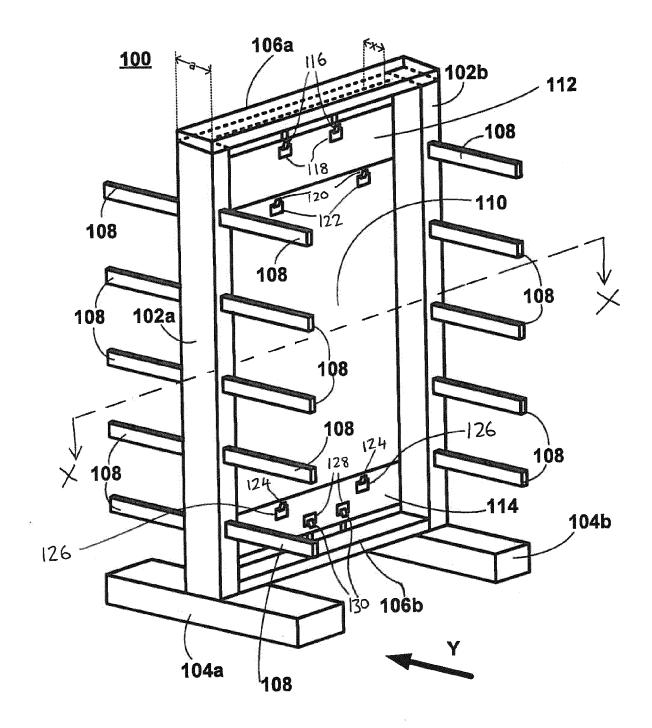
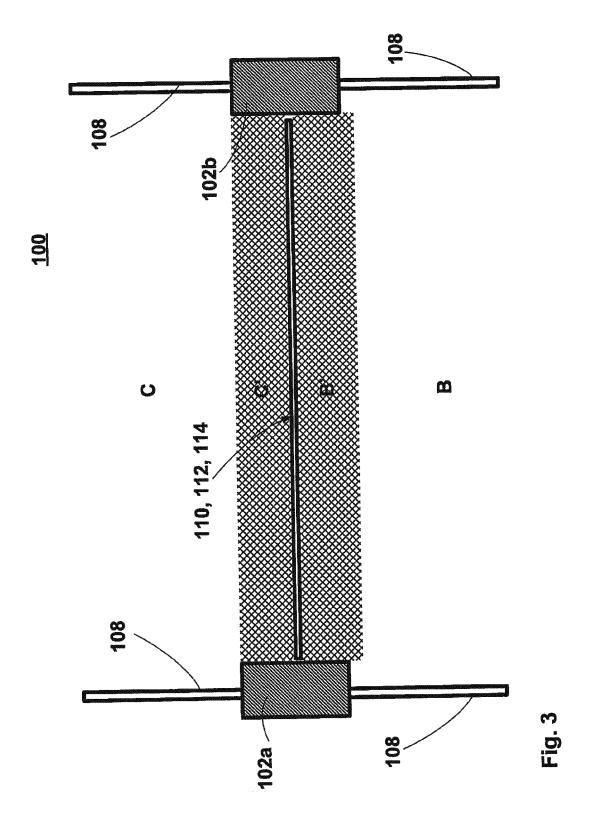
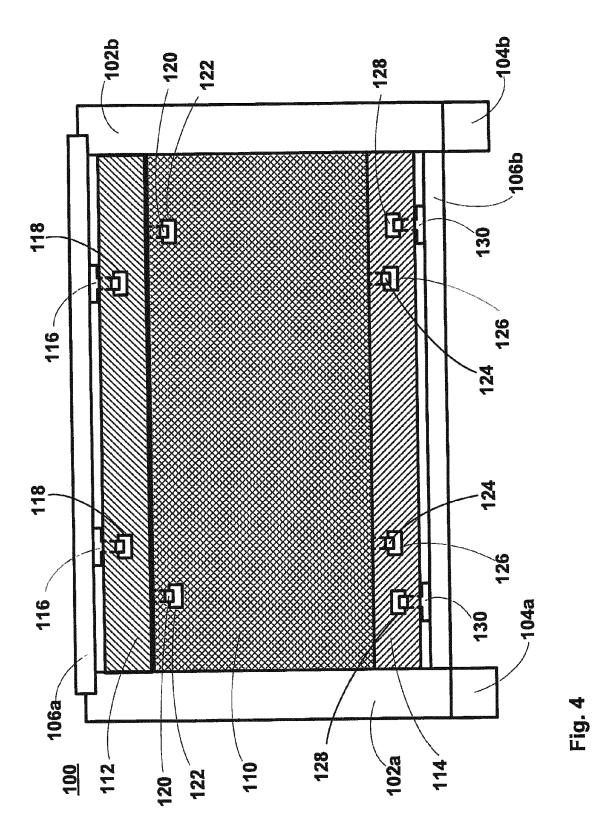
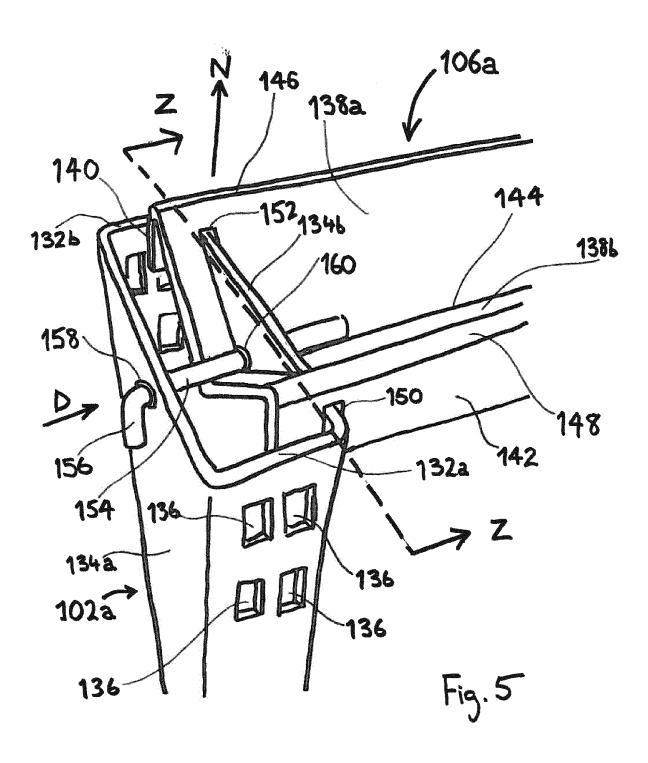


Fig. 2







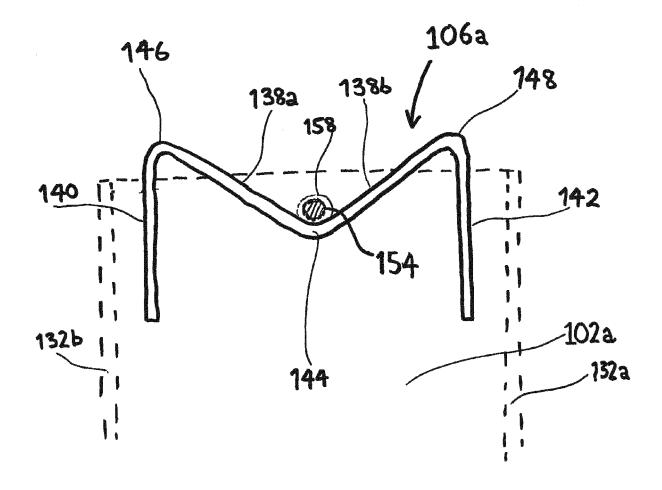
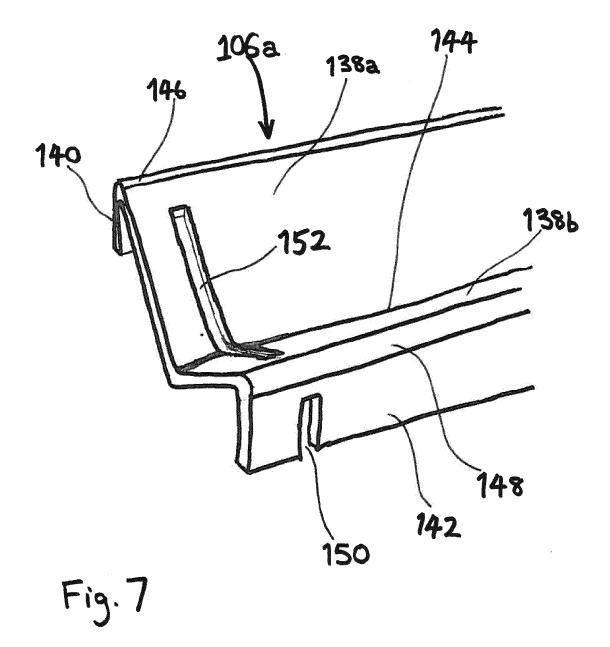


Fig. 6



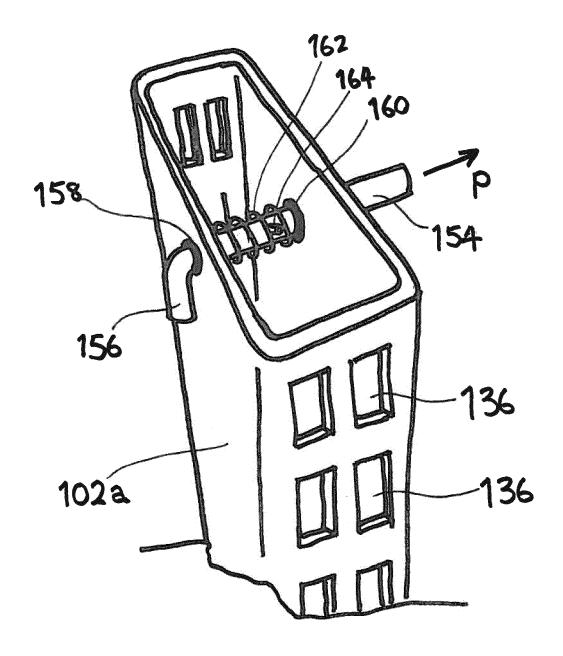


Fig. 8

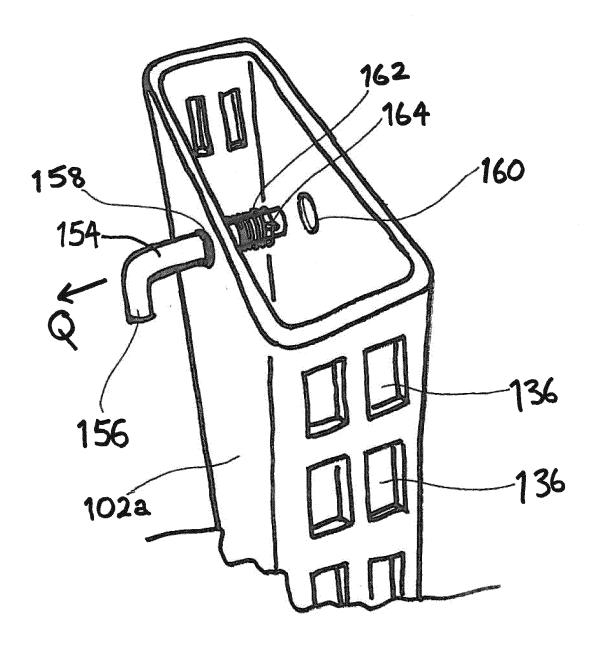
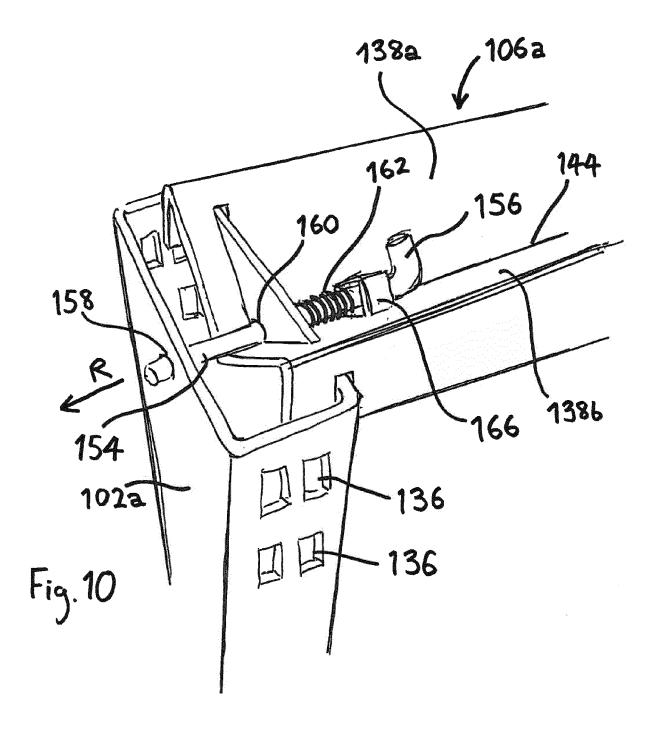


Fig.9





## PARTIAL EUROPEAN SEARCH REPORT

Application Number

under Rule 62a and/or 63 of the European Patent Convention. This report shall be considered, for the purposes of subsequent proceedings, as the European search report EP 13 19 0161

	DOCUMENTS CONSID				
Category	Citation of document with ir of relevant passa	ndication, where appropriate, ages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)	
X Y	EP 1 969 965 A1 (KI 17 September 2008 ( * paragraph [0001]		1-8, 18-23 11-17	INV. A47F5/00 A47F5/10	
x	ET AL) 21 August 20	 WISHART ANDREW S [US 03 (2003-08-21) - paragraph [0096];	[1-3,21, 23		
Y	US 3 144 945 A (SEI 18 August 1964 (196 * column 1 - column	4-08-18)	11-17		
x	US 1 781 277 A (GAM 11 November 1930 (1 * page 1 - page 2;	930-11-11)	1,2,4		
				TECHNICAL FIELDS SEARCHED (IPC)	
				A47F A47B G09F	
The Searc		application, or one or more of its claims		_	
	y with the EPC so that only a partial so arched completely:				
Claims se	arched incompletely :				
Claims no					
	or the limitation of the search: Sheet C				
	Place of search	Date of completion of the sea		Examiner	
	The Hague	10 December 2		hler, Pierre	
CATEGORY OF CITED DOCUMENTS  X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background		E : earliér pa after the fii ner D : document L : document	T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons		
O non	-written disclosure rmediate document	& : member o	& : member of the same patent family, corresponding document		



## INCOMPLETE SEARCH SHEET C

Application Number

EP 13 19 0161

10	Claim(s) completely searchable: 1-23
10	Claim(s) not searched: 24-29
15	Reason for the limitation of the search:
,,	n reply to the clarification request under Rule 62a(1) EPC), dated 27 November 2013, the applicant indicated claims 1 and 24, 27 to be searched. The division is not agree, therefore the written opinion will be restricted to the same set of claims originally filled 1 to 23.
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## ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 13 19 0161

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

10-12-2013

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82