

A FURNITURE SYSTEM

Field of the invention

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A furniture system for displaying and storing articles, which is particularly suitable for being erected in shops, at home or in industrial companies, e.g. in an industrial store. In particular, the present invention may be a modular system that provides components for a furniture system suitable for display and storage
10 of items for sale at a retail store. In addition, the present invention system may also be a kit for assembly of customizable and adjustable furniture that may be ideally suited for commercial use in the display and storage of items for sale in a store.

15 Background of the invention

In retail stores, clothing and goods for sale are displayed on racks or shelves. In some instances, clothing may be displayed on arms that protrude either from a wall or from a stand. Garments are typically hung from hangers, which are then
20 suspended from the arms. The arms are either straight poles or are equipped with dividers to space out the hangers and garments to ensure all garments are visible. The arms protrude substantially horizontally or at a pre-determined angle, so that all of the garments on the arm may be seen, including those at the rear.

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When the types of garments to be displayed need to be changed, the arms are removed from the wall or stand and the required type of arm, i.e. horizontal or angled, is attached. This can be time consuming and requires a retail store to have a number of different arms in storage for attachment as needed. There may
30 be times when it is thought that a particular garment would be best displayed horizontally, and then once the arm is changed and the garments are suspended, it is realised that an angled arm would be better. The garments then need to be removed and the arm changed again.

It is therefore an object of the present invention to provide a furniture system that at least in part alleviates some of the problems associated with current systems.

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Summary of the invention

In a first aspect of the invention, there is provided a modular furniture system comprising: (a) a first vertical panel, the panel having a top end and a bottom end; (b) the first vertical panel having at least one vertical track on a surface of the panel running from the top of the panel to the bottom of the panel; (c) a display or storage means adapted to slide along the length of the track; and (d) a fastening means for securing the display or storage means at a desired position along the track.

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Preferably, the system according to claim 1, further comprising: (a) a second vertical panel opposing the first vertical panel; (b) the second vertical panel having a top end and a bottom end; (c) the second vertical panel having at least one vertical track on a surface that opposes the first vertical panel, the track running from the top of the panel to the bottom of the panel; and (d) the display or storage means extends between the first and second vertical panels.

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Preferably, the first and second vertical panels further comprising a plurality of vertical tracks on the surface that opposes each other, each track is adapted to receive at least one display or storage means, wherein the display or storage means is adapted to slide along the length of the track.

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Preferably, each first and second vertical panels comprising three tracks, the positions of the tracks on the first vertical panel correspond to those positions of the tracks on the opposing second vertical panel.

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Preferably, one track is positioned in the center of the panel, one track is positioned near a front edge of the panel, and one track is positioned near a rear edge of the panel.

5 Preferably, the track further comprising a plurality of notches that are spaced at pre-determined positions and are adapted to engage the fastening means. The notches on the track of the first vertical panel correspond to those positions of the notches on the track of the opposing second vertical panel.

10 Preferably, the fastening means is any one selected from the group: a releasable latch, a lever lock, a stud, a protuberance, a snap or clip fit arrangement.

Preferably, the display or storage means is any one selected from the group: a crossbar, a shelf.

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Preferably, the display or storage means is integral with the fastening means, i.e. they both either are adapted to engage with each other or are formed in a single article.

20 Preferably, the vertical panel is hollow. More preferably, the hollow of the vertical panel houses an illuminating device. Alternatively, the hollow of the vertical panel houses a communicator for obtaining product information from products on the display or storage means, and transmitting the information to a processor.

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Preferably, the vertical panel further comprises slots on a front edge of the panel for receiving a display means.

30 Preferably, the bottom end of the vertical panel is supported on the ground by a base.

In a second aspect of the invention, there is provided a kit for erecting a furniture system, the kit comprising: (a) a prefabricated first vertical panel, the panel

having a top end and a bottom end; (b) the first prefabricated vertical panel having at least one vertical track on a surface of the panel running from the top of the panel to the bottom of the panel; (c) a prefabricated display or storage means adapted to slide along the length of the track; and (d) a prefabricated fastening means for securing the display or storage means at a desired position along the track; and optionally instructions for erecting the furniture system.

Preferably, the kit further comprises: (a) a prefabricated second vertical panel opposing the first vertical panel; (b) the second prefabricated vertical panel having a top end and a bottom end; (c) the second prefabricated vertical panel having at least one vertical track on a surface that opposes the first vertical panel, the track running from the top of the panel to the bottom of the panel; and (d) the prefabricated display or storage means extends between the first and second vertical panels.

Advantageously, the present invention provides a modular furniture system that allows a store or office to quickly and easily arrange furniture for display or storing products without the use of complicated parts. As such, it allows flexibility in the design of the space because of its modular system and, because it is a vertical free-standing system, it does not require the use of any walls for support.

Brief Description of Figures

In order that the present invention may be fully understood and readily put into practical effect, there shall now be described by way of non-limitative examples only preferred embodiments of the present invention, the description being with reference to the accompanying illustrative figures.

In the Figures:

Figure 1 is perspective view of the furniture system as set-up according to an embodiment of the present invention;

Figure 2 is a perspective view of the vertical panel according to an embodiment of the present invention;

5 Figure 3 is a cross-section of the vertical panel according to an embodiment of the present invention;

Figure 4 is a perspective view of the vertical panel according to an embodiment of the present invention;

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Figure 5 is a perspective view of the display or storage means according to an embodiment of the present invention; and

15 Figures 6(a) to (d) are perspective views of various examples of the fastening means according to an embodiment of the present invention.

Detailed Description of The Preferred Embodiments

20 Figure 1 shows an embodiment of the present invention. In particular, it shows the set-up of modular furniture system in accordance with an embodiment of the present invention.

In the simplest form of the present invention, the modular furniture system comprises a first vertical panel 5. The vertical panel 5 has a top end 10 and a
25 bottom end 15. On one surface of the vertical panel 5, there is at least one vertical track 20 running from the top of the panel 10 to the bottom of the panel 15. In Figure 1, there is shown 3 vertical tracks 20. These tracks will be described in detail later. However, it is noted that the present invention may only require 1 track 20. A display or storage means 25 is adapted to slide along the length of the
30 vertical track 20. A fastening means 30 may be any means that fastens and secures the display or storage means 25 at a desired position along the track 20. Various specific examples of the fastening means 30 will be described later.

By "furniture", it is meant to include any object intended to support various human activities such as seating, sleeping, working, displaying and/or storing items of products either for sale or otherwise. Furniture is also used to hold objects at a convenient height for work (as horizontal surfaces above the ground), or to store things.

By "display or storage means", it is meant to include any means that allows for the display, placement and storage of any articles or products either for sale or otherwise. Such means may include fixture such as a shelf, a cross bar for hanging clothes hung on a hanger, or the like. By "shelf", it includes any surface for placing products or be used as a work stations such as a table. By "fixture", it is meant to include anything that may be permanent or temporary. In the present invention, by way of example, the placement (including the height of the) display or storage means is adjustable and may be moved along the track 20 of the panel and be secured at any position along the track 20. In addition, the term "display or storage means" is also meant to include any board for the display of graphics, pictures, information (particularly product information, for example price tags), and the like.

By "track", it is meant to include any narrow strip or conduit that is cut into the surface of the vertical panel 5, 5a that is continuous and runs the length of the panel that allows the display or storage means 25 to slide along the length of the track. Alternatively, the track may be broken along the length of the panel 5, 5a in any suitable length or sections.

In another embodiment of the present invention, there is a second vertical panel 5a that is placed opposite the first vertical panel 5. The second vertical panel 5a may be similar or identical in features to the first vertical panel 5. Like the first vertical panel 5, the second vertical panel 5a has a top end 10 and a bottom end 15. The second vertical panel 5a also has at least one vertical track 20 on a surface that opposes (or facing) the first vertical panel 5, the track 20 running from the top of the panel 10 to the bottom of the panel 15. The display or storage means 25 extends between the first 5 and second 5a vertical panels.

By "extends", it is meant that the length of the display or storage means 25 extends between the length or distance between the first 5 and second 5a vertical panels. It is also meant to include any display or storage means 25 that
5 does not extend the entire length or distance between the first 5 and second 5a vertical panels. The length of the display or storage means 25 may be shorter than the length or distance between the first 5 and second 5a vertical panels, i.e. extends part of the length or distance between the first 5 and second 5a vertical panels.

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Figures 2 and 3 show perspective and cross sectional views of the vertical panels 5 and 5a.

As described above and as shown in the Figures, an embodiment of the present
15 invention includes having 3 tracks 20 on each first 5 and second 5a vertical panels.

In the cross-sectional view of the vertical panel 5, 5a as shown in Figure 3, it can be seen that the vertical panel 5, 5a has a 4 edges – 2 front edges 35 and 2 rear edges 40. It follows then that it has a front surface 45, a rear surface 50, and 2
20 side surfaces 55. The tracks 20 are positioned on both side surfaces 55 of the vertical panel 5, 5a. The side surfaces 55 have a larger surface area than the front and rear surfaces 45, 50. In an embodiment where there are 3 tracks 20, one track is positioned in the center of the panel 20a, one track is positioned near a
25 front edge of the panel 20b, and one track is positioned near a rear edge of the panel 20c. The positions of the tracks 20 on the first vertical panel 5 correspond to those positions of the tracks 20 on the opposing second vertical panel 5a.

In an embodiment of the invention, there are tracks 20 on both side surfaces 55
30 of the vertical panel 5, 5a. As shown in Figure 3, the position and location of the tracks 20 on both of the side surfaces 55 on the same panel 5 may be the same relative to each other. Figure 4 shows a perspective view of the side 55 of the vertical panel 5, 5a. It shows that along each track 20 there is a series or plurality

of notches 60 that are spaced at pre-determined positions and are adapted to engage the fastening means 30. The notches 60 on the track 20 of the first vertical panel 5 correspond to those positions of the notches 60 on the track 20 of the opposing second vertical panel 5a.

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By "notch", it is meant to include any small cut or marking along the track 20. By having the positions of the notches 60 on the first panel 5 correspond to those same positions of the notches 60 on the opposing second panel 5a, these notches 60 act as markers so that any display or storage means that extends between the first 5 and second 5a vertical panels will be aligned level to the ground. In an embodiment of the invention, it can be seen in Figure 4 that the notch 60 is in cut along the track 20 that is shaped like a circle that overlaps the track 20.

Figures 4, 6(a) to (d) show examples of a fastening means 30. These include any one that is selected from the group: a releasable latch, a lever lock, a stud, a protuberance, a snap or clip fit arrangement. The releasable latch may include biasing means for allow the fastener to stay on the track 20 by frictional forces. As shown in Figure 6(c) and (d), the fastening is adapted to engage the display or storage means 25 such that it locks the display or storage means 25 in place along the track 20. In Figure 6(c), the display or storage means 25 may be a shelf or table surface which requires 2 fastening means 30 (which is a lever lock in this example). The fastening means 30 may be positioned on the same level or plane on more than one track (e.g. two tracks 20 as shown in Figure 6(c)) and engage the display or storage means 25 mechanically and secures the display or storage means 25. In Figure 6(d), the display or storage means 25 is a cross bar. The cross bar may be used to display or store clothes hung on hangers. In Figure 5, the display or storage means 25 may comprise a cross bar and further bars attached perpendicular to the cross bar for displaying or storing clothes hung on hangers. Of course, the invention is not limited to only displaying or storing clothes, but may include the hanging of any product or items for display or storage.

In an embodiment of the invention, the display or storage means 25 is integral with the fastening means 30, i.e. they both either are adapted to engage with each other or are formed in a single article. This can be seen in Figure 6(b) where the fastening means 30 is integral to the display or storage means 25 (cross bar in this case).

Returning to Figure 3 that shows the cross section of the vertical panels 5, 5a, it can be seen that the panel has a cavity or a hollow 65. In an embodiment of the invention, the inside of the panel 5, 5a is divided into several sections – each section represents a hollow 65 interior. In one embodiment of the invention, the hollow 65 interior may house an illuminating device, for example a light bulb, a light tube, LED tubing, and the like.

In addition to the above or in an alternative embodiment of the invention, the hollow 65 of the vertical panel 5, 5a houses a communicator for obtaining product information from products on the display or storage means 25, and transmitting the information to a processor. Such a system of relying product information is useful so that an inventory of the products on the display or storage means 25.

With reference to Figure 3, the front edges 35 and rear edges 40 may have flanges such that the surfaces 45, 50 and 55 can receive a display means such as a board. Such a display board may be used to decorate the sides of the vertical panels 5, 5a. This is particularly useful in a retail store where the display means such as a board may be used as advertisements, displaying product information and/or contribute to the aesthetics and branding of the store.

The panel 5, 5a may be made of any durable material that may be opaque or non-opaque. In the case where the panel is made from a non-opaque material, light from the hollow 65 interior may be seen from outside or surroundings of the panel. The light may then be used to illuminate the display means board described above. The panels 5, 5a might be of any suitable colour or laminate. An example of how light is may be seen from the exterior of the panel is shown as

feature 70 in Figure 1. Light from an illuminating device in the hollow 65 interior of the panel 5, 5a may be seen being emitting from the side 55 of the panel 5, 5a.

5 The bottom end 15 of the vertical panel 5, 5a may be supported on the ground by a base. Alternatively, first 5 and second 5a vertical panels may be connected to a horizontal panel (that has the same technical features of the vertical panel 5, 5a but placed horizontally) to form a frame or part of a frame.

10 Finally, the present invention also provides a kit for erecting a furniture system as shown in Figure 1 wherein the kit comprises all the components described above. In particular, it comprises a prefabricated first vertical panel 5 having at least one vertical track 20 on a surface of the panel 5 running from the top of the panel 10 to the bottom of the panel 15, a prefabricated display or storage means 25 that is adapted to slide along the length of the track 20, a prefabricated fastening means 30 for securing the display or storage means 25 at a desired position along the track 20, and instructions for erecting the furniture system.

20 In addition to the above, in an embodiment of the invention, the kit may further comprise a prefabricated second vertical panel 5a opposing the first vertical panel 5, the second prefabricated vertical panel 5a having at least one vertical track 20 on a surface that opposes the first vertical panel 5, the track 20 running from the top of the panel 10 to the bottom of the panel 15, and the prefabricated display or storage means 25 for extending between the first and second vertical panels 5, 5a.

25 Whilst there has been described in the foregoing description preferred embodiments of the present invention, it will be understood by those skilled in the technology concerned that many variations or modifications in details of design or construction may be made without departing from the present invention.

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CLAIMS

1. A modular furniture system, the system comprising:
 - (a) a first vertical panel, the panel having a top end and a bottom end;
 - (b) the first vertical panel having at least one vertical track on a surface of the panel running from the top of the panel to the bottom of the panel;
 - (c) a display or storage means adapted to slide along the length of the track; and
 - (d) a fastening means for securing the display or storage means at a desired position along the track.
2. The system according to claim 1, further comprising:
 - (a) a second vertical panel opposing the first vertical panel;
 - (b) the second vertical panel having a top end and a bottom end;
 - (c) the second vertical panel having at least one vertical track on a surface that opposes the first vertical panel, the track running from the top of the panel to the bottom of the panel; and
 - (d) the display or storage means extends between the first and second vertical panels.
3. The system according to any one of claims 1 or 2, wherein the first and second vertical panels further comprising a plurality of vertical tracks on the surface that opposes each other, each track is adapted to receive at least one display or storage means, wherein the display or storage means is adapted to slide along the length of the track.
4. The system according to any one of the preceding claims, wherein each first and second vertical panels comprising three tracks, the positions of the tracks on the first vertical panel correspond to those positions of the tracks on the opposing second vertical panel.

5. The system according to claim 5, wherein one track is positioned in the center of the panel, one track is positioned near a front edge of the panel, and one track is positioned near a rear edge of the panel.
6. The system according to any one of the preceding claims, wherein the track further comprising a plurality of notches that are spaced at pre-determined positions and are adapted to engage the fastening means.
7. The system according to claim 6, wherein the position of the notches on the track of the first vertical panel correspond to those position of the notches on the track of the opposing second vertical panel.
8. The system according to any one of the preceding claims, wherein the fastening means is any one selected from the group: a releasable latch, a lever lock, a stud, a protuberance, a snap or clip fit arrangement.
9. The system according to any one of the preceding claims, wherein the display and holding means is any one selected from the group: a crossbar, a shelf.
10. The system according to any one of the preceding claims, wherein the display or storage means is integral with the fastening means.
11. The system according to any one of the preceding claims, wherein the vertical panel is hollow.
12. The system according to claim 11, wherein the hollow of the vertical panel houses an illuminating device.
13. The system according to claim 11, wherein the hollow of the vertical panel houses a communicator for obtaining product information from products on the display or storage means, and transmitting the information to a processor.

14. The system according to any one of the preceding claims, further comprising slots on a front edge of the panel for receiving a display means.
15. The system according to any one of the preceding claims, wherein the bottom end of the vertical panel is supported on the ground by a base.
16. A kit for erecting a furniture system, the kit comprising:
- (a) a prefabricated first vertical panel, the panel having a top end and a bottom end;
 - (b) the first prefabricated vertical panel having at least one vertical track on a surface of the panel running from the top of the panel to the bottom of the panel;
 - (c) a prefabricated display or storage means adapted to slide along the length of the track; and
 - (d) a prefabricated fastening means for securing the display or storage means at a desired position along the track; and optionally instructions for erecting the furniture system.
17. The kit according to claim 16, further comprising:
- (a) a prefabricated second vertical panel opposing the first vertical panel;
 - (b) the second prefabricated vertical panel having a top end and a bottom end;
 - (c) the second prefabricated vertical panel having at least one vertical track on a surface that opposes the first vertical panel, the track running from the top of the panel to the bottom of the panel; and
 - (d) the prefabricated display or storage means extends between the first and second vertical panels.