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(54) **SLAT WALL**

LAMELLENWAND

PAROI A LAMELLES

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(73) Proprietor: **Green Lite AB**

601 04 Norrköping (SE)

(72) Inventor: **ALDÉN, Kurt**

S-61633 Åby (SE)

(74) Representative: **Willquist, Sofia Ellinor**

Awapatent AB

Junkersgatan 1

582 35 Linköping (SE)

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Description

[0001] The present invention relates to a method for manufacturing a slat wall.

Technical Background

[0002] Slat walls are commonly used to display articles in stores. Slat walls usually comprise a plurality of horizontal panel strips separated by hook defining grooves which are adapted to receive display elements, such as eurohangers, shelves etc. In the art, slat walls are often made of panels of e.g. MDF or HDF, which panels comprise milled out grooves running horizontally from one edge to the opposite edge of the panel. Usually inserts of e.g. aluminum are inserted into the milled grooves. The grooves, and the inserts, usually have t-shaped profiles in order for mutually engaging display elements to be hooked on the grooves.

[0003] The slat walls used in the art are usually very heavy and cumbersome to handle. In recent years, boards based on a core sandwiched between printable facing sheets have been commonly used to replace traditional board material, such as MDF, in e.g. furniture, advertising signs and in commercial stands. EP1714776A1 discloses a light-weight wood fiber based board of the above mentioned sandwiched-type, wherein the flutes or channels are tilted in relation to the facing sheets. Such a construction gives rise to an increased strength, since the effective contact between the walls of the structure is increased.

[0004] US494416 A relates to a light-weight slotted panel for mounting merchandising accessories on the front face thereof. The panel is formed from a high density light-weight core composed of molded-board expanded plastic foam and is provided with a front facing sheet laminated thereto. Parallel slots are formed in both the core and facing sheet.

[0005] It would be a desire to provide slat walls that are light and easy to handle, e.g. by providing slat walls made of light-weight boards. However, the current designs of slat walls do not allow use of light-weight boards since it would be very hard to mill out t-shaped channels in this kind of material.

Summary of invention

[0006] It is an object of the invention to manufacture a slat wall that is easy to handle and simple to manufacture.

[0007] This object, as well as other advantages, is achieved by the present invention.

[0008] The present invention relates to a method for manufacturing a slat wall comprising the steps of;

- providing a core presenting a first and a second face,
- forming at least one groove extending inwardly from the first face of the core,
- inserting an insert, comprising at least one wall de-

fining a cavity, into said groove,

- laminating at least one covering layer onto the first face of the core
- forming at least one slit through the covering layer and through the wall of the insert so that said cavity is accessible.

[0009] The method of the invention enables light, but yet functional, slat walls with beautiful appearances to be manufactured in an easy way.

[0010] The invention further relates to a slat wall obtained by said method.

[0011] The slat wall obtained by the method of manufacturing is formed as a three dimensional body with a predetermined height, width and thickness. The slat wall comprises a core, presenting a first and a second face and at least one groove extending inwardly from the first face of the core. The core comprises or is made of cellulose fibers and is formed of corrugated and stacked sheets that form channels, each channel having a longitudinal axis intersecting the first face. An insert, comprising at least one wall which defines a cavity, is arranged in said groove, and at least one covering layer covers the first face of the core and a part of the groove. The slat wall further comprises a slit running through the covering layer and through the wall of the insert.

[0012] The slit, through which the cavity of the insert is accessible, forms a receiving groove for receiving display elements. Thus, mutually engaging means of display elements, such as eurohangers, can be hooked on said receiving groove. The design of the slat wall enables the manufacturing of a receiving groove with a T-shaped profile in a light-weight board made of cellulose fibers, which board comprises a core presenting a wall structure defining a plurality of channels.

[0013] In one embodiment of the invention, the groove and the slit may have extensions in the direction of the width of the slat wall. In this embodiment, the length of the slit may be shorter than the width of the slat wall. In this way, a more pleasant design of the slat wall is enabled. Moreover, the height of the slit may be less than the height of the groove. This contributes to the T-shaped profile of the receiving groove.

[0014] In another embodiment of the invention, the groove and the slit may have extensions in the direction of the height of the slat wall. The length of the slit may then be shorter than the height of the slat wall to provide a more pleasant design. In this embodiment, the insert may further comprise a standard vertical upright, e.g. of metal, which upright may have one wall with vertically spaced slots located therein. Said upright may be arranged in the cavity of the insert so that said wall with vertically spaced slots is accessible through the slit. Such a standard upright enables use of standard bracket members to be hooked on said slots.

[0015] The core may present a wall structure defining a plurality of channels, each channel having a longitudinal axis intersecting the first face at an angle which is

less than 90 degrees. A slat wall comprising such a material is strong, but yet extremely light, which facilitates the handling of the slat wall.

[0016] The at least one covering layer may be made of wood, such as of medium or hard density fiber board, metal or plastic. Preferably, the slat wall further comprising a second covering layer, laminated onto said at least one covering layer. The second covering layer may be a printable film, such as a film made of polyester or a plastic sheet. The printable film enables decorative prints to be made on the slat wall and thus contributes to a beautiful appearance.

Brief description of the drawings

[0017]

Fig. 1 shows a slat wall, mounted on a wall, obtained in accordance with one example of the invention.

Fig. 2 shows a cross-sectional side view of the slat wall in Fig. 1 as seen from an imaginary cut line, C1.

Fig. 3 shows an example of an insert of a slat wall.

Fig. 4 shows a slat wall obtained in accordance with another example of the invention.

Fig. 5 shows a metal upright.

Detailed description

[0018] The slat wall obtained by the invention is formed as a three dimensional body that may be removably mounted on a wall. The slat wall comprises a front side defining several slats at least partly separated by slits. The slat wall comprises a core, which core comprises grooves wherein inserts are inserted. Each insert comprises at least one wall that defines a cavity. A covering layer or layers covers the core and part of the grooves. Slits are made in the covering layer and in the wall of the insert so that the cavity of the inserts is accessible through the slits.

[0019] The design of the slat wall obtained by the invention enables use of materials that otherwise might be hard to use. The core of the slat wall may e.g. be made of a light weight fiber based board such as the one described in EP EP1714776A1. The light weight fiber based board may be based on a core that present a first and a second face and comprises corrugated and stacked sheets that form flutes or channels. The flutes or channels may be tilted in relation to the first face. Thus, the longitudinal axis of the channels may intersect the first face at an angle which is less than 90 degrees. Such a construction gives rise to a light board with an increased strength. The corrugated sheets forming the core may be of wood fiber based material, such as paper or cardboard. The light weight board may also comprise facing sheets laminated onto said first and second face. The board may further comprise edge liners that are attached to the side portions of the core, thus to the portions of the core that are connecting the first and the second faces

of the core.

[0020] Several slat wall assemblies might be mounted side by side on a wall. In another embodiment, the slat wall may be double sided. Thus, the rear side of the three dimensional body forming the slat wall, might also comprise grooves, inserts and slits in accordance to the invention. Several slat walls, e.g. three slat walls, might also be mounted at an angle of 90 degrees to each other.

[0021] In the manufacturing of the slat wall according to the invention, grooves are formed in a core of a light-weight material. The grooves are formed so that they have an extension in the horizontal direction of the core, preferably the grooves run from one side of the core to the other. Alternatively, the grooves are formed so that they have an extension in the vertical direction of the core. Several grooves are preferably made in the slat wall, at a distance to each other. The grooves are preferably made by milling.

[0022] Inserts, comprising at least one wall defining a cavity, are inserted into the grooves. The inserts are preferably made of plastic but may also be made of other materials such as metals, e.g. aluminum. The inserts may e.g. be formed by extrusion.

[0023] After the inserts are inserted into the grooves, a covering layer is laminated onto the core so that it covers the surface of the core as well as the grooves and the inserts. A slit is formed through the covering layer and through the wall of the insert so that the cavity of the insert is accessible through the slit. The slit may be formed by milling. A covering layer or layers may also be laminated onto the second side, i.e. the rear side, of the core. On the rear side of the slat wall, means for mounting the slat wall on a wall may also be formed or attached.

[0024] The slat wall obtained by the invention will now be described in more details by way of an example.

[0025] Fig. 1 shows a slat wall (1) obtained according to one example of the invention. The slat wall comprises a front side defining several slats (7) at least partly separated by slits (8), and a rear side to be mounted on a wall. The slat wall (1) has a predetermined height (h1) and a predetermined width (w1). Several slat wall assemblies might be mounted side by side on the wall, although only one slat wall is shown in fig. 1.

[0026] Fig. 2 shows a cross-sectional side view of the slat wall as seen from an imaginary cut line, C1.

[0027] With reference to fig. 1 and 2, the slat wall comprises a core (3) of a light weight wood fiber based board sandwiched between covering layers (4, 4') of e.g. HDF. The core (3) presents a first face (3') and a second face (3'') and a wall structure defining a plurality of channels, each channel having a longitudinal axis intersecting the first face at an angle less than 90 degrees, preferably between 45 - 85 degrees. A first and a second film (5, 5') is laminated onto said covering layers (4, 4').

[0028] The core comprises grooves (6) with predetermined depths (d2) and predetermined heights (h2), which grooves run horizontally from one side edge of the wall to the other. Thus the length (l1) of the grooves in the

horizontal direction corresponds to the width (w1) of the slat wall. The grooves (6) extend inwardly from the first face of the core and have an approximate squared cross-section. The depth (d2) of the grooves is less than the thickness (t1) of the core. As shown in the cross-sectional view in fig. 2, the groove extend inwardly from the first face of the core in a direction forming an angle (α) to the first face, which angle (α) is at least 90 degrees. Thus, the groove may have a decreasing cross-section in depth. This facilitates the formation of the groove in lightweight materials.

[0029] A plastic, extruded, insert (9) comprising a cavity (10) is arranged in the groove (6). The insert is shown in more details in fig. 3. As can be seen in fig. 3, the insert is in the form of a rectangular tube, comprising a tubular cavity (10). The insert (9) is dimensioned to fit in the groove (6) and has the same length (l3) as the groove (6), which length (l1) corresponds to the width (w1) of the slat wall.

[0030] The slat wall further comprises slits (8) in the front side (7), which slits go through the polyester film (5), the covering layer (4) and through the wall of the insert (9) so that the cavity (10) is accessible. The slits has a height (h3) which is less than the height (h2) of the groove (6) and a horizontal length (12) that is shorter than the length (l1) of the slat wall.

[0031] The covering layers (4) and the polyester film (5) extend past the first face (3') of the core (3) so that it partly covers the height of the channels (6).

[0032] In the manufacturing of the slat wall, a core (3) presenting a first face 3' and an in relation thereto parallel, second face 3" is provided. The core 3 is constituted of an internal wall structure defining channels that are tilted in relation to the faces 3', 3", i.e. each channel has a longitudinal axis that intersects the faces 3', 3" at an angle α of intersection being less than 90 degrees. In said core (3) grooves (6) are milled out. Thereafter, inserts (9), as described in relation to fig. 3, are inserted into the grooves (6). Covering layers (4, 4') and polyester films (5, 5') are laminated onto the first and second faces (3', 3") of the core (3) so that the grooves and the inserts are completely covered by the covering layers and the films. Thereafter, slits are milled out in the front side (7) through the polyester film (5) and the covering layer (4) so that the cavity (10) is accessible.

[0033] Fig. 4 shows a slat wall (11) obtained according to another example of the invention. In order to avoid undue repetitions, the same reference numbers are used for the same or corresponding features and only features that differ from the previous example are highlighted in this example. The slat wall shown in fig. 4 comprises vertically extending grooves (6), running in the direction of the height of the slat wall. Plastic, extruded, inserts (9) (shown in fig. 3) comprising cavities (10) are arranged in the grooves (6). The inserts (9) further comprise standard metal uprights (12). Such an upright (12) is shown in more details in fig. 5. Said upright (12) has a u-shaped horizontal cross-section and a wall (13) with vertically spaced

slots (14) located therein. The upright (12) is arranged in the cavity (10) of the insert (9).

[0034] The slat wall shown in fig. 4 further comprises at least one vertically extending slit (8) in the front side (7), which slit go through the covering layer(s) and through the wall of the insert so that the wall (13) of the upright (12) arranged in the cavity (10) of the insert (9) is accessible. The slit (8) have a vertical length that is shorter than the height (h1) of the slat wall.

Claims

1. A method for manufacturing a slat wall comprising the steps of;

- providing a core presenting a first and a second face (3', 3"),
- forming at least one groove (6) extending inwardly from the first face of the core,
- inserting an insert (9), comprising at least one wall defining a cavity (10), into said groove (6),
- laminating at least one covering layer (4) onto the first face of the core (3)

characterized in that the method comprises the step of:

- forming at least one slit (8) through the covering layer and through the wall of the insert so that said cavity (10) is accessible.

Patentansprüche

1. Verfahren zum Herstellen einer Lamellenwand, das die Schritte umfasst:

- Bereitstellen eines Kerns, der eine erste und eine zweite Fläche (3', 3") darstellt,
- Bilden von mindestens einer Nut (6), die sich von der ersten Fläche des Kerns nach innen erstreckt,
- Einführen eines Einsatzes (9), der mindestens eine Wand umfasst, die einen Hohlraum (10) definiert, in die Nut (6),
- Schichten von mindestens einer Deckschicht (4) auf die erste Fläche des Kerns (3),

dadurch gekennzeichnet, dass das Verfahren den Schritt umfasst:

- Bilden von mindestens einem Schlitz (8) durch die Deckschicht und durch die Wand des Einsatzes, sodass der Hohlraum (10) zugänglich ist.

Revendications

1. Procédé pour fabriquer une paroi à lamelles comprenant les étapes suivantes :

- fourniture d'une partie centrale présentant une première et une seconde face (3', 3''),
 - formation d'au moins une rainure (6) s'étendant vers l'intérieur à partir de la première face de la partie centrale, 5
 - insertion d'un insert (9), comprenant au moins une paroi définissant une cavité (10), à l'intérieur de ladite rainure (6),
 - laminage d'au moins une couche de revêtement (4) sur la première face de la partie centrale (3), 10
- caractérisé en ce que** le procédé comprend l'étape suivante :
- formation d'au moins une fente (8) à travers la couche de revêtement et à travers la paroi de l'insert de manière à ce que ladite cavité (10) soit accessible. 15

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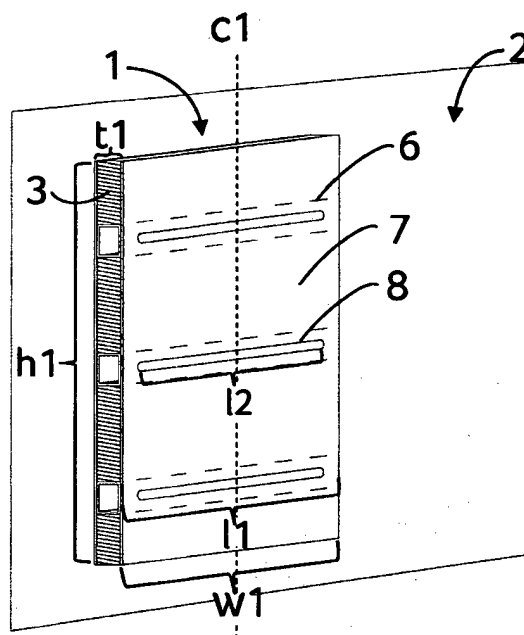


Fig. 1

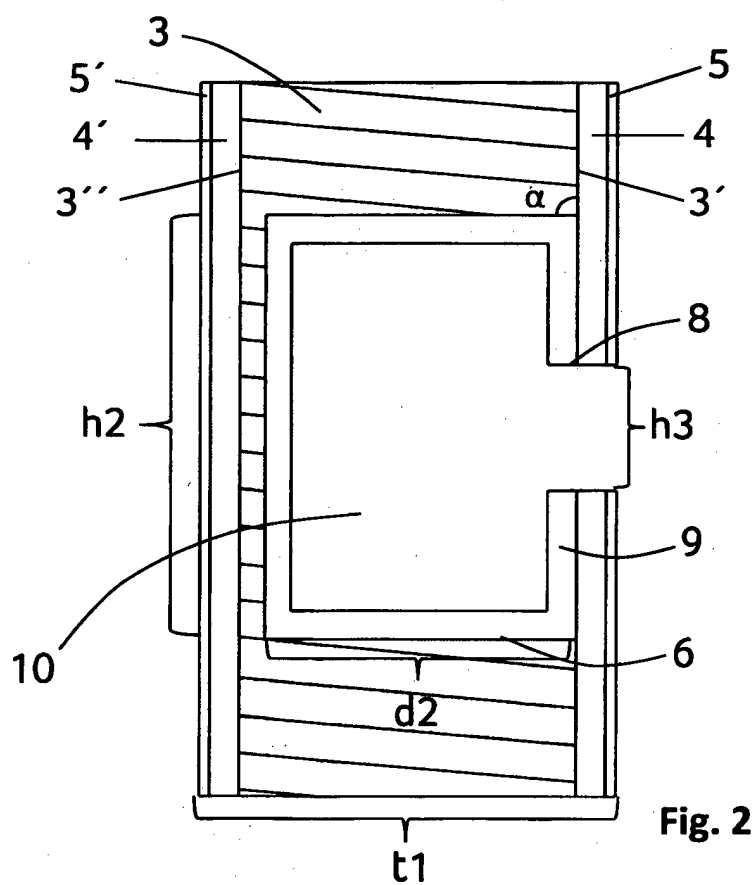


Fig. 2

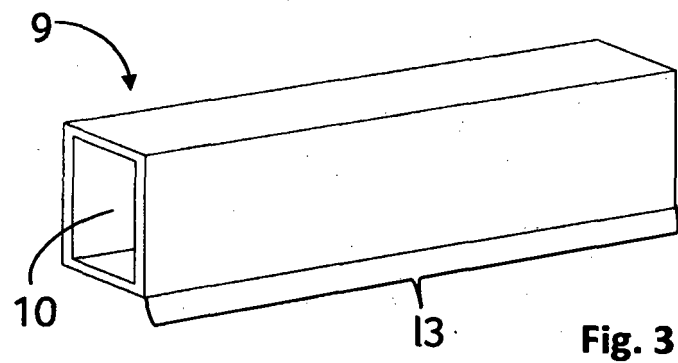
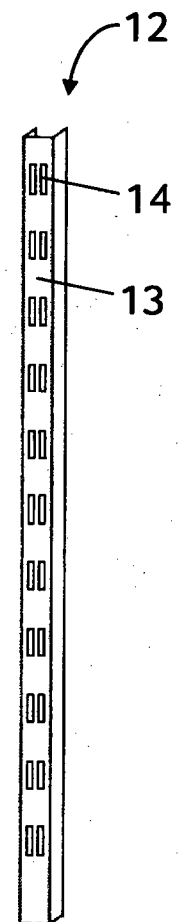
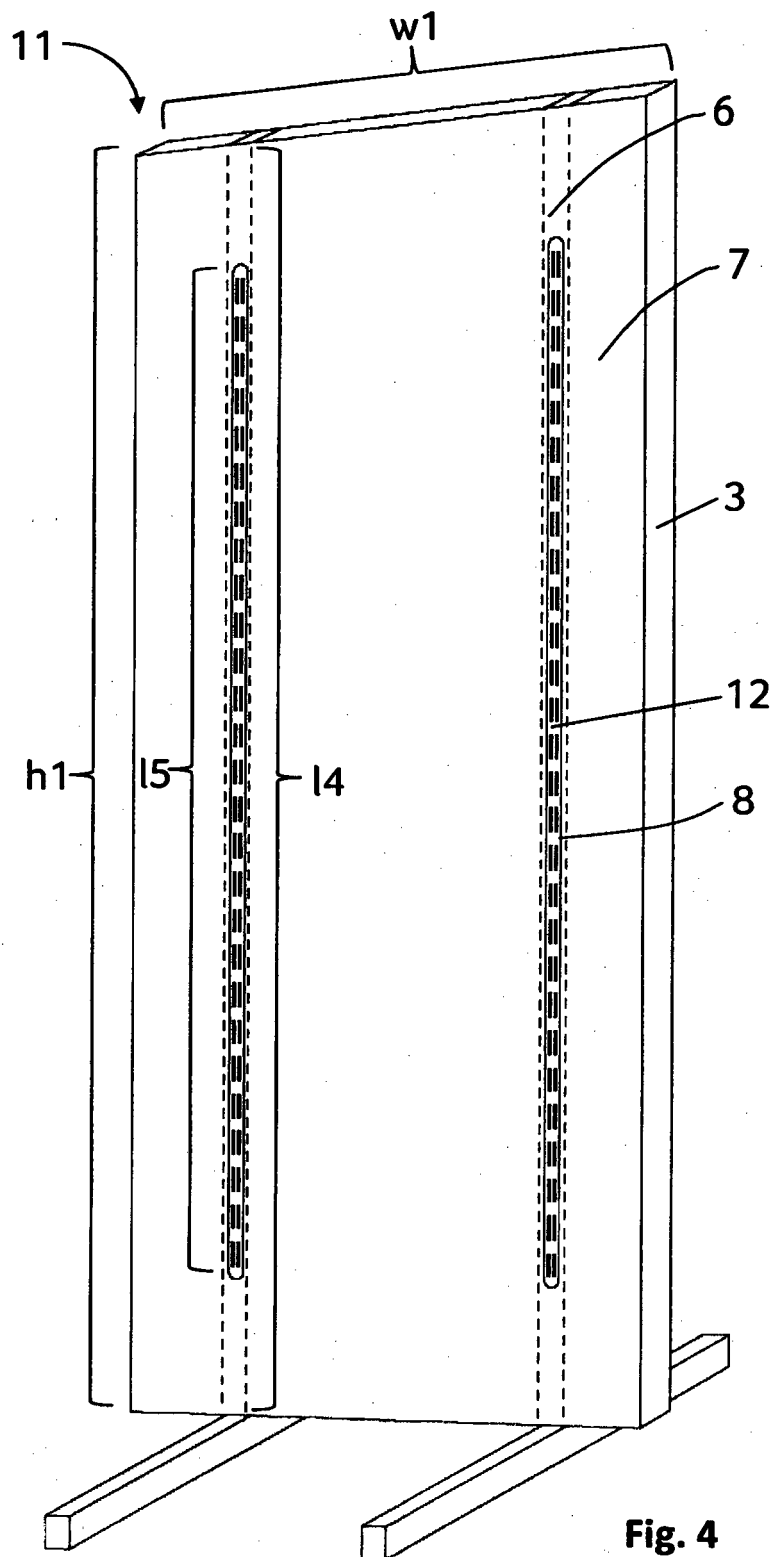


Fig. 3



REFERENCES CITED IN THE DESCRIPTION

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