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(54) **A CHAIR HAVING A VERTICALLY ADJUSTABLE SEAT**

(57) The invention relates to a chair (100) having a vertically adjustably seat, said chair in the orientation intended for use comprises:

- a first side panel (4) and a second side panel (6), said first side panel and said second side panel being vertically arranged;

- a seat support (8) having a top side (10) and a bottom side (12); and

- a seat (2) having a top side (14) and a bottom side (16); wherein said first side panel comprises two or more through-going holes (18a,18b,18c,18d,18e,18f), said through-going holes being oblong in a horizontal direction; and wherein said two or more through-going holes being vertically displaced;

wherein said second side panel comprises two or more through-going holes (18a',18b',18c',18d',18e',18f), said through-going holes being oblong in a horizontal direction; and wherein said through-going holes being vertically displaced;

wherein the height of location of each through-going holes (18a,18b,18c,18d,18e,18f) of said first side panel (4) corresponds to the height of location of a through-going holes (18a',18b',18c',18d',18e',18f) of said second side panel (6);

wherein said seat support (8) is having dimensions which allows said seat support to be inserted and accommodated into one of the through-going holes (18a,18b,18c,18d,18e,18f) in said first side panel as well as into one of the through-going holes (18a',18b',18c',18d',18e',18f) in said second side panel in such a way that said seat support rests in said through-going holes;

wherein said seat support is comprising a first set of locking means (20) and wherein said seat is comprising a

second set of locking means (22); said first set of locking means (20) and said second set of locking means (22) being adapted to be engaged into each other; thereby allowing locking of said seat (2) between said first side panel (4) and said second side panel (6).

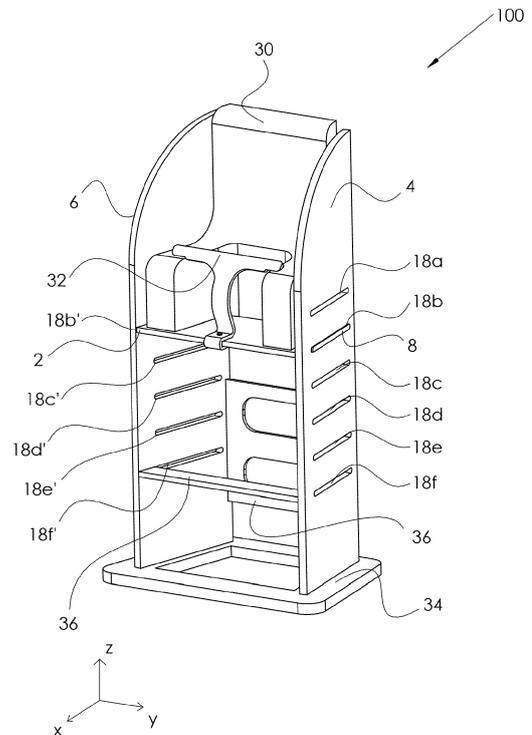


Fig. 1

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Description

Field of the invention

[0001] The present invention relates in a first aspect to a chair having a vertically adjustable seat and in a second aspect to the use of such a chair.

Background of the invention

[0002] In raising children, parents encounter great expenses in needing to replace clothing and other equipment used by a child. These needs to replace clothing and other equipment do not always originate from a situation in which a child in fact has worn out the clothing or equipment. On the contrary, very often these needs originate from the fact that due to the growth of a child, the child will rapidly be unable to fit such clothing or equipment.

[0003] Accordingly it is economically advantageous for parents to provide equipment that can be fitted to a child irrespective of the age and thus size or height of the child.

[0004] This is not at least the case in respect of chairs intended for use when a child is eating at a dining table together with its family.

[0005] In the literature a number of chairs has been disclosed which are intended to be used by a child during dining. These chairs all share the common feature that the seat of the chair can be adjusted in height, thereby making it possible for a child to fit the chair when dining at a dining table, irrespective (within certain limits) of the age of the child.

[0006] Such a chair is disclosed in US 5.634.687 A. US 5.634.687 A discloses a child's chair, comprising a pair of spaced, parallel, vertically extending side panels having inner oppositely extending faces. The side panels comprise recesses provided in opposite sides thereof. The recesses are intended for partly accommodating opposite ends of tubes being inserted into the recesses on one side of said panels. A threaded fastener assembly can be inserted through the recesses on the other side of said panels and into a plug, whereby the tubes are fastened to the side panels. A transversely extending platform can subsequently be arranged on top of the tubes thereby forming a seat for a child. By choosing various heights of the recesses accommodating the tubes, the seat height of the chair may be adjusted. However, adjustment of the seat height of this chair necessitates a more or less full disassembly and subsequently reassembly of the chair.

[0007] WO 2006/090170 A1 discloses a device for supporting a person, such as a child. The device comprises an enclosure separated into an upper part and a lower part by a moveable partition. The moveable partition is accommodated into grooves provided in two inside and opposite facing sides of the enclosure. By varying the height of the position of the moveable partition, a varying seat height of a child's high stool may be provided.

[0008] Another type of chair allowing adjustment of seat height is disclosed in DE 10 2006 040 449 A1. This document discloses a chair comprising two opposite side panels. The two side panels comprises, at corresponding heights, a number of horizontally arranged holes and cuts which allow a seat plate to be inserted into two opposing holes so as to rest in two associated cuts. This document does not disclose arranging a support plate into two opposing holes and arranging a seat plate on top of the support plate, where the support plate and the seat plate are being locked to each other via locking means.

[0009] On the market a child's high stool is available from the company Stokke®, Norway under the trade name of Tripp Trapp®. This kind of stool comprises two opposite, vertically backward extending side panels connected to a ground plate. The two oppositely vertically backward extending side panels comprise at their inner sides a number of horizontally arranged grooves. By arranging a seat in two oppositely faced grooves at various heights, the seating height of a child may be varied.

[0010] Although the chair disclosed in WO 2006/090170 A1 and the TrippTrapp® stool provides for a change of seat height without a more or less full disassembly and subsequent reassembly of the chair, the system of change of seat heights in these chairs nevertheless implies certain disadvantages.

[0011] One of these disadvantages relies in the fact that in order to provide a chair that is safe for the child to sit in, it is of paramount importance that the seat, once positioned in the desired height, does not slide out of its associated grooves provided in the side panels. In order to achieve a safe mounting of the seat in the grooves, it is necessary to ensure that the friction between the side end of the seat and the groove is relatively high. However, such a high friction makes it necessary to exert a not insignificant amount of force when sliding the seat out of or into its associated grooves. Accordingly, changing of seat height in the chair of WO 2006/090170 A1 and in the TrippTrapp® stool is not an easy task. This will be particularly important in case the same chair is being used for different tables having different heights. In such a case it will be necessary for the parents or other persons to change the seat height every time the chair is to be used with a table, such as a dining table, having a different height compared to the height of the table used previously. In such a situation the cumbersome task of pressing the seat in and out of its associated grooves must be performed regularly.

[0012] Accordingly, there is a persistent need for a chair having a vertically adjustable seat which more easily allows for change of seat height.

[0013] It is the object of the present invention to provide a chair which fulfils this need.

Brief description of the invention

[0014] This object is fulfilled with a chair according to claim 1 and with the use according to claim 13. Preferred

embodiments are set out in the dependent claims 2 - 12 and 14.

[0015] Accordingly, the present invention in its first aspect relates to a chair having a vertically adjustable seat, said chair in the orientation intended for use comprises:

- a first side panel and a second side panel, said first side panel and said second side panel being vertically arranged;
- a seat support having a top side and a bottom side; and
- a seat having a top side and a bottom side;

wherein said first side panel comprises two or more through-going holes, said through-going holes being oblong in a horizontal direction; and wherein said two or more through-going holes being vertically displaced;

wherein said second side panel comprises two or more through-going holes, said through-going holes being oblong in a horizontal direction; and wherein said through-going holes being vertically displaced;

wherein the height of location of each through-going holes of said first side panel corresponds to the height of location of a through-going holes of said second side panel;

wherein said seat support is having dimensions which allows said seat support to be inserted and accommodated into one of the through-going holes in said first side panel as well as into one of the through-going holes in said second side panel in such a way that said seat support rests in said through-going holes.

[0016] The chair is characterized in that said seat support is comprising a first set of locking means and wherein said seat is comprising a second set of locking means; said first set of locking means and said second set of locking means being adapted to be engaged into each other; thereby allowing locking of said seat between said first side panel and said second side panel.

[0017] In a second aspect the present invention relates to the use of a chair according the first aspect of the present invention for seating a child.

Brief description of the figures

[0018]

Fig. 1 is a perspective view showing a chair having a vertically adjustable seat according to the first aspect of the present invention.

Fig. 2 is a perspective view illustrating the process of adjusting the seat height of an adjustable chair according to the first aspect of the present invention.

Detailed description of the invention

The first aspect of the present invention

[0019] As mentioned above, the present invention in its first aspect relates to a chair having a vertically adjustable seat, said chair in the orientation intended for use comprises:

- a first side panel and a second side panel, said first side panel and said second side panel being vertically arranged;
- a seat support having a top side and a bottom side; and
- a seat having a top side and a bottom side;

wherein said first side panel comprises two or more through-going holes, said through-going holes being oblong in a horizontal direction; and wherein said two or more through-going holes being vertically displaced;

wherein said second side panel comprises two or more through-going holes, said through-going holes being oblong in a horizontal direction; and wherein said through-going holes being vertically displaced;

wherein the height of location of each through-going holes of said first side panel corresponds to the height of location of a through-going holes of said second side panel;

wherein said seat support is having dimensions which allows said seat support to be inserted and accommodated into one of the through-going holes in said first side panel as well as into one of the through-going holes in said second side panel in such a way that said seat support rests in said through-going holes;

characterized in that said seat support is comprising a first set of locking means and wherein said seat is comprising a second set of locking means; said first set of locking means and said second set of locking means being adapted to be engaged into each other; thereby allowing locking of said seat between said first side panel and said second side panel.

[0020] The chair of the first aspect of the present invention accordingly provides an improved mode of changing the seat height of the seat.

[0021] In the present description and in the appended claims, the term "in the orientation intended for use" shall be understood as commonly understood for using a chair, i.e. in an orientation in which the seat is arranged in an essentially horizontal plane in such a way that the seat's top side is facing upward.

[0022] In one embodiment of the first aspect of the present invention, the number of through-going holes in said first side panel and said second side panel, respectively, is 2 - 11, such as 3 - 10, for example 4 - 9, such as 5 - 8 or 6 - 7.

[0023] A number in this range has proven to provide

sufficient flexibility as to possible variation of the height of the seat.

[0024] In one embodiment of the first aspect of the present invention the first set of locking means in said seat support is comprising one or more recesses provided in the top side of said seat support; and the second set of locking means is comprising one or more protrusions provided in the bottom side of said seat.

[0025] Hereby is achieved in an easy manner the enabling of locking the seat to the seat support.

[0026] Alternatively, the first set of locking means in said seat support may comprise one or more protrusions in the top side of said seat support, and the second set of locking means in the bottom side of said seat may comprise one or more recesses.

[0027] However, it is important that the first set of locking means in the seat support is having dimensions small enough to allow that the seat support may be slid into a through-going hole of first side panel and the second side panel, respectively.

[0028] Any other types of the first set of locking means in said seat support and of the second set of locking means in said seat may be envisaged.

[0029] In one embodiment of the first aspect of the present invention the chair further comprising a back support provided between the upper part of the first side panel and a second side panel, respectively, for supporting the back of a child when sitting in said chair.

[0030] In this way the back support may ensure that the child will not fall down in a backward direction.

[0031] In one embodiment of the first aspect of the present invention the chair further comprising a cushion, such as a shape-molded cushion adapted to fit on top of said seat between said first side panel and said second side panel.

[0032] In addition to providing a more ergonomically correct sitting position, a cushion may provide more comfort to a child sitting in the chair.

[0033] In one embodiment of the first aspect of the present invention the chair further comprising safety means, such as a T-shaped safety element, optionally being adapted to be fastened to a front part of said seat support or said seat, thus preventing a child's falling down.

[0034] Such a safety mean, will as mentioned, provide more safety to the child being seated in the chair according to the present invention.

[0035] In one embodiment of the first aspect of the present invention the chair further comprising a supporting base arranged at a lower part of said first side panel and second side panel, respectively, for enhancing stability of said chair.

[0036] In one embodiment of the first aspect of the present invention the chair further comprising one or more support elements, connecting said first side panel and second side panel.

[0037] Such supporting base and support elements provide additional strength and stability to the chair ac-

cording to the present invention.

[0038] In one embodiment of the chair of the first aspect of the present invention the first side panel and/or said second side panel and/or said seat support and/or said seat is manufactured from wood, such as solid wood, plywood, such as veneered plywood, MDF or is manufactured from a polymeric material, such as a composite material, or is manufactured from metal, such as aluminum.

[0039] Such materials have proven to provide sufficient strength and ease of manufacture. Additionally, such materials may ensure that the production costs are optimized.

[0040] In one embodiment of the chair of the first aspect of the present invention, the vertical distance between any two adjacent through-going holes in the first side panel and the second side panel, respectively, is 8 - 30 cm, such as 10 - 28 cm, for example, 12 - 26 cm, such as 14 - 24 cm, e.g. 16 - 22 cm, such as 18 - 20 cm.

[0041] Hereby is ensured that sufficient flexibility as to possible variation of the height of seat is provided.

[0042] In one embodiment of the chair of the first aspect of the present invention the first side panel and said second side panel are being parallel.

[0043] Hereby is ensured a simple design that allows ease of manufacture and low production costs.

[0044] In one embodiment of the chair of the first aspect of the present invention the seat independently is having a width of 30 - 105 cm, such as 35 - 100 cm, e.g. 40 - 95 cm, such as 45 - 90 cm or 50 - 85 cm, such as 55 - 80 cm, e.g. 60 - 75 cm or 65 - 70 cm and/or a depth of 15 - 40 cm, such as 20 - 35 cm, e.g. 25 - 35 cm.

[0045] These dimensions of the seat provide adequate space for a child when seated. Further, these dimensions may in some instances even provide enough space to seat two children, next to each other, in one chair.

The second aspect of the present invention

[0046] In a second aspect the present invention relates to the use of a chair according the first aspect of the present invention for seating a child.

[0047] In one embodiment of the second aspect of the present invention, the use relates to a use in a nursery institution, kindergarten or similar child day care center.

[0048] Referring now to the drawings in order to illustrate the present invention, fig. 1 discloses a chair according to the first aspect of the present invention.

[0049] Fig. 1 shows that the chair in the orientation intended for use comprises:

a first side panel 4 and a second side panel 6, wherein said first side panel and said second side panel being vertically arranged.

[0050] The first side panel comprises six through-going holes 18a, 18b, 18c, 18d, 18e, 18f, wherein these through-going holes are being oblong in a horizontal direction;

and wherein these six through-going holes being vertically displaced.

[0051] In the same way, the second side panel comprises six through-going holes 18a', 18b', 18c', 18d', 18e', 18f', wherein these through-going holes are being oblong in a horizontal direction; and wherein these six through-going holes are being vertically displaced.

[0052] The height of location of each through-going holes 18a, 18b, 18c, 18d, 18e, 18f in the first side panel 4 corresponds to the height of location of a through-going hole 18a', 18b', 18c', 18d', 18e', 18f' in the second side panel 6.

[0053] Although fig. 1 shows that each side panel of the chair comprises six oblong through-going holes any number of holes of 2 or above is contemplated. In this way, each side panel 4, 6 may comprise 2 - 11, such as 3 - 10, for example 4 - 9, such as 5 - 8 or 6 - 7 through going holes.

[0054] Fig. 1 shows that the two side panels 4, 6 are mounted on a supporting base 34. Furthermore, two support elements 36 arranged at a lower front part and at a lower rear part of the chair, respectively, provide stability to the chair.

[0055] A seat support 8 has been slit through the second highest through going hole 18b in the first side panel 4 and through the second highest through going hole 18b' in the second side panel 6 in such a way that said seat support 8 rests in said through-going holes.

[0056] On top of the seat support 8 is arranged a seat 2. The seat 2 simply rest on the seat support.

[0057] Furthermore, a first set of locking means 20 (not visible in fig. 1) is arranged in the seat support and a second set of locking means 22 (not visible in fig. 1) is arranged in the seat. The first set of locking means 20 and the second set of locking means 22 are engaged into each other; thereby locking of the seat 2 between said first side panel 4 and said second side panel 6 so that the seat does not unintentionally move.

[0058] The chair 100 of fig. 1 also comprises a back support (not visible in fig. 1) supporting a cushion 30 which in turn will support the back of a child when seated in the chair.

[0059] In order to prevent a child from falling off the chair in a forward direction, the chair 100 has been provided with a safety means 32, in the form of a T-shaped safety element, which has been fastened to a front part of the seat support 8 and/or the seat 2, thus preventing a child from falling down.

[0060] Although the chair depicted in fig. 1 comprises a first side panel 4 and said second side panel 6 which are being parallel arranged, it is envisaged that these two side panel may be angled in relation to each other.

[0061] Fig. 2 illustrates the process of adjusting the seat height of a seat of the chair of fig. 1. Fig. 2 shows the two side panels 4 and 6. The first side panel comprises from top to bottom the oblong through going holes 18a, 18b, 18c, 18d, 18e, 18f, which are vertically displaced

in relation to each other. Likewise, the second side panel comprises from top to bottom the oblong through-going holes 18a', 18b', 18c', 18d', 18e', 18f', which are vertically displaced in relation to each other.

[0062] In fig. 2 the seat support 8 has been slit through the oblong hole 18b in the first side panel 4 and through the oblong hole 18b' in the second side panel 6. The seat support 8 is having dimensions that allow the seat support to be inserted and accommodated into these holes so as to rest in these holes 18b and 18b'.

[0063] The seat support 8 comprises a first set of locking means 20 which are provided in the top side 10 of said seat support. The first set of locking means 20 comprises two recesses 24.

[0064] Fig. 2 furthermore shows that the seat 2 is just about to be arranged on top of the seat support 8. The seat 2 is having dimensions that allow the seat to fit in a horizontal direction between the first side panel 4 and the second side panel 6.

[0065] The seat 2 comprises a second set of locking means 22 which are provided in the bottom side 16 of said seat 2. The second set of locking means 22 comprises two protrusions 26.

[0066] In the situation depicted in fig. 2 it is clear that the seat 2 is not fixed and therefore is able to move in the xy-plane in the horizontal x-direction.

[0067] However, as the first set of locking means 20, 24 is adapted to be engaged with the second set of locking means 22, 26, which will happen when the seat 2 is arranged in its configuration which is intended in use, i.e. horizontally arranged on top of the seat support 8 so that the bottom side 16 of the seat abuts the top side 10 of the seat support, the seat is locked into place.

[0068] In a locked position, brought about by the engaged first set of locking means 20 and second set of locking means 22, neither the seat 2 nor the seat support 8 is able to move in the horizontal xy-plane. Accordingly, in a locked position, the chair is safe to use for seating a child.

[0069] When it is desired to alter the seat height of the seat 2 of the chair 100, the seat 2 is simply lifted. Subsequently, the seat support 8 is pulled out of its oblong locking holes 18b, 18b'. Next, the seat support 8 is inserted in another pair of oblong through going holes 18a, 18c, 18d, 18e, 18f and 18a', 18c', 18d', 18e', 18f, respectively.

[0070] Finally, the seat 2 is arranged on top of the seat support 8 in such a way that the first set of locking means 20 of the seat support engages with the second set of locking means 22 arranged in the seat. Hereafter the seat height has been altered in an extremely easy way.

List of reference numerals

55	[0071]	
2		Vertically adjustable seat
4		First side panel of chair

6	Second side panel of chair	
8	Seat support	
10	Top side of seat support	
14	Top side of seat	
16	Bottom side of seat	5
18a, 18b, 18c	Through going hole in first side panel	
18d, 18e, 18f	Through going hole in first side panel	
18a', 18b', 18c'	Through going hole in second side panel	
18d', 18e', 18f'	Through going hole in second side panel	10
20	First set of locking means	
22	Second set of locking means	
24	Recess of first locking means	
26	Protrusion of second locking means	15
30	Cushion	
32	Safety means	
34	Supporting base	
36	Support element	
100	Chair	20

Claims

1. A chair (100) having a vertically adjustably seat, said chair in the orientation intended for use comprises:

- a first side panel (4) and a second side panel (6), said first side panel and said second side panel being vertically arranged;
- a seat support (8) having a top side (10) and a bottom side ; and
- a seat (2) having a top side (14) and a bottom side (16);

wherein said first side panel comprises two or more through-going holes (18a,18b,18c,18d,18e,18f), said through-going holes being oblong in a horizontal direction; and wherein said two or more through-going holes being vertically displaced;

wherein said second side panel comprises two or more through-going holes (18a',18b',18c',18d',18e',18f), said through-going holes being oblong in a horizontal direction; and wherein said through-going holes being vertically displaced;

wherein the height of location of each through-going holes (18a,18b,18c,18d,18e,18f) of said first side panel (4) corresponds to the height of location of a through-going holes (18a',18b',18c',18d',18e',18f) of said second side panel (6);

wherein said seat support (8) is having dimensions which allows said seat support to be inserted and accommodated into one of the through-going holes (18a,18b,18c,18d,18e,18f) in said first side panel as well as into one of the through-going holes (18a',18b',18c',18d',18e',18f) in said second side panel in such a way that said seat support rests in

said through-going holes;

characterized in that said seat support is comprising a first set of locking means (20) and wherein said seat is comprising a second set of locking means (22); said first set of locking means (20) and said second set of locking means (22) being adapted to be engaged into each other; thereby allowing locking of said seat (2) between said first side panel (4) and said second side panel (6).

2. A chair (100) according to claim 1, wherein the number of through-going holes in said first side panel (4) and said second side panel (6), respectively, is 2 - 11, such as 3 - 10, for example 4 - 9, such as 5 - 8 or 6 - 7.

3. A chair (100) according to claim 1 or 2, wherein the a first set of locking means (20) in said seat support (8) is comprising one or more recesses (24) provided in the top side of said seat support; and wherein said second set of locking means in said seat (2) is comprising one or more protrusions (26) provided in the bottom side of said seat.

4. A chair (100) according to any of the claims 1 - 3 further comprising a back support provided between the upper part of the first side panel (4) and a second side panel (6), respectively for supporting the back of a child when sitting in said chair.

5. A chair (100) according to any of the claims 1 - 4 further comprising a cushion (30), such as a shape-molded cushion adapted to fit on top of said seat (2) between said first side panel (4) and said second side panel (6).

6. A chair (100) according to any of the claims 1 - 5 further comprising safety means (32), such as a T-shaped safety element, optionally being adapted to be fastened to a front part of said seat support (8) or said seat (2), thus preventing a child's falling down.

7. A chair (100) according to any of the claims 1 - 6 further comprising a supporting base (34) arranged at a lower part of said first side panel and second side panel, respectively, for enhancing stability of said chair.

8. A chair (100) according to any of the claims 1 - 7 further comprising one or more support elements (36) connecting said first side panel (4) and second side panel (6).

9. A chair (100) according to any of the claims 1 - 8, wherein said first side panel and/or said second side panel and/or said seat support and/or said seat is manufactured from wood, such as solid wood, plywood, such as veneered plywood, MDF or is manu-

factured from a polymeric material, such as a composite material, or is manufactured from metal, such as aluminum.

10. A chair (100) according to any of the claims 1 - 9, wherein the vertical distance (in a Z direction) between any two adjacent through-going holes (18a, 18b, 18c, 18d, 18e, 18f, 18a', 18b', 18c', 18d', 18e', 18f') in the first side panel and the second side panel, respectively, is 8 - 30 cm, such as 10 - 28 cm, for example, 12 - 26 cm, such as 14 - 24 cm, e.g. 16 - 22 cm, such as 18 - 20 cm. 5
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11. A chair (100) according to any of the claims 1 - 10, wherein said first side panel (4) and said second side panel (6) being parallel. 15
12. A chair (100) according to any of the claims 1 - 11, wherein said seat independently is having a width (in the Y direction) of 30 - 105 cm, such as 35 - 100 cm, e.g. 40 - 95 cm, such as 45 - 90 cm or 50 - 85 cm, such as 55 - 80 cm, e.g. 60 - 75 cm or 65 - 70 cm and/or a depth (in the X direction) of 15 - 40 cm, such as 20 - 35 cm, e.g. 25 - 35 cm. 20
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13. Use of a chair according to any of the claims 1 - 12 for seating a child.
14. Use according to claim 13 in a nursery institution, kindergarten or similar child day care center. 30

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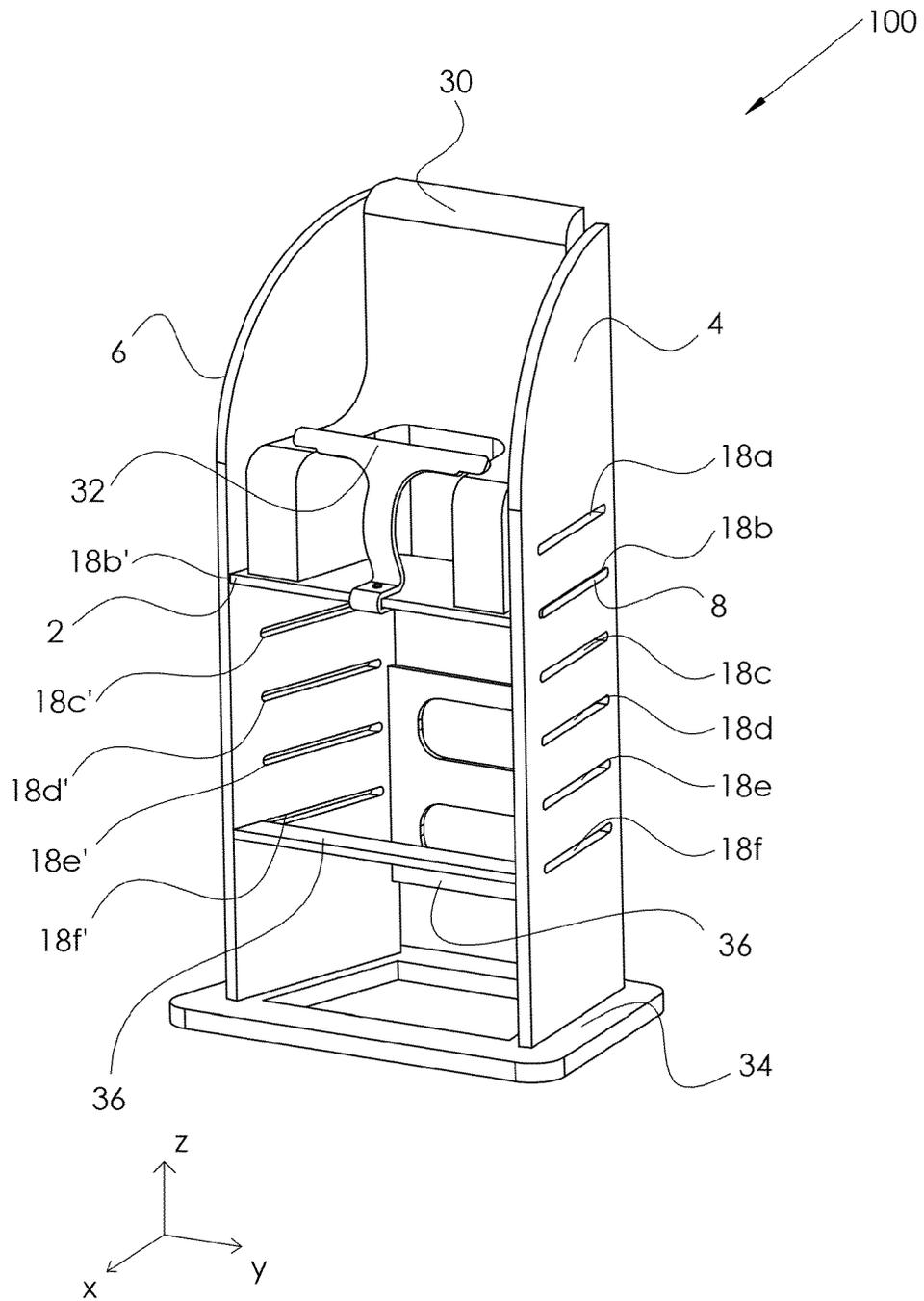


Fig. 1

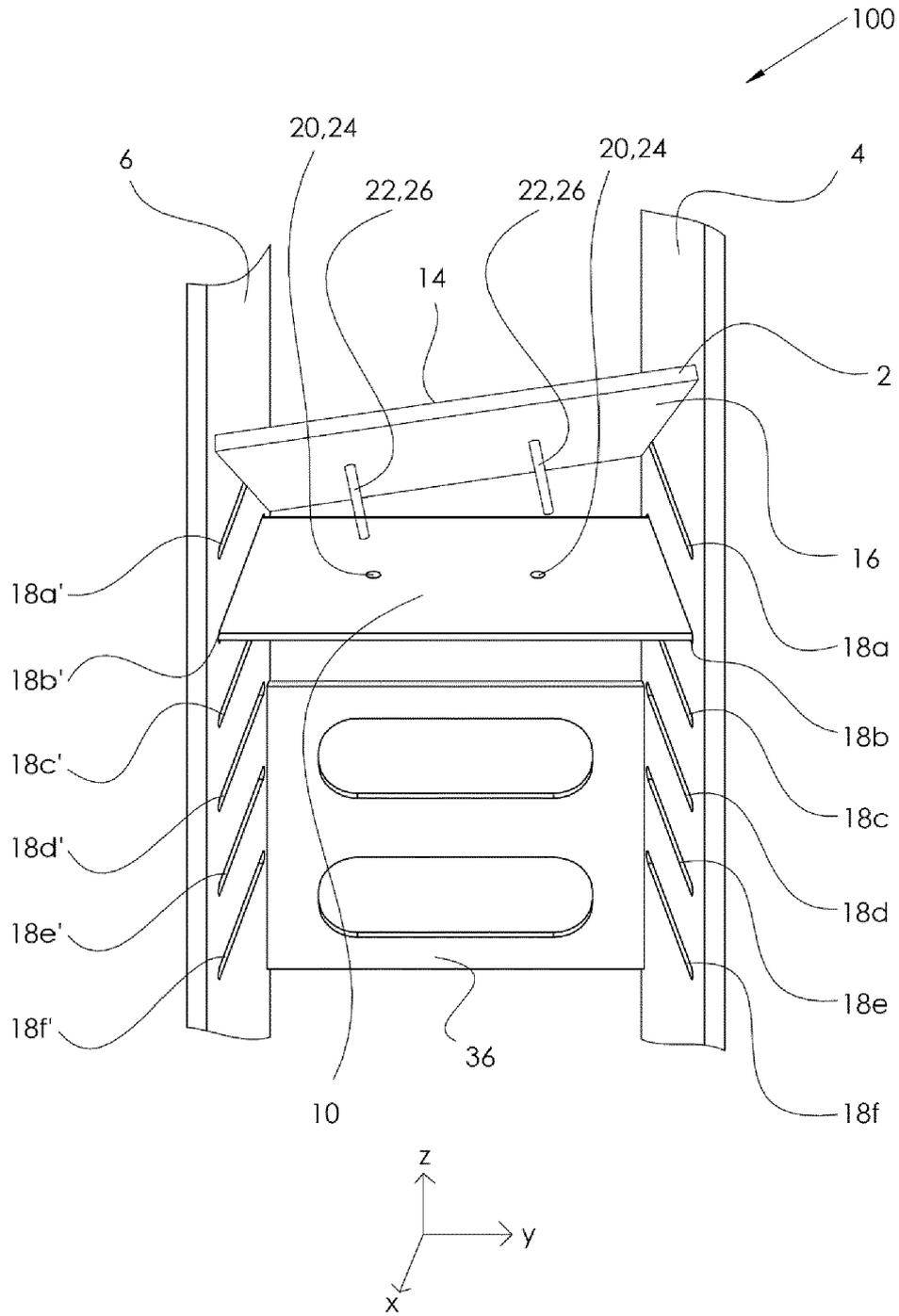


Fig. 2



EUROPEAN SEARCH REPORT

Application Number
EP 15 17 4762

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	DE 10 2008 006460 A1 (HAUCK ERICH [DE]) 30 July 2009 (2009-07-30)	1,2,4,5, 7-14	INV. A47D1/00
Y	* paragraphs [0028], [0030], [0054] -	6	A47D15/00
A	[0056]; figure *	3	
Y	DE 20 2004 001901 U1 (SEIFERT KARSTEN [DE]) 29 April 2004 (2004-04-29) * claims 8,9,11,18,21; figures 1,2 *	6	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			A47D A47C
Place of search		Date of completion of the search	Examiner
The Hague		11 December 2015	Amghar, Norddin
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone		T : theory or principle underlying the invention	
Y : particularly relevant if combined with another document of the same category		E : earlier patent document, but published on, or after the filing date	
A : technological background		D : document cited in the application	
O : non-written disclosure		L : document cited for other reasons	
P : intermediate document		& : member of the same patent family, corresponding document	

EPO FORM 1503 03/02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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5 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
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REFERENCES CITED IN THE DESCRIPTION

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