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(54) **Steam oven device and water tank for use in the same**

Dampfgarofen und Wassertank zur Verwendung darin

Four de cuisson vapeur et réservoir d'eau pour l'utilisation dans le four

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Description

I. Technical Field

[0001] The present invention relates to a steam oven device as well as to a water tank for use in a respective device.

II. Background Art

[0002] Known steam ovens use different approaches as far the water tank position and configuration is concerned. These approaches may be summarised as follows:

a) The water tank is positioned side-by-side with the cooking cavity of the steam oven and stands in upright format. Since the width of the steam oven is limited to the standard built-in furniture dimensions the width of the cooking cavity has to be reduced to accommodate the water tank thus reducing the width the associated food-trays. Such a steam oven is disclosed in DE 19741881 A1 and EP 1108384 A1.

b) The water tank is positioned behind the control panel for controlling the cooking operation. Access to the water tank is gained through a door arranged in the control panel. This kind of arrangement has the disadvantage that humidity from the water tank may badly affect or destroy the electronic components of the control panel. Further, the manufacturing of the face plate for the control panel is more expensive since an aperture for the door of the water tank is required.

c) The water tank is positioned inside the steam oven structure and water is pored into the water tank through an opening arranged in the control panel. As the water tank cannot be removed water remains inside it between subsequent cooking cycles and this presents hygiene problems. Again, an extra opening is required in the face plate of the control panel so that the manufacturing costs are increased in this case too.

d) A flat water tank is positioned above the cooking cavity and has generally the same width as the cooking cavity. The flat water tank is completely closed to prevent that water slops out of the water tank into the steam oven when the water tank is moved. A small closable opening is arranged on the top wall of the water tank to fill up water. Hence the water tank is difficult to clean and presents hygienic problems. Such a steam oven is known from EP 1 550 828 A1.

III. Disclosure of the invention

a) Technical object

[0003] Therefore, it is the object of the present invention to provide a steam oven device and a water tank for use in a respective steam oven device which maximises the size of the cooking cavity, reduces the manufacturing costs and prevents hygiene problems resulting from water remaining in the water tank between subsequent cooking cycles while at the same time improving the outer appearance of the front side of the steam oven device.

b) Achievement of the object

[0004] This object is achieved by a steam oven device having the features of claim 1 and by a water tank for use in a steam oven device having the features of claim 12. Further features of the present invention are set forth in the subclaims.

[0005] The water tank has top wall completely formed as a primary lid so that the interior of the water tank is fully accessible after opening the primary lid. Accordingly, efficient cleaning of the interior of the water tank is possible. The primary lid may have a smaller secondary lid for facilitating refilling of water to the water tank. It is thus not necessary to completely remove the water tank from the receiving slot when water is to be refilled. It is sufficient to extract the water tank from the receiving slot in such a manner that the smaller secondary lid can be opened.

[0006] In an embodiment it is proposed to horizontally arrange a water tank receiving slot below the control panel and above the cooking cavity in such a manner that the water tank received in the receiving slot is arranged behind the closed cavity door. This has the advantage that the water tank does not occupy any space on the left or right hand side of the cooking cavity which allows in particular the cavity width to be maximised. In addition, the water tank can be made relatively flat so that the height of the cooking cavity can be maximised too.

[0007] According to the invention the water tank is no more situated behind the control panel so that the likelihood of contact between water or humidity and electronic components of the control panel is minimised. The face plate of the control panel does not need to have any kind of additional opening or door for filling in water.

[0008] The water tank has a flat geometry defined by its height, width and depth. Preferably the height of the water tank is smaller than 7 % of its width and smaller than 15 % of its depth. The water tank may have a cuboid-like shape or other appropriate flat shapes. Alternatively, the plan view of the water tank may be for example in the shape of a semicircle. Then, the width in the sense of the present invention would be the diameter of the semicircle and the depth in the sense of the present invention would be the radius of the semicircle.

[0009] In addition, according to the present invention the height of the water tank is also small if compared with

the height of the cooking cavity. It is preferred that the height of the water tank is smaller than 14 % of the height of the cooking cavity.

[0010] The water tank is moveable between an extracted position in which it is at least partially extracted from the receiving slot and an operating position in which it is fully received in the receiving slot. For the purpose of refilling water the water tank can be partially extracted from the receiving slot like a sliding drawer. For discharging water from the water tank the latter can be completely removed from the receiving slot.

[0011] Preferably the water tank has one or more snap-in connection means for automatically engaging or disengaging a fluid mechanical communication between the water tank and one or more water pumps. When the water tank is moved between the extracted position and the operating position the snap-in connection means are automatically engaged or disengaged with suitable hoses, tubes or pipes connected with the one or more water pumps.

[0012] In the front wall of the water tank a recess having the function of a hand grip may be formed. The hand grip may be used to move the water tank between the extracted position and the operating position in the manner of a sliding drawer.

[0013] Further, in view of the flat shape of the water tank water inside the tank could swivel during handling and manoeuvring of the water tank. In order to prevent such kind of swivel movement the interior of the water tank may have tranquillising barriers for tranquillising water movements occurring during the handling of the water tank.

[0014] Preferably, the steam oven device according to the present invention has two water pumps. The first water pump supplies water from the water tank to the boiler means during a cooking cycle. The second water pump returns the water remaining in the boiler means after the cooking cycle to the water tank thus ensuring that no water remains inside the steam oven water circuit.

c) Exemplary embodiment

[0015] Hereinafter, an exemplary embodiment of the present invention is described in connection with the attached drawings, in which:

Fig. 1: shows a perspective view of an embodiment of the steam oven device according to the present invention;

Fig. 2: shows a vertical cross sectional view of the steam oven device shown in Fig. 1 with the water tank fully contained in the receiving slot and the cavity door closed;

Fig. 3: shows a top plan view of the steam oven device shown in Fig. 2 with some upper parts removed in order to make interior components visible;

Fig. 4: shows a perspective front view of the water tank; and

Fig. 5: shows a perspective rear view of the water tank shown in Fig. 5.

[0016] Fig. 1 shows a built-in steam oven device 7 according to the present invention which is intended to be mounted in a hollow space of a standard built-in furniture. Steam oven device 7 has a cooking cavity 1 for food preparation. Hot water vapour can be directed into the cooking cavity 1 for this purpose. Cooking cavity 1 can be closed by a cavity door 3 shown in Fig. 1 in its open position.

[0017] In the upper front region of steam oven device 7 a control panel 2 having control elements 15 for controlling the cooking operation is mounted. Below control panel 2 steam oven device 7 has a water tank receiving slot 8 for receiving a water tank 10. In Fig. 1 water tank 10 is partially extracted from the water tank receiving slot 8.

[0018] Fig. 2 shows a vertical cross section along the midplane of steam oven device 7 in Fig. 1. In Fig. 2 cavity door 3 is shown in its closed position. As can be seen, the water tank 10 fully contained in receiving slot 8 lies behind the upper region of cavity door 3. In the shown embodiment the water tank 10 is arranged nearly in the same horizontal plane like cavity door grip 9.

[0019] In the top plan view according to Fig. 3 some upper parts of steam oven device 7 have been omitted so that the interior of steam oven device 7 can be seen. As in Fig. 2 cavity door 3 is shown in its closed position and water tank 10 is completely contained in receiving slot 8. Further, a boiler means 6 for vaporising water received from water tank 10 is shown. A first pump 4 serves as inlet pump which pumps water from water tank 10 to boiler means 6 during a cooking cycle. A second pump 5 serves as outlet pump which pumps water remaining in the boiler means after a cooking cycle back to the water tank.

[0020] Fig. 4 and 5 are showing exploded views of water tank 10. It is defined by a body - comprising bottom wall 18, side walls 19, 20, rear wall 21 and front wall 16 - and by a top wall 13. Top wall 13 is formed as a primary lid which may be completely removed from the body of water tank 10. Thus, the interior of water tank 10 is fully accessible for cleaning purposes.

[0021] As further shown in Fig. 4 and 5, water tank 10 has two snap-in connections 11 in its rear wall 21. When water tank 10 is pushed to its operating position in which it is fully received in receiving slot 8 the snap-in connections 11 automatically provide a fluid mechanical communication with first and second pumps 4, 5. As shown in Fig. 4 front wall 16 has a recess 17 shaped in a way to serve as a hand grip for pulling out water tank 10 from receiving slot 8.

[0022] In the shown embodiment primary lid 13 has a smaller secondary lid 14 which is pivotably connected

with primary lid 13. Secondary lid 14 can be moved between open and closed positions with respect to an opening 22 provided in primary lid 13 for the purpose of refilling water to water tank 10. Further, Fig. 4 and 5 show four wall-like tranquillising barriers 12 fixed on bottom wall 18. They extend parallel to side walls 19, 20 and are not in contact with front wall 16 and rear wall 21 in order to allow the water to flow through the whole volume of water tank 10. However, the barriers 12 have a tranquillising effect on the flow movement of the water contained in water tank 10.

[0023] In the present embodiment water tank 10 has a flat cuboid-like shape as in particular shown in Fig. 1, 4 and 5. In Fig. 4 the width w , the depth d and the height h (thickness of primary lid 13 neglected) are shown. According to the present invention it is preferred that height h is smaller than 7 % of the width w and at the same time smaller than 15 % of the depth d . In addition, it is preferred that the height h of water tank 10 is smaller than 14 % of the height H of cooking cavity 1 as shown in Fig. 1.

LIST OF REFERENCE NUMBERS

[0024]

1	cooking cavity
2	control panel
3	cavity door
4	first pump
5	second pump
6	boiler means
7	steam oven device
8	water tank receiving slot
9	cavity door grip
10	water tank
11	snap-in connection
12	tranquillising barrier
13	primary lid = top wall
14	secondary lid
15	control element
16	front wall
17	recess
18	bottom wall
19, 20	side walls
21	rear wall
22	opening

w	width of water tank 10
d	depth of water tank 10
h	height of water tank 10
H	height of cooking cavity 1

Claims

1. Steam oven device comprising at least one cooking cavity (1), at least one cavity door (3) moveable between a first position in which the cooking cavity (1)

is closed and a second position in which the cooking cavity (1) is open, a control panel (2) having at least one control element (15) for controlling the cooking operation, a boiler means (6) for vaporising water, a water tank (10) for receiving water to be vaporised by the boiler means (6) and a water tank receiving slot (8) for receiving the water tank (10), wherein said receiving slot (8) is horizontally arranged in such a manner that the water tank (10) received in the receiving slot is arranged behind the cavity door (3) taking its first position, and wherein the receiving slot (8) is arranged below the control panel (2),

characterised in that

the receiving slot (8) is arranged above the cooking cavity (1) and the water tank (10) has a top wall formed as a primary lid (13) so that the interior of the water tank (10) is fully accessible after opening the primary lid (13).

20 **2.** Steam oven device according to claim 1,
characterised in that
the water tank (10) has a flat geometry defined by its height (h), width (w) and depth (d), wherein the height (h) is smaller than 7 % of the width (w) and smaller than 15 % of the depth (d).

25 **3.** Steam oven device according to claim 2,
characterised in that
the height (h) of the water tank (10) is smaller than 14 % of the height (H) of the cooking cavity (1).

30 **4.** Steam oven device according to one of the preceding claims,
characterised in that
the water tank (10) is moveable between an extracted position in which it is at least partially extracted from the receiving slot (8) and an operating position in which it is fully received in the receiving slot (8).

35 **5.** Steam oven device according to claim 4,
characterised in that
the water tank (10) has at least one snap-in connection means (11) for automatically engaging or disengaging a fluidmechanical connection between the water tank (10) and at least one water pump (4, 5) when the water tank (10) is moved between the extracted position and the operating position.

40 **6.** Steam oven device according to claim 4 or 5,
characterised in that
the primary lid (13) is fully removable from the body of the water tank (10).

45 **7.** Steam oven device according to claim 4, 5 or 6,
characterised in that
the primary lid (13) has a smaller secondary lid (14) for facilitating refilling of water to the water tank (10).

8. Steam oven device according to claim 7,
characterised in that
the secondary lid (14) is mounted in the primary lid (13) such that it can be pivoted between closed and opened positions.
9. Steam oven device according to one of claims 4 - 8,
characterised in that
the water tank (10) has a front wall (16) having a recess (17) formed as a hand grip for moving the water tank (10) between the extracted position and the operating position.
10. Steam oven device according to one of the preceding claims,
characterised in that
the water tank (10) has in its interior tranquilising barriers (12) for tranquilising water movements occurring during the handling of the water tank (10).
11. Steam oven device according to one of the preceding claims,
characterised in that
it comprises a first water pump (4) for supplying water to the boiler means (6) during a cooking cycle and a second water pump (5) for re-supplying water remaining in the boiler means (6) after the cooking cycle to the water tank (6).
12. Water tank (10) for use in a steam oven device having at least one cooking cavity (1) and a water tank receiving slot (8) for receiving the water tank (10), wherein said water tank (10) has a flat geometry defined by its height (h), width (w) and depth (d), wherein the height (h) is smaller than 15 % of the depth (d),
characterised in that
the height (h) is smaller than 7 % of the width (w) and **in that** it has a top wall formed as a primary lid (13) so that the interior of the water tank (10) is fully accessible after opening the primary lid (13),
13. Water tank (10) according to claim 12,
characterised in that
the height (h) of the water tank (10) is smaller than 14 % of the height (H) of the cooking cavity (1).
14. Water tank (10) according to claim 12 or 13,
characterised in that
it has at least one snap-in connection means (11) for automatically engaging or disengaging a fluidmechanical connection between the water tank (10) and at least one water pump (4, 5) when the water tank (10) is moved between an extracted position in which it is at least partially extracted from the receiving slot (8) and an operating position in which it is fully received in the receiving slot (8).
15. Water tank (10) according to claims 12 to 14,

characterised in that

the primary lid (13) is fully removable from the body of the water tank (10).

- 5 16. Water tank (10) according to claim 12 to 15,
characterised in that
the primary lid (13) has a smaller secondary lid (14) for facilitating refilling of water to the water tank (10).
- 10 17. Water tank (10) according to claim 16,
characterised in that
the secondary lid (14) is mounted in the primary lid (13) such that it can be pivoted between closed and opened positions.
- 15 18. Water tank (10) according to one of claims 12 - 17,
characterised in that
it has a front wall (16) having a recess (17) formed as a hand grip for moving the water tank (10) between an extracted position in which it is at least partially extracted from the receiving slot (8) and an operating position in which it is fully received in the receiving slot (8).

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Patentansprüche

1. Dampfeneinrichtung aufweisend wenigstens einen Garraum (1), wenigstens eine Garraumtür (3), die zwischen einer ersten Position, in der der Garraum (1) geschlossen ist, und einer zweiten Position, in der der Garraum (1) geöffnet ist, bewegbar ist, ein Bedienfeld (2) mit wenigstens einem Bedienelement (15) zur Steuerung des Garvorgangs, eine Boilereinrichtung (6) zur Verdampfung von Wasser, einen Wassertank (10) zur Aufnahme des Wassers, das durch die Boilereinrichtung (6) verdampft wird, und einen Wassertank-Aufnahmeschlitz (8) zur Aufnahme des Wassertanks (10), wobei der Aufnahmeschlitz (8) derart horizontal angeordnet ist, dass der Wassertank (10) hinter der Garraumtür (3) angeordnet ist, wenn der Wassertank (10) in dem Aufnahmeschlitz (8) aufgenommen ist und die Garraumtür (3) sich in der ersten Position befindet, und der Aufnahmeschlitz (8) unterhalb des Bedienfelds (2) angeordnet ist,
dadurch gekennzeichnet, dass
der Aufnahmeschlitz (8) oberhalb des Garraums (1) angeordnet ist und
der Wassertank (10) eine obere Wandung hat, die als ein erster Deckel (13) ausgebildet ist, so dass der Innenbereich des Wassertanks (10) nach dem Öffnen des ersten Deckels (13) vollständig zugänglich ist.
2. Dampfeneinrichtung gemäß Anspruch 1,
dadurch gekennzeichnet, dass
der Wassertank (10) eine flache Geometrie hat, die

- durch seine Höhe (h), Breite (w) und Tiefe (d) definiert ist, wobei die Höhe (h) kleiner als 7 % der Breite (w) und kleiner als 15 % der Tiefe (d) ist.
3. Dampfofenrichtung gemäß Anspruch 2, **dadurch gekennzeichnet, dass** die Höhe (h) des Wassertanks (10) kleiner als 14 % der Höhe (H) des Garraums (1) ist.
 4. Dampfofenrichtung gemäß einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** der Wassertank (10) zwischen einer Auszugsposition, in der er zumindest teilweise aus dem Aufnahmeschlitz (8) herausgezogen ist, und einer Betriebsposition, in der er vollständig in dem Aufnahmeschlitz (8) aufgenommen ist, bewegbar ist.
 5. Dampfofenrichtung gemäß Anspruch 4, **dadurch gekennzeichnet, dass** der Wassertank (10) wenigstens eine Einrast-Verbindungseinrichtung (11) zum automatischen Herstellen bzw. Trennen einer fluidmechanischen Verbindung zwischen dem Wassertank (10) und wenigstens einer Wasserpumpe (4, 5), beim Bewegen des Wassertanks (10) zwischen der Auszugsposition und der Betriebsposition aufweist.
 6. Dampfofenrichtung gemäß Anspruch 4 oder 5, **dadurch gekennzeichnet, dass** der erste Deckel (10) vollständig von dem Körper des Wassertanks (10) entfernbar ist.
 7. Dampfofenrichtung gemäß Anspruch 4, 5 oder 6, **dadurch gekennzeichnet, dass** der erste Deckel (13) einen kleineren zweiten Deckel (14) aufweist, um das Auffüllen von Wasser in den Wassertank (10) zu erleichtern.
 8. Dampfofenrichtung gemäß Anspruch 7, **dadurch gekennzeichnet, dass** der zweite Deckel (14) derart in dem ersten Deckel (13) befestigt ist, dass er zwischen einer geschlossenen und geöffneten Position schwenkbar ist.
 9. Dampfofenrichtung gemäß einem der Ansprüche 4 bis 8, **dadurch gekennzeichnet, dass** der Wassertank (10) eine Frontwand (16) mit einer Aussparung (17) aufweist, die als ein Handgriff zum Bewegen des Wassertanks (10) zwischen der Auszugsposition und der Betriebsposition ausgebildet ist.
 10. Dampfofenrichtung gemäß einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** der Wassertank (10) in seinem Innenbereich Beruhigungsbarrieren (12) aufweist, um Wasserbewegungen, die beim Hantieren des Wassertanks (10) entstehen, zu beruhigen.
 11. Dampfofenrichtung gemäß einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die Dampfofenrichtung eine erste Wasserpumpe (4) aufweist, um während eines Garzyklusses Wasser zu der Boilereinrichtung (6) zu fördern, sowie eine zweite Wasserpumpe (5), um nach einem Garzyklus in der Boilereinrichtung (6) zurückgebliebenes Wasser zu dem Wassertank (6) zurückzuführen.
 12. Wassertank (10) zur Verwendung in einer Dampfofenrichtung, wobei die Dampfofenrichtung wenigstens einen Garraum (1) und einen Wassertank-Aufnahmeschlitz (8) zur Aufnahme des Wassertanks (10) umfasst, wobei der Wassertank (10) eine flache Geometrie hat, die durch dessen Höhe (h), Breite (w) und Tiefe (d) definiert ist, wobei die Höhe (h) kleiner als 15 % der Tiefe (d) ist, **dadurch gekennzeichnet, dass** die Höhe (h) kleiner als 7 % der Breite (w) ist und der Wassertank (10) eine obere Wandung hat, die als ein erster Deckel (13) ausgebildet ist, so dass der Innenraum des Wassertanks (10) nach Öffnung des ersten Deckels (13) vollständig zugänglich ist.
 13. Wassertank (10) gemäß Anspruch 12, **dadurch gekennzeichnet, dass** die Höhe (h) des Wassertanks (10) kleiner als 14 % der Höhe (H) des Garraums (1) ist.
 14. Wassertank (10) gemäß Anspruch 12 oder 13, **dadurch gekennzeichnet, dass** der Wassertank (10) wenigstens; eine Einrast-Verbindungseinrichtung (11) aufweist, die zum automatischen Herstellen oder Trennen einer fluidmechanischen Verbindung zwischen dem Wassertank (10) und wenigstens einer Wasserpumpe (4, 5) beim Bewegen des Wassertanks (10) zwischen einer Auszugsposition, in der er zumindest teilweise aus dem Aufnahmeschlitz (8) ausgezogen ist, und einer Betriebsposition, in der er vollständig in dem Aufnahmeschlitz (8) aufgenommen ist, vorgesehen ist.
 15. Wassertank (10) gemäß der Ansprüche 12 bis 14, **dadurch gekennzeichnet, dass** der erste Deckel (13) vollständig von dem Körper des Wassertanks (10) entfernbar ist.
 16. Wassertank (10) gemäß Anspruch 12 bis 15, **dadurch gekennzeichnet, dass** der erste Deckel (13) einen kleineren zweiten Deckel (14) aufweist, um Auffüllen von Wasser in den Wassertank (10) zu erleichtern.

17. Wassertank (10) gemäß Anspruch 16, **dadurch gekennzeichnet, dass** der zweite Deckel (14) derart in dem ersten Deckel (13) befestigt ist, dass er zwischen einer geschlossenen und einer geöffneten Position schwenkbar ist.

18. Wassertank (10) gemäß einem der Ansprüche 12 bis 17, **dadurch gekennzeichnet, dass** der Wassertank eine Frontwand (16) mit einer Aussparung (17) aufweist, wobei die Aussparung (17) als ein Handgriff zum Bewegen des Wassertanks (10) zwischen einer Auszugsposition, in welcher er zumindest teilweise aus dem Aufnahmeschlitz (8) ausgezogen ist, und einer Betriebsposition, in der er vollständig in dem Aufnahmeschlitz (8) aufgenommen ist, ausgebildet ist.

Revendications

1. Dispositif de four à vapeur comprenant au moins une cavité de cuisson (1), au moins une porte de cavité (3) déplaçable entre une première position dans laquelle la cavité de cuisson (1) est fermée et une deuxième position dans laquelle la cavité de cuisson (1) est ouverte, un panneau de commande (2) ayant au moins un élément de commande (15) pour commander l'opération de cuisson, un moyen de chaudière (6) pour vaporiser l'eau, un réservoir d'eau (10) pour recevoir de l'eau destinée à être vaporisée par le moyen de chaudière (6), et une fente de réception (8) du réservoir d'eau pour recevoir le réservoir d'eau (10), et dans lequel ladite fente de réception (8) est disposée horizontalement de sorte que le réservoir d'eau (10) reçu dans la fente de réception est disposé derrière la porte de cavité (3) occupant sa première position,

la fente de réception (8) est disposée au-dessous du panneau de commande (2),

caractérisé en ce que

la fente de réception (8) est disposée au-dessus de la cavité de cuisson (1) et

le réservoir d'eau (10) a une paroi supérieure formée comme un couvercle primaire (13) de sorte que l'intérieur du réservoir d'eau (10) est entièrement accessible après l'ouverture du couvercle primaire (13).

2. Dispositif de four à vapeur selon la revendication 1, **caractérisé en ce que** le réservoir d'eau (10) a une géométrie plate définie par sa hauteur (h), sa largeur (l) et sa profondeur (p), dans lequel la hauteur (h) est inférieure à 7% de la largeur (l) et inférieure à 15% de la profondeur (p).

3. Dispositif de four à vapeur selon la revendication 2, **caractérisé en ce que**

la hauteur (h) du réservoir d'eau (10) est inférieure à 14% de la hauteur (H) de la cavité de cuisson (1).

4. Dispositif de four à vapeur selon l'une des revendications précédentes, **caractérisé en ce que**

le réservoir d'eau (10) est déplaçable entre une position extraite dans laquelle il est au moins partiellement extrait de la fente de réception (8) et une position de fonctionnement dans laquelle il est entièrement logé dans la fente de réception (8).

5. Dispositif de four à vapeur selon la revendication 4, **caractérisé en ce que**

le réservoir d'eau (10) a au moins un moyen de raccordement par encliquetage (11) pour mettre automatiquement en prise ou hors prise un raccord fluide entre le réservoir d'eau (10) et au moins une pompe à eau (4, 5) quand le réservoir d'eau (10) est déplacé entre la position extraite et la position de fonctionnement.

6. Dispositif de four à vapeur selon la revendication 4 ou 5, **caractérisé en ce que**

le couvercle primaire (13) peut être enlevé entièrement du corps du réservoir d'eau (10).

7. Dispositif de four à vapeur selon la revendication 4, 5 ou 6, **caractérisé en ce que**

le couvercle primaire (13) a un couvercle secondaire (14) plus petit pour faciliter le remplissage de l'eau dans le réservoir d'eau (10).

8. Dispositif de four à vapeur selon la revendication 7, **caractérisé en ce que**

le couvercle secondaire (14) est monté dans le couvercle primaire (13) de sorte qu'il peut pivoter entre des positions ouverte et fermée.

9. Dispositif de four à vapeur selon l'une des revendications 4 - 8, **caractérisé en ce que**

le réservoir d'eau (10) a une paroi frontale (16) ayant un creux (17) formé en tant que poignée pour déplacer le réservoir d'eau (10) entre la position extraite et la position de fonctionnement.

10. Dispositif de four à vapeur selon l'une des revendications précédentes, **caractérisé en ce que**

le réservoir d'eau (10) a, à l'intérieur, des barrières tranquillisantes (12) pour tranquilliser les mouvements de l'eau survenant pendant la manipulation du réservoir d'eau (10).

11. Dispositif de four à vapeur selon l'une des revendications

cations précédentes,

caractérisé en ce

qu'il comprend une première pompe à eau (4) pour fournir de l'eau au moyen de chaudière (6) pendant un cycle de cuisson et une deuxième pompe à eau (5) pour refournir au réservoir d'eau (10) de l'eau restant dans le moyen de chaudière (6) après le cycle de cuisson.

12. Réservoir d'eau (10) pour une utilisation dans un dispositif de four à vapeur ayant au moins une cavité de cuisson (1) et une fente de réception (8) de réservoir d'eau pour recevoir le réservoir d'eau (10), dans lequel ledit réservoir d'eau (10) a une géométrie plate définie par sa hauteur (h), sa largeur (l) et sa profondeur (p), dans lequel la hauteur (h) est inférieure à 15 % de la profondeur (p),
15
caractérisé en ce que
la hauteur (h) est inférieure à 7 % de la largeur (l) et **en ce qu'il** a une paroi supérieure formée en tant que couvercle primaire (13) de sorte que l'intérieur du réservoir d'eau (10) est entièrement accessible après l'ouverture du couvercle primaire (13). 20
13. Réservoir d'eau (10) selon la revendication 12,
25
caractérisé en ce que
la hauteur (h) du réservoir d'eau (10) est inférieure à 14 % de la hauteur (H) de la cavité de cuisson (1).
14. Réservoir d'eau (10) selon la revendication 12 ou 13,
30
caractérisé en ce
qu'il a au moins un moyen de raccordement par encliquetage (11) pour mettre automatiquement en prise ou hors prise un raccord fluidique entre le réservoir d'eau (10) et au moins une pompe à eau (4, 5) quand le réservoir d'eau (10) est déplacé entre une position extraite dans laquelle il est au moins partiellement extrait de la fente de réception (8) et une position de fonctionnement dans laquelle il est entièrement logé dans la fente de réception (8). 35 40
15. Réservoir d'eau (10) selon les revendications 12 à 14,
caractérisé en ce que
le couvercle primaire (13) peut être entièrement enlevé du corps du réservoir d'eau (10). 45
16. Réservoir d'eau (10) selon les revendications 12 à 15,
caractérisé en ce que
le couvercle primaire (13) a un couvercle secondaire (14) plus petit pour faciliter le remplissage d'eau dans le réservoir d'eau (10). 50
17. Réservoir d'eau (10) selon la revendication 16,
55
caractérisé en ce que
le couvercle secondaire (14) est monté dans le couvercle primaire (13) de sorte qu'il peut pivoter entre

des positions fermée et ouverte.

18. Réservoir d'eau (10) selon une des revendications 12 - 17,
caractérisé en ce
qu'il a une paroi frontale (16) ayant un creux (17) formé en tant que poignée pour déplacer le réservoir d'eau (10) entre une position extraite dans laquelle il est au moins partiellement extrait de la fente de réception (8) et une position de fonctionnement dans laquelle il est entièrement logé dans la fente de réception (8).

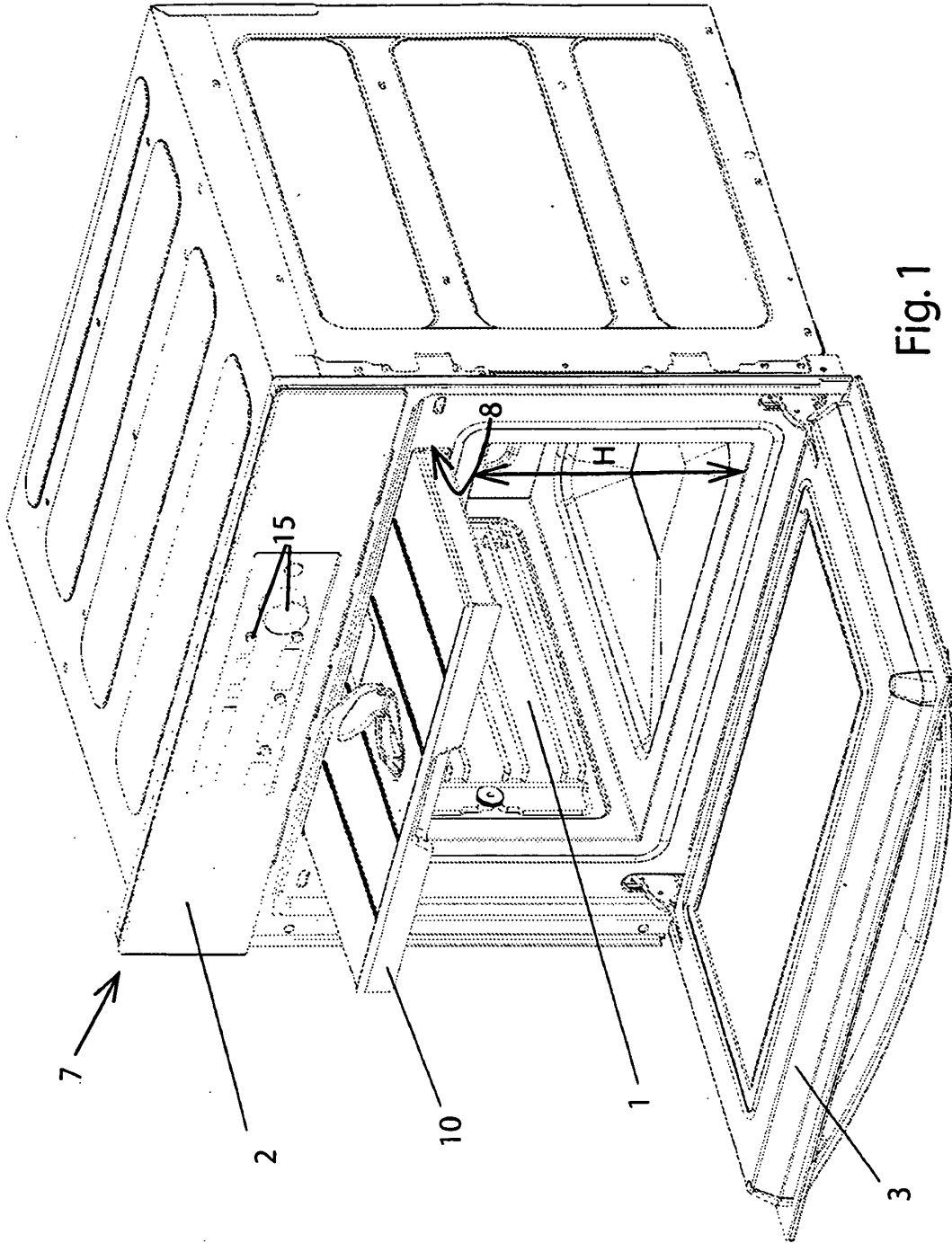
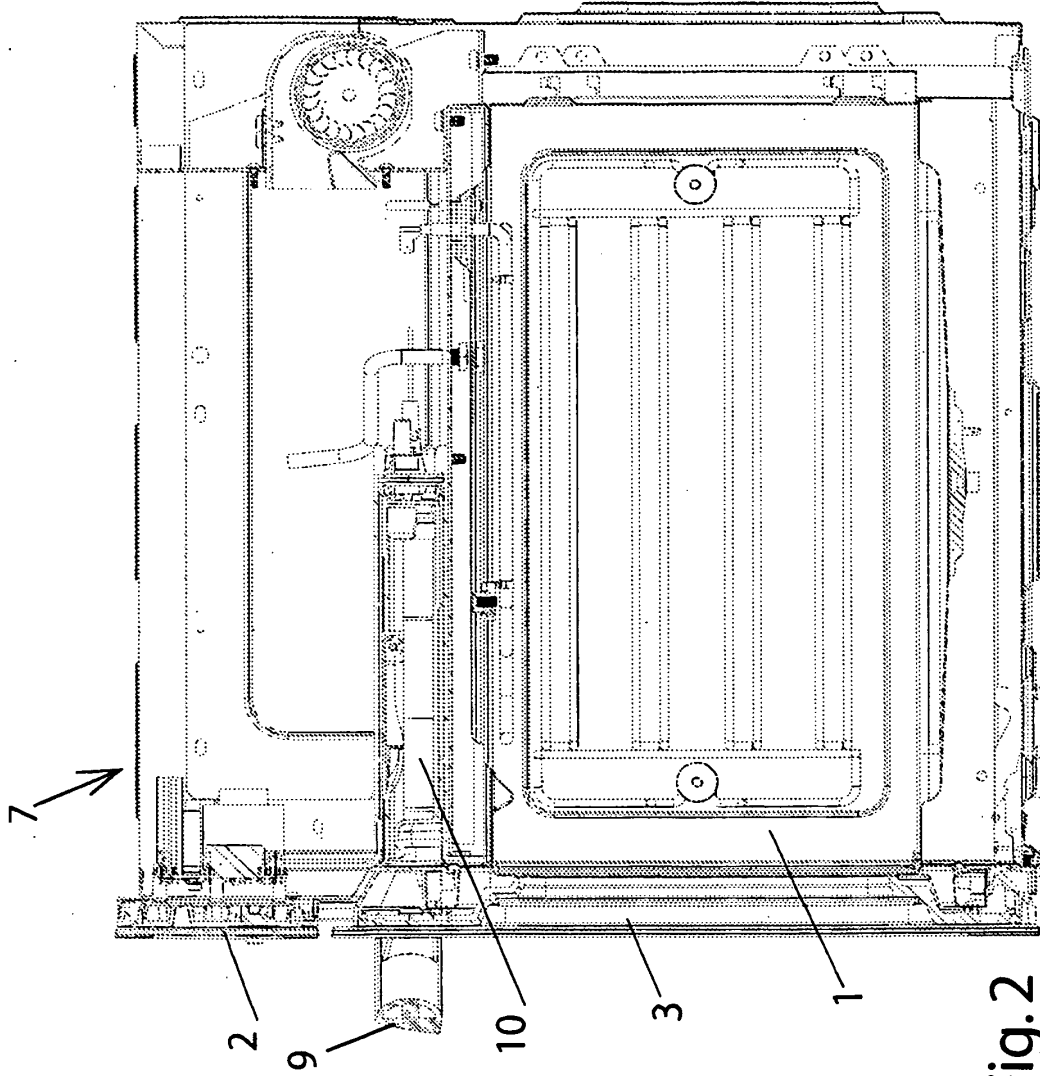
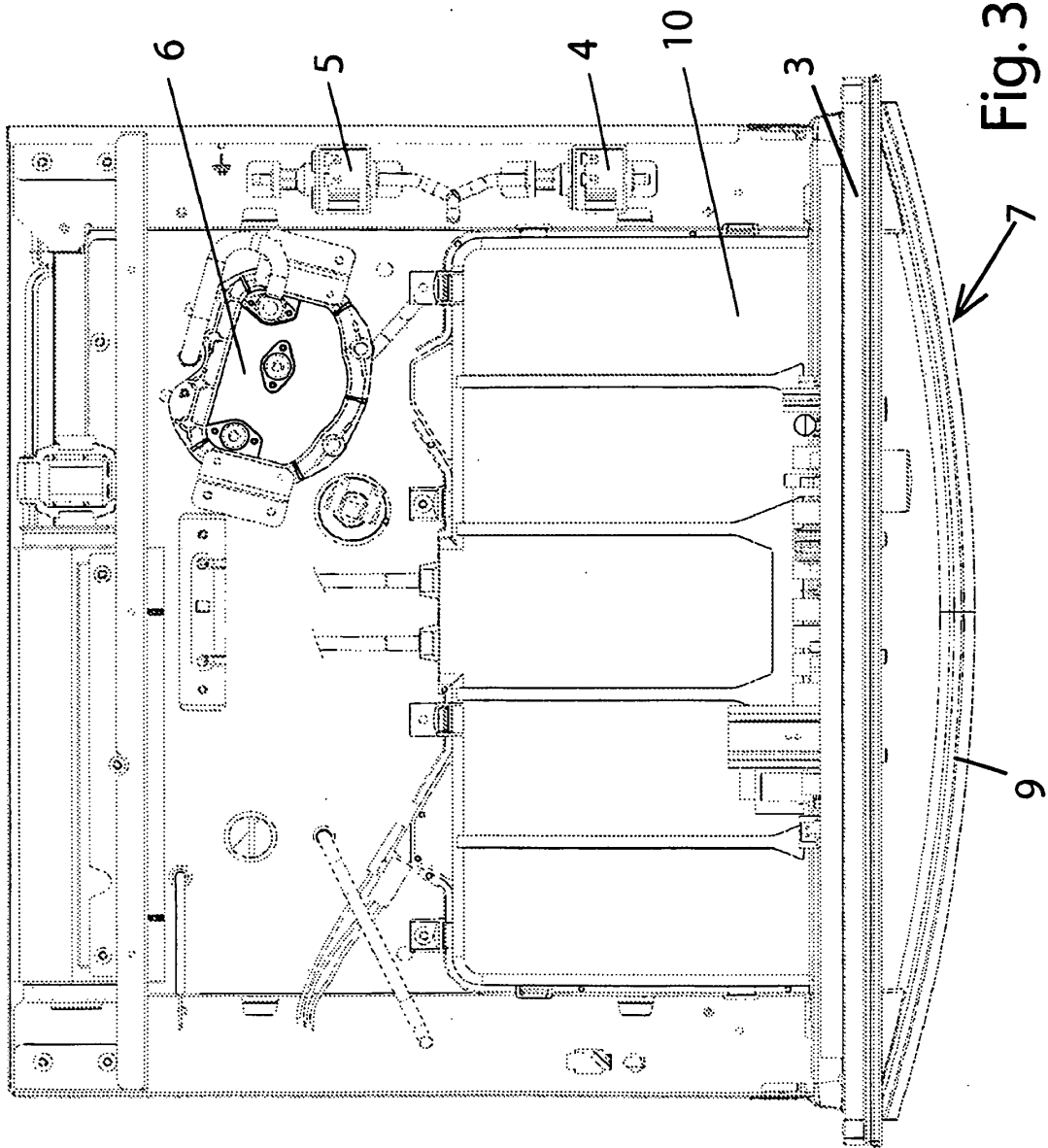


Fig.1





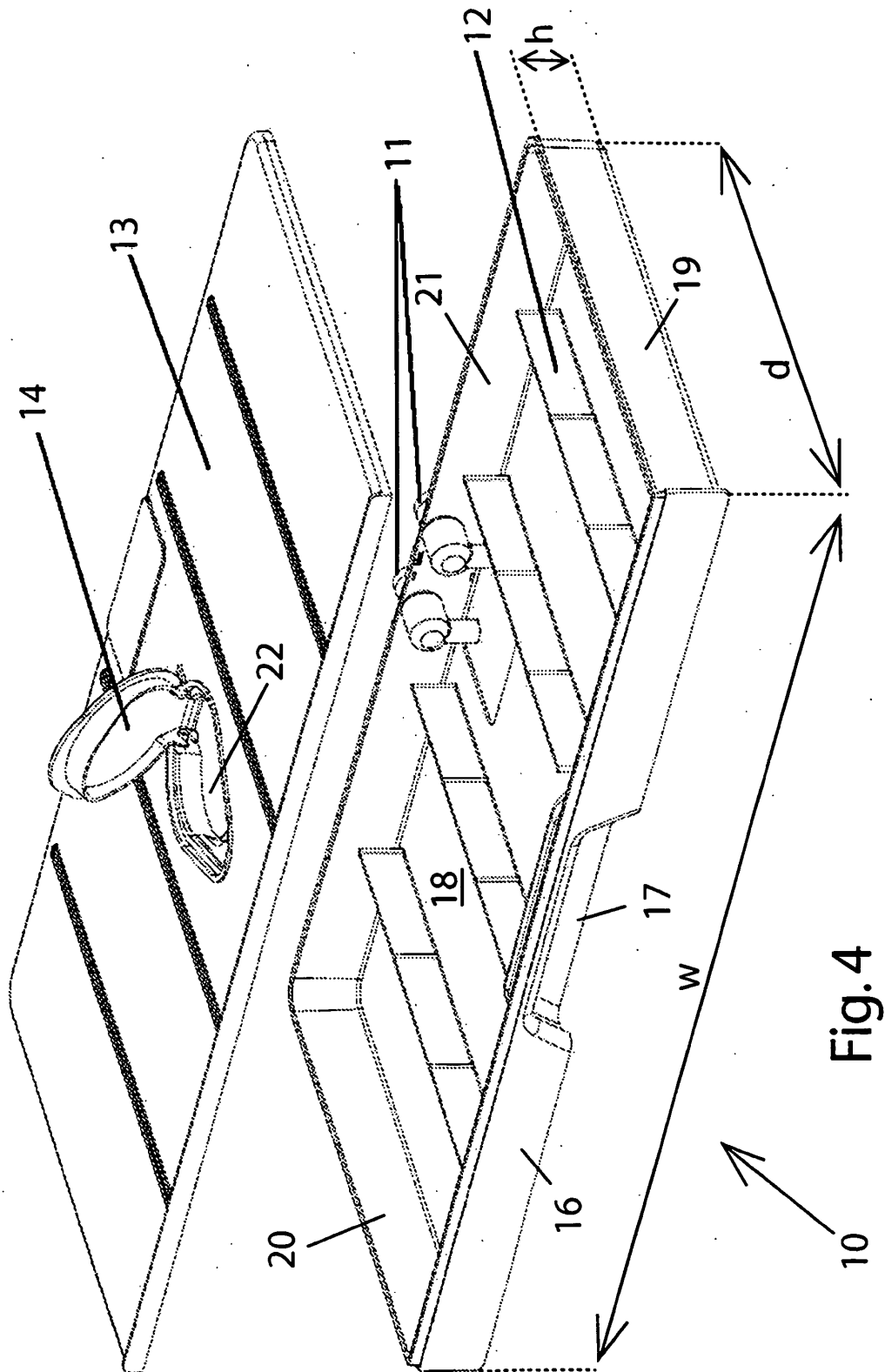


Fig. 4

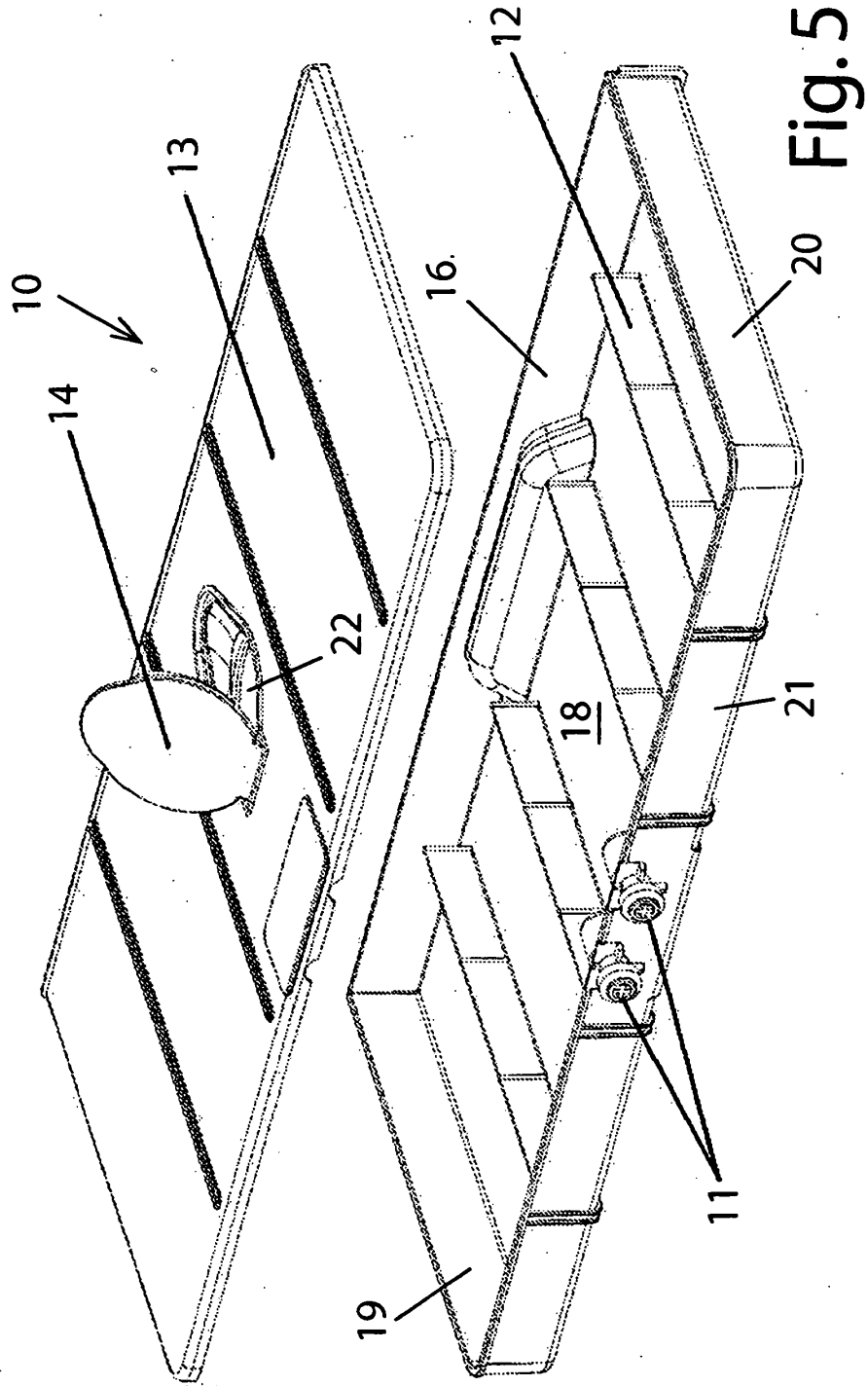


Fig. 5

REFERENCES CITED IN THE DESCRIPTION

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