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(54) **Oven door**

Backofentür

Porte de four

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US-B1- 6 561 180**

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Description

[0001] The present invention relates to an oven door for closing a cooking cavity of an oven according to the preamble of claim 1. The invention also relates to an oven.

[0002] For ovens, several types of doors for closing cooking cavities comprising a first unit and a second unit are known in the state of the art. However, it is also desired to prevent that the outer surface of the door heats up too much when the oven is in use. This improves the comfort when cooking and decreases the risk of getting burned, especially for children. Furthermore, it is important that the door can be produced, maintained and cleaned in an easy way.

[0003] DE 84 13 224 U1 describes an oven door, with a front cover which comprises spring elements directed towards the inner door part to connect the front part with the inner part. The inner part is made from sheet metal in one piece. This piece contains the inner window and the door frame. The frame part of the inner part comprises openings in order to connect the inner part with spring elements of the front part. The spring elements snap into these openings for connection, and can be released for disassembling the door parts. The outer surface of the door is not cooled or isolated.

[0004] DE 101 63 150 shows an oven door where the plates are connected through corner elements and horizontal and vertical elements. All these elements constitute a door frame in an assembled condition of the door.

[0005] In DE 199 06 747 A1, an oven door is shown whose inner plate can be removed. The door has an upper and lower horizontal element. Between the upper horizontal element and an upper end element a pivotal point for turning the inner plate is arranged. The inner plate is connected with the lower horizontal element which snaps in a connection part of the feather element to fix the door plates. This enables the inner plate to be fold out, but the inner plate cannot be taken out. For this door no ventilation is provided.

[0006] DE 696 09 223 T2 shows an oven door with a detachable device. Side bars build a frame on the inner plate. On these bars and the frame of the outside part connection elements are arranged, so that these two devices can be snapped together. Guiding elements on both devices provide the correct assembling. This connection is detachable. There is no possibility of inserting an additional inside plate.

[0007] EP 0 209 115 A1 discloses a door comprising a peripheral frame to which an internal transparent pane is adhesively secured and carrying an outer transparent pane removably attached thereto. The frame has its lower and upper boundary areas formed with passages for the circulation of air through the interspace between the two panes, the upper boundary area of the frame being provided with a profile member secured thereto and having a centre portion thereof formed as a handle. The profile member is formed with an internal cavity communicating through respective slots with the passages formed in the upper boundary area of the door and with the interior in the oven chamber. The cavity contains first deflector elements for directing an air flow provenient from the interior of the oven into the interspace between the two transparent panes and second deflector elements defining venturi-type passages for facilitating the escape of air from the interspace.

[0008] EP 1 030 116 A2 discloses a solid glass appliance door for an oven, the door having an outer pane, an inner pane and extruded profiles arranged in the side regions between the two. The inner pane is secured to an upper traverse profile and a lower traverse profile and forms a unit with it. If a completely ventilated appliance door is desired, the outer pane only abuts the upper traverse profile in sub-regions. Passage openings are present adjacent contact surfaces, so that the air is guided through the complete interior of the door and can exit in the upper region.

[0009] It is an object of the invention to provide an oven door for closing a cooking cavity of an oven, especially a household oven which offers ventilation for cooling the door and which is easy to assemble, to repair and to clean.

[0010] The solution of this object according to the invention is achieved by an oven door according to claim 1 and an oven according to claim 12. Advantageous embodiments are described particularly in the dependent claims.

[0011] According to claim 1, a door is provided for closing a cooking cavity of an oven, especially a household oven, with an outer unit and an inner unit. One unit is guided by at least one detachable or releasable connection means comprising snapping means, in the other unit, and at least one unit is provided with at least one opening for ventilation, which is connected in a closed position of the door to an air suction area of the oven.

[0012] This makes it possible to use the air which is sucked into the oven for cooling also for cooling the outer surface of the door. In other words, the ambient air is cooling the outer surface of the door at first and then cooling the surrounding area of the cooking cavity. The detachable or releasable connection means facilitate production, maintenance as well as cleaning of the door.

[0013] Preferably, the outer unit contains a front plate, two vertical elements arranged in parallel on the front plate and at least one inside plate arranged between the vertical elements. This enables a compact and stable structure of the front plate and the at least one inside plate which is, in addition, mountable in an easy way.

[0014] The inner unit contains an inner plate and a frame, which extends over the side areas and the upper transversal area of the inner plate. By this, the structure which is carrying the at least one inside plate can be covered so that dirt can be reduced. If dirt intrudes nevertheless, it can be easily removed after detaching or releasing the connection of the two units.

[0015] The at least one opening for ventilation is arranged close to the upper transversal area of the inner plate. This

makes it possible to ventilate the plates up to their upper end.

[0016] The at least one opening for ventilation is located in the same plane or at the same level as the inner plate, that means they are directed towards the oven when the door is locked. The air suction area of the oven, which is the area where the at least one ventilation opening normally leads to, can advantageously be arranged over the cooking cavity. As an alternative, it is possible to arrange the at least one opening for ventilation in the inner plate. This is possible particularly if the inner plate covers the cooking cavity and the air suction area.

[0017] According to a preferred embodiment, the at least one opening for ventilation extends in a horizontal direction over about the width of the inside plates. That provides a maximum cross sectional area of the air flow, and improves the cooling of the oven door. Alternatively, two or more openings for ventilation can be arranged side by side so that the air flow can disperse over the whole cross sectional area advantageously.

[0018] Preferably, the at least one opening for ventilation is arranged between the upper transversal area of the frame and the inner plate. It is possible that this is provided through a distance or gap between these two parts.

[0019] According to a preferred embodiment, the at least one opening for ventilation is arranged in a separate ventilation bar, which is preferably placed between the transversal frame part and the inner plate. The ventilation bar preferably extends also into the inside of the door, which stabilises the complete door construction. Furthermore, the air flow can advantageously lead from the door inside to the air suction area of the oven through the ventilation bar without any turbulences.

[0020] Preferably, the at least one opening for ventilation is arranged in an extension of the frame which adjoins the inner plate at the level of the cooking cavity. In this area of the frame part, the openings for ventilation can be inserted.

[0021] The interior area of the door has preferably at least one opening or opens towards the bottom, so that ambient air can be sucked in from the surrounding environment outside the oven.

[0022] The ventilation of the door is provided by an air flow, which gets sucked in from the bottom, is lead through the inside of the door and directed through the at least one opening for ventilation to the air suction area of the oven. In a preferred embodiment, the air flow cross section stays at least approximately the same inside the door. Preferably, the vertical connection elements are arranged in the side areas of the unit, so that the air flow has no barriers to bypass and can be easily guided without turbulences from the bottom of the door. to the upper openings for ventilation.

[0023] Preferably, the inner unit is mounted on the outer unit.

[0024] Preferably, the frame is guided by at least one connection means in the vertical elements of the outer unit. Preferably, the connection of the two units is realized with at least one bayonet connection. To connect the two units, preferably one unit is put on the other at first and then the two units are slid against each other, so that shaped connection means of one unit can reach into corresponding recesses, the bayonet openings or recesses, of the other unit. Preferably, several connection means are arranged on each side of the units which can be connected at the same time so that the two units can be connected easily one the one hand but also establish a stable connection on the other hand.

[0025] The shaped connection means snap into a final position, which is the position when both units form the assembled door, in corresponding gaps to establish and fix the connection of the two units.

[0026] This connection can be unfixed by opening the snapping connection and sliding one unit out of the bayonet guides. So the door can be disjoined in its main parts, the two door units, for cleaning or maintenance.

[0027] Preferably, the door frame is made at least essentially of metal. In a preferred embodiment, the door frame is made at least essentially of steel. This has the advantage that the frame can be cleaned particularly easily and the connection of the two units is very durable. It is also possible to have only parts of the frame made of metal. However, this invention is not limited to the use of metal for the frame, instead of metal any other suitable material can be taken. The plates are usually made of glass or other transparent material.

[0028] The outer unit comprises at least one snapping hook, whereas the inner unit comprises at least one opening with a rectangular shape,

wherein the snapping device is releasably pushable into the opening to connect the outer unit and the inner unit. This enables an easy and stable fixing and a simple releasing of the outer and the inner unit with each other.

[0029] According to claim 12, the invention comprises an oven with a cooking cavity and a door for closing the cooking cavity according to the invention.

[0030] The invention will be described in further detail with reference to the drawings in which

- FIG 1 shows the assembled door,
- FIG 2 shows the outer unit of the door,
- FIG 3 shows the inner unit of the door,
- FIG 4 shows a back view of the assembled door and
- FIG 5 shows the cross-sectional view of a side. view,
- FIG 6 shows another embodiment of the invention in a released position,
- FIG 7 shows the door according to FIG 6 in fixed position,
- FIG 8 shows a detail of FIG 6,

FIG 9 shows the surrounding area of the upper end of the oven door and

FIG 10 shows the door assembled with the oven.

[0031] FIG 1 and FIG 4 show a completely assembled door 1 which consists of a first unit 2 used as an outer unit and a second unit 3 used as an inner unit.

[0032] The outer unit 2 comprises a front plate 21 of the door 1 which is visible from the outside. On the upper outer surface of the front plate 21, a handle 28 is arranged.

[0033] The inner unit 3 is arranged on the inner surface of the front plate 21. The inner unit 3 comprises a frame 32, which extends over the outer side areas 32A and 32B, respectively, and the upper transversal area 32C of the inner unit 3. In the lower transversal area 32D of the outer unit 3, no frame is provided. Consequently, the bottom of the door 1, which is not shown in FIG 1, stays open for ventilation purposes.

[0034] Underneath the upper transversal area 32C of the inner unit 3, a ventilation bar 34 with openings 33A, 33B for ventilation is arranged. For durability, the ventilation bar 34 has a thin stabilisation bar 35 in the middle between the openings 33A and 33B for ventilation. So the ventilation is spread over two openings for ventilation 33A and 33B. The inner plate 31 of the door 1 closes or seals the cooking cavity. The openings for ventilation 33A and 33B adjoin directly to an air suction area of the oven, which is placed over the cooking cavity. The air suction area of the oven is not shown in FIG 1.

[0035] FIG 2 shows the outer unit 2. The two parallel vertical elements 22A and 22B are fixed, preferably glued or screwed, on the back-sided side areas of the front plate 21. Between the vertical elements 22A and 22B, an inside plate 23 is arranged which is held parallel to the front plate 21 by the vertical elements 22A and 22B. On their outwardly directed sides, the vertical elements 22A and 22B have insertion areas 41A and 41B in the upper area, insertion areas 51A and 51B in the middle area and insertion areas 61A and 61B in the lower area.

[0036] Adjacent to the front plate 21, the insertion areas 41B, 51B and 61B comprise elongated supports 42B, 52B and 62B, respectively. Underneath the insertion areas 41B, 51B and 61B, also adjacent to the front plate 21, elongated openings 43B, 53B and 63B are arranged. In the lower area of the openings 43B and 53B, recesses 44B and 54B, respectively, are arranged.

[0037] The insertion area 41B, the support 42B, the opening 43B and the recess 44B on the outward side of the vertical element 22B form a bayonet or snapping connection to fix the inner unit 3. Also, the insertion area 51B, the support 52B, the opening 53B and the recess 54B on the outward side of the vertical element 22B form another bayonet or snapping connection to fix the inner unit 3. The insertion area 61B, the support 62B and the opening 63B on the outward side of the vertical element 22B form a third bayonet or snapping connection to fix the inner unit 3.

[0038] Correspondingly, the insertion area 41A, the support 42A, the opening 43A and the recess 44A on the outward side of the vertical element 22A form a bayonet or snapping connection to fix the inner unit 3. The insertion area 51A, the support 52A, the opening 53B and the recess 54A on the outward side of the vertical element 22A form another bayonet or snapping connection to fix the inner unit 3. Finally, the insertion area 61A, the support 62A, the opening 63A and the recess 64A on the outward side of the vertical element 22A form a bayonet or snapping connection to fix the inner unit 3.

[0039] FIG 3 shows the inner unit 3. The frame 32 extends over the side areas 32A and 32B of the inner plate 31 of the inner unit 3 and the upper transversal area 32C over the ventilation bar 34. The inner plate 31 closes the cooking cavity, not shown here. The ventilation bar 34 adjoins to an air suction area, not shown here, which is arranged over the front of the cooking cavity. The connection means for connecting the inner unit 3 with the outer unit 2 which are not shown in FIG 3 are arranged on the interior side of the side areas 32A and 32B of the frame.

[0040] To connect the two units, the connection means of the frame 32 of the inner unit 3, here not shown, are positioned over the inserting areas 41A, 51A, 61A, 41B, 51B and 61B of the outer unit 2 and then concurrently inserted into these areas, orthogonally to the plane of the inner plate 31 and following direction D1.

[0041] Afterwards, by sliding the connection means of frame 32 downwardly in parallel to the plane of the inner plate 31, following direction D2, into the openings 43A, 53A, 63A, 43B, 53B and 63B of the vertical elements 22A and 22B, the units 2 and 3 are connected. For fixing this connection, the connecting elements of the inner unit 3 snap into a final end position into the recesses 54A, 54B of the vertical elements 22A and 22B of the outer unit 2.

[0042] FIG 5 shows a cross sectional view from a side view of the oven door 1. The ventilation bar 34 extends under the transversal area 32C of frame 32 into the interior 27 of the first unit 2 between front plate 21 and inside plate 23. The interior 27 of the first unit 2 is open at the bottom 9. By this, ambient air flow A is sucked through the bottom 27 of the door 1 into the interior 27 of the first unit 2 to cool the front plate 21. The air flow A is guided between or through the space between the front plate 21 and the inside plate 23. The air flow A extends from the bottom to the ventilation bar at the top and finally in the air suction area of the oven.

[0043] By repeatedly assembling and disassembling of the first unit 2 and the second unit 3, the cross-section of the air flow A is not noteworthy affected, as the front plate 21 and the interior plate 23 stay in their positions relative to each other. This makes it possible to optimize and preserve the form of the cross section over a long time which is helpful for

maintaining the air flow A in the desired way.

[0044] The plates 21, 23, 31 are usually made of glass or other transparent material.

[0045] Figures 6 to 8 show another embodiment of the invention where the inner unit 3' is fixed to the outer unit 2' by two snapping hooks 72B' and, not shown, 72A'. The snapping hook 72B' is sprayed onto the base area of the vertical, not shown element 22B'. It comprises a support plate 71B' which works as a base plate and which comprises an edge 76B' at its outer end. A carrying element 75B' is arranged on the support plate 71B' where the carrying element 75B', at its outer end, forms the snapping hook 72B'. The snapping hook 72B' is bent downwards at a bending 74B'.

[0046] On the other hand, the inner unit 3' comprises at the bottom of its side area 32B' a notch 73B'. The notch 73B' is formed as a rectangular opening.

[0047] When pushing the inner unit 3' onto the outer unit 2', the snapping 72B' is pushed into the notch 73B' and, by this, fixes the inner unit 3' and the outer unit 2' with each other. The fixed state is shown in FIG 7, whereas FIG 6 and FIG 8 show the released state. By pushing the snapping hooks 72B' and 72A' with the fingers, the connection can be released again.

[0048] Figures 9 and 10 show the door assembled with the oven. For this, FIG 10 shows the muffle 80, the door 1 in front of the muffle and the fan 81 which is arranged above the muffle. Above the fan 81, an air suction channel 82 which constitutes the air suction area is arranged and above the air suction channel 82, an air blowing channel 83 is arranged. The fan 81, when operated, sucks the air out of the door 1 along the air suction channel 82, where it also sucks hot air out of the muffle 80 through the opening 84 above the muffle 80. After passing the fan 81, the air is blown through the blowing channel 83 and is blown out of the oven over the door 1. Over the door, a top plate 182 is arranged.

Reference Signs

[0049]

1, 1'	door
2, 2'	first unit
21	front plate
22A, 22B	vertical elements
23	interior plate
27	interior
28, 28'	handle
29	bottom
3	second unit
31	inner plate
32	frame
32A, 32B, 32B'	side areas
32C	transversal area
33A, 33B	openings for ventilation
34	ventilation bar
35	stabilisation bar
41A, 41B, 51B, 61B	insertion areas
42B, 52B, 62B	supports
43B, 53B, 63B	openings
54B	recess
71A', 71B'	support plate
72B'	snapping hook
73B'	notch
74B'	bending

Claims

1. An oven door (1,1') for closing a cooking cavity of an oven, especially of a household oven, with an outer unit (2,2') and an inner unit (3,3') containing an inner plate (31), and at least one of the units (2,3;2',3') is provided with at least one opening for ventilation (33A, 33B, 33A', 33B'), and wherein the inner unit (3) contains a frame (32) extending over the upper transversal area (33B') of the inner plate (31), **characterised in that** the frame (32) extends over the side areas (32B') of the inner plate (31), the outer unit (2') comprises at least one snapping hook (72B'), and the inner unit (3') comprises at the bottom of its side area (32B') a notch (73B') formed as a rectangular opening, so that the snapping hook (72B') is releasably pushable into the notch (73B') to connect the outer unit (2') and the inner unit (3'), wherein the connection can be released again by pushing the snapping hook (72B'), wherein the ventilation of the door (1) is provided by an air flow (A), which gets sucked in from the bottom, is led through the inside of the door (1) and directed through at the least one opening for ventilation (33A,33B) to an air suction area of the oven connected to the at least one opening for ventilation (33A,33B,33A',33B') in a closed position of the door (1,1') and wherein the at least one opening for ventilation (33A,33B) is arranged close to the upper transversal area (33B') of the inner plate (31) and located in the same plane or at the same level as the inner plate (31).
2. The oven door (1) according to claim 1, **characterised in that** the outer unit (2) contains a front plate (21), two vertical elements (22A,22B) arranged on the front plate (21) and at least one inside plate (23) arranged between the vertical elements (22A,22B), where especially an air flow (A) is guided between the front plate (21) and the inside plate (22).
3. The oven door (1) according to claim 1 or 2, **characterised in that** the at least one opening for ventilation (33A,33B) has about the same width as the inside plate (23).
4. The oven door (1) according to any one of claims 1-3, **characterised in that** the at least one opening for ventilation (33A,33B) is arranged between the upper transversal area of the frame (32) and the inner plate (31).
5. The oven door (1) according to claim 4, **characterised in that** the at least one opening for ventilation (33A,33B) is arranged in a separate ventilation bar.
6. The oven door (1) according to claim 4 or 5, **characterised in that** the at least one opening for ventilation (33A,33B) is arranged in an extension of the frame (32) which adjoins the inner plate (31) at the level of the cooking cavity.
7. The oven door (1) according to any of the preceding claims, **characterised in that** the interior of the door (1) has at least one opening or opens towards the bottom, for sucking in ambient air.
8. The oven door (1) according to claim 2 or to any of the preceding claims insofar as dependent on claim 2, **characterised in that** the air flow (A), led through the inside of the door (1) is led through the space between the front plate (21) and the inside plate (23).
9. The oven door (1) according to any one of the preceding claims, **characterised in that** the inner unit (3) is mounted on the outer unit (2).
10. The oven door (1) according to any one of the preceding claims, **characterised in that** the frame (32) is guided by at least one connection means in the vertical elements (22A,22B) of the outer unit (2).
11. The oven door (1) according to any one of the preceding claims, **characterised in that** the frame (32) is made at least partly of metal, especially of steel.
12. Oven with a cooking cavity and an oven door for closing the cooking cavity according to one of the claims 1 to 11.

Patentansprüche

1. Backofentür (1, 1') zum Verschließen eines Garraums eines Backofens, insbesondere eines Haushaltsbackofens, mit einer Außeneinheit (2, 2') und einer Inneneinheit (3, 3'), die eine Innenplatte (31) enthält, wobei mindestens eine

der Einheiten (2, 3; 2', 3') mit mindestens einer Entlüftungsöffnung (33A, 33B, 33A', 33B') bereitgestellt ist, und wobei die Inneneinheit (3) einen Rahmen (32) enthält, der sich über den oberen Querbereich (33B') der Innenplatte (31) erstreckt,

dadurch gekennzeichnet, dass

sich der Rahmen (32) über die Seitenbereiche (32B') der Innenplatte (31) erstreckt, wobei die Außeneinheit (2') mindestens einen Schnapphaken (72B') umfasst und die Inneneinheit (3') an der Unterseite ihres Seitenbereichs (32B') eine Kerbe (73B') umfasst, die als rechteckige Öffnung ausgebildet ist, sodass der Schnapphaken (72B') lösbar in die Kerbe (73B') gedrückt werden kann, um die Außeneinheit (2') mit der Inneneinheit (3') zu verbinden, wobei die Verbindung erneut durch Drücken des Schnapphakens (72B') freigegeben werden kann, wobei die Entlüftung der (1) durch einen Luftstrom (A) bereitgestellt wird, der von der Unterseite angesaugt wird, durch die Innenseite der Tür (1) geleitet wird und durch mindestens eine Entlüftungsöffnung (33A, 33B) zu einem Luftansaugbereich des Ofens gelenkt wird, der mit mindestens einer Entlüftungsöffnung (33A, 33B, 33A', 33B') in einer geschlossenen Position der Tür (1, 1') verbunden ist, wobei mindestens eine Entlüftungsöffnung (33A, 33B) in der Nähe des oberen Querschnittsbereichs (33B') der Innenplatte (31) angeordnet ist und auf der gleichen Ebene oder auf der gleichen Stufe wie die innere Platte (31) angeordnet ist.

2. Backofentür (1) nach Anspruch 1,

dadurch gekennzeichnet, dass die Außeneinheit (2) eine Frontplatte (21), zwei vertikale Elemente (22A, 22B), die auf der Frontplatte (21) angeordnet sind, und mindestens eine Innenplatte (23) enthält, die zwischen den vertikalen Elementen (22A, 22B) angeordnet ist, wobei insbesondere ein Luftstrom (A) zwischen der Frontplatte (21) und der Innenplatte (22) geführt wird.

3. Backofentür (1) nach Anspruch 1 oder 2, **dadurch gekennzeichnet, dass** die mindestens eine Entlüftungsöffnung (33A, 33B) etwa die gleiche Breite wie die Innenplatte (23) aufweist.

4. Backofentür (1) nach einem der Ansprüche 1 bis 3, **dadurch gekennzeichnet, dass** die mindestens eine Entlüftungsöffnung (33A, 33B) zwischen dem oberen Querbereich des Rahmens (32) und der Innenplatte (31) angeordnet ist.

5. Backofentür (1) nach Anspruch 4, **dadurch gekennzeichnet, dass** mindestens eine Entlüftungsöffnung (33A, 33B) in einer separaten Luftleiste angeordnet ist.

6. Backofentür (1) nach Anspruch 4 oder 5, **dadurch gekennzeichnet, dass** die mindestens eine Entlüftungsöffnung (33A, 33B) in einer Verlängerung des Rahmens (32) angeordnet ist, der an die Innenplatte (31) auf Höhe des Garraums angrenzt.

7. Backofentür (1) nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** das Türinnere (1) mindestens eine Öffnung aufweist oder zu der Unterseite hin öffnet, um Umgebungsluft anzusaugen.

8. Backofentür (1) nach Anspruch 2 oder einem der vorhergehenden Ansprüche, soweit von Anspruch 2 abhängig, **dadurch gekennzeichnet, dass** der Luftstrom (A), der durch die Innenseite der Tür (1) geleitet wird, durch den Raum zwischen der Frontplatte (21) und der Innenplatte (23) geleitet wird.

9. Backofentür (1) nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die Inneneinheit (3) an der Außeneinheit (2) montiert ist.

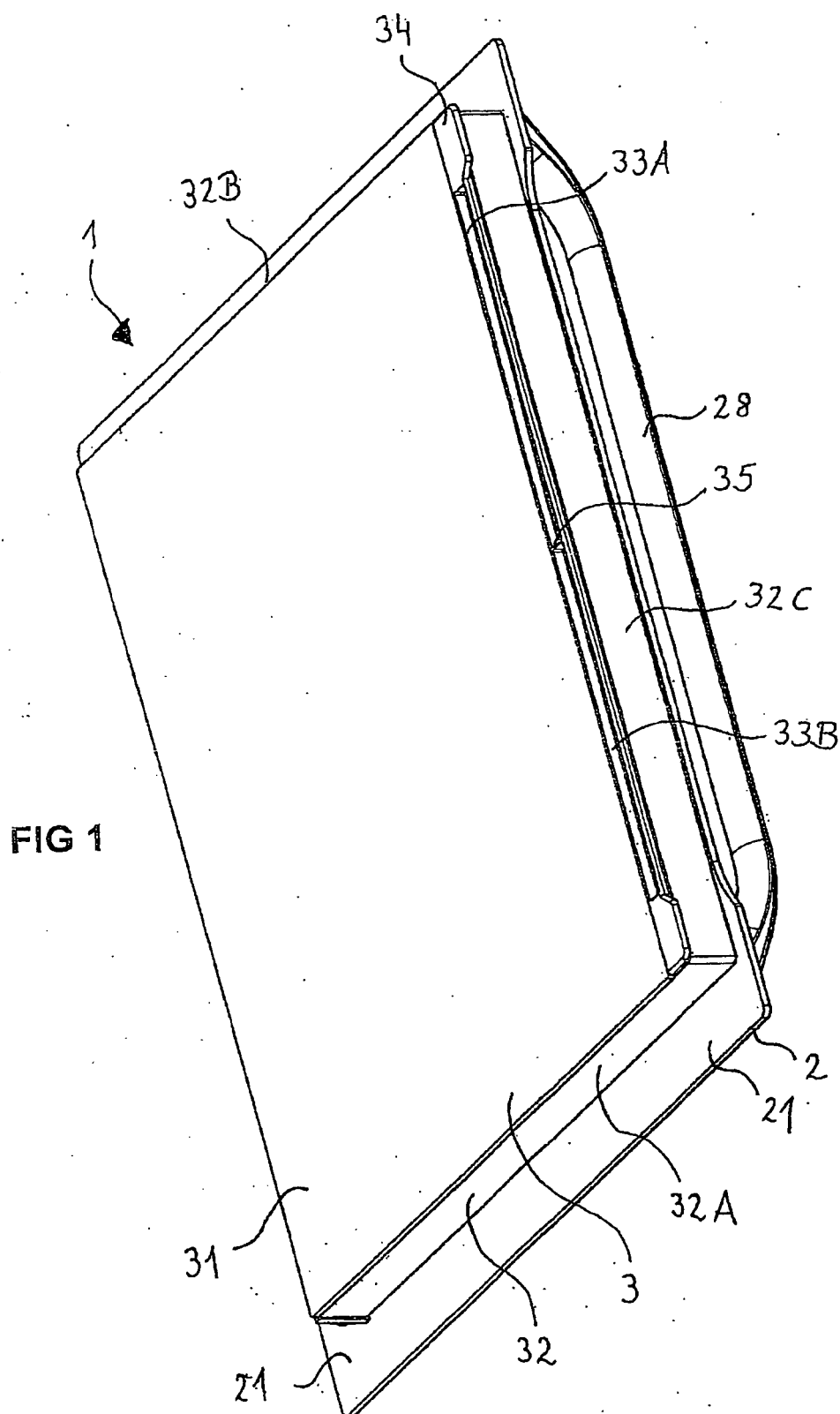
10. Backofentür (1) nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** der Rahmen (32) durch mindestens ein Verbindungsmittel in den vertikalen Elementen (22A, 22B) der Außeneinheit (2) geführt wird.

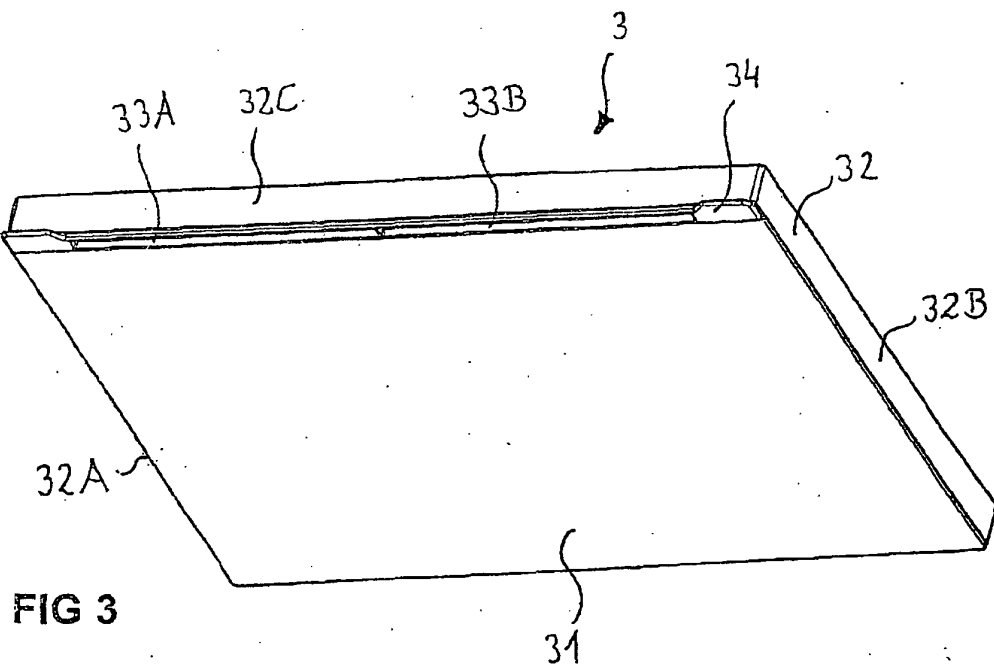
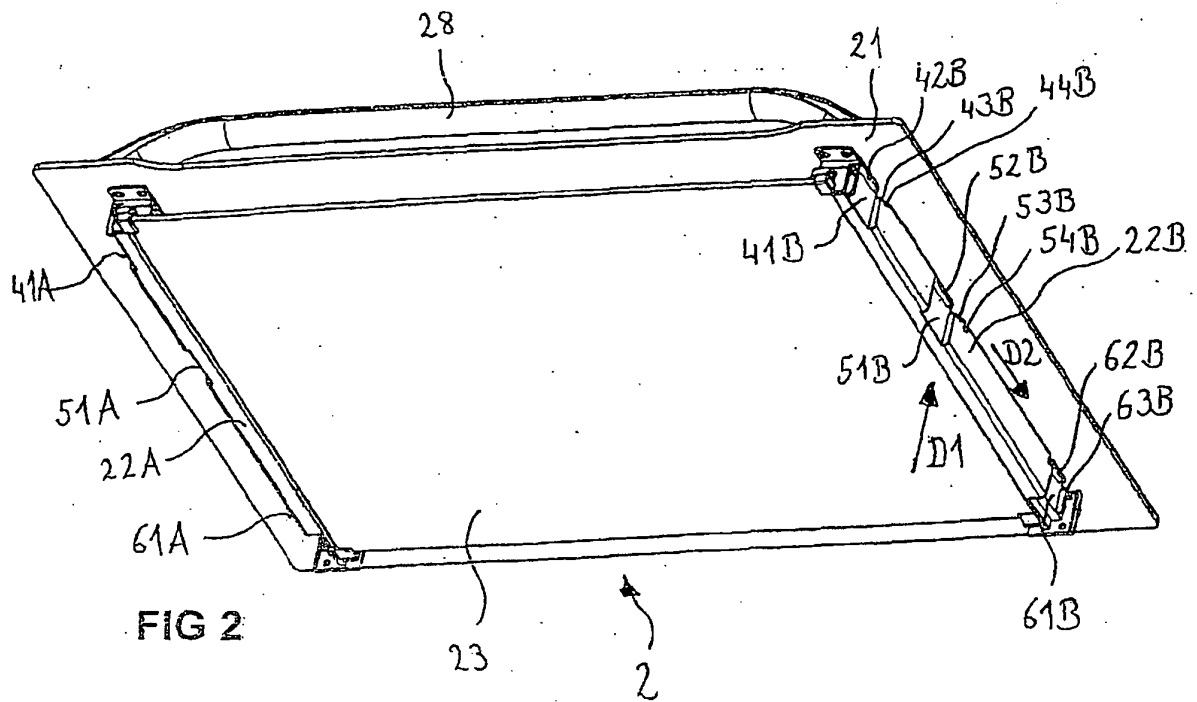
11. Backofentür (1) nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** der Rahmen (32) mindestens zum Teil aus Metall, insbesondere aus Stahl, hergestellt ist.

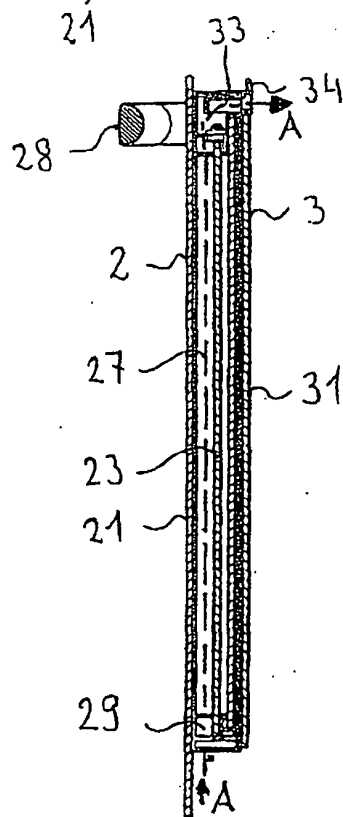
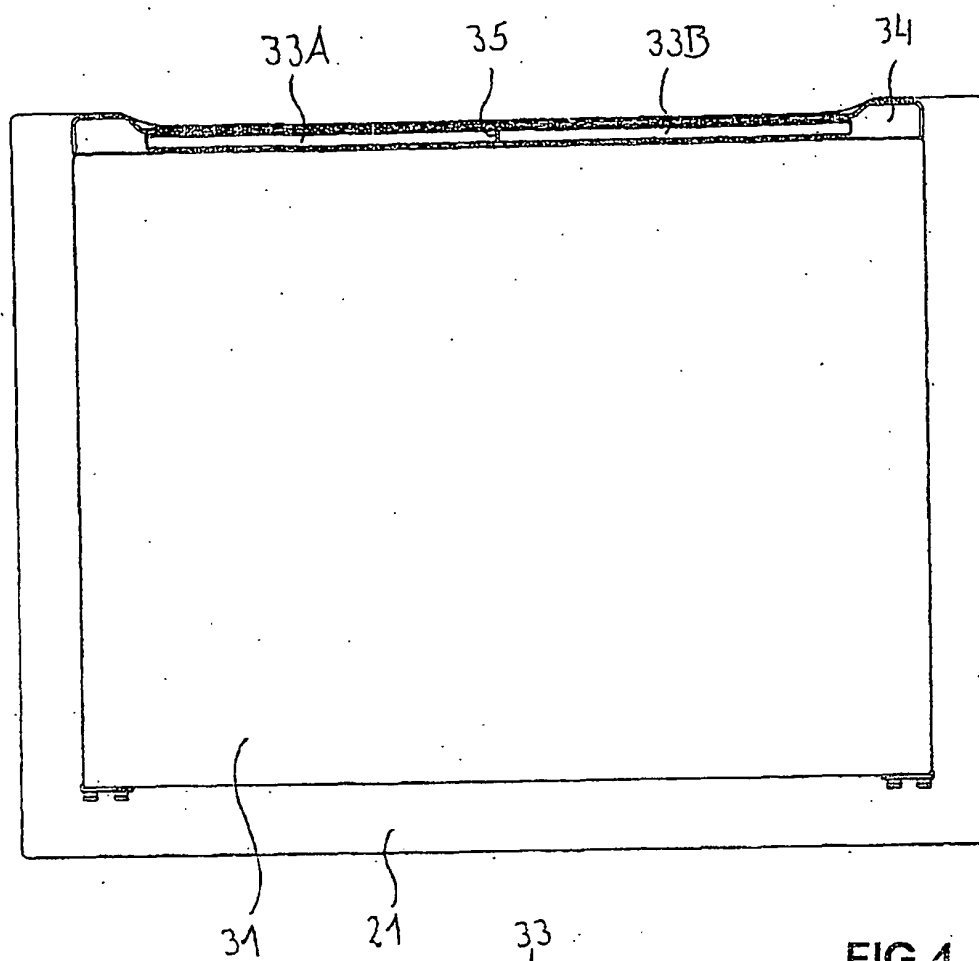
12. Backofen mit einem Garraum und einer Backofentür zum Schließen des Garraums nach einem der Ansprüche 1 bis 11.

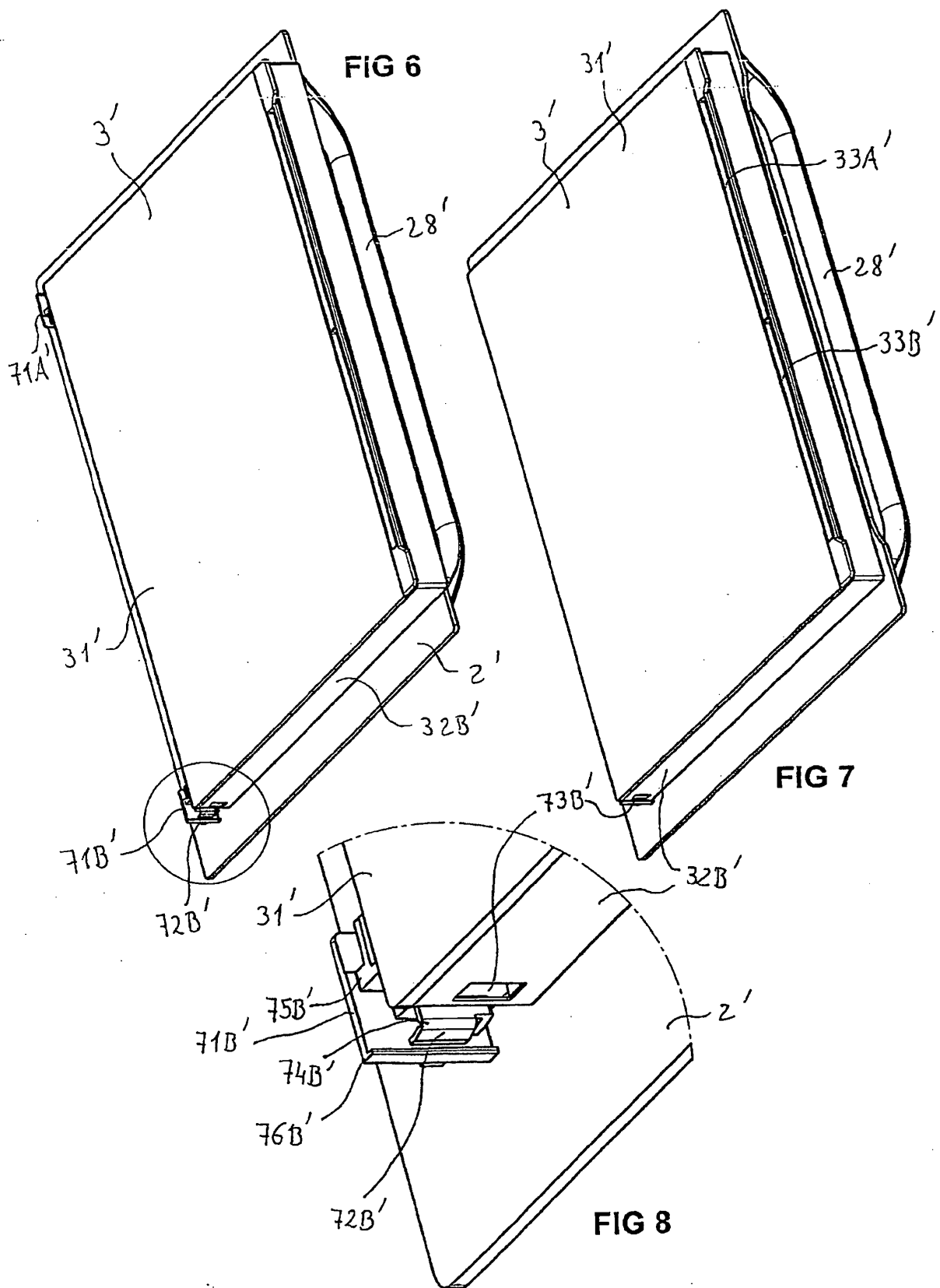
Revendications

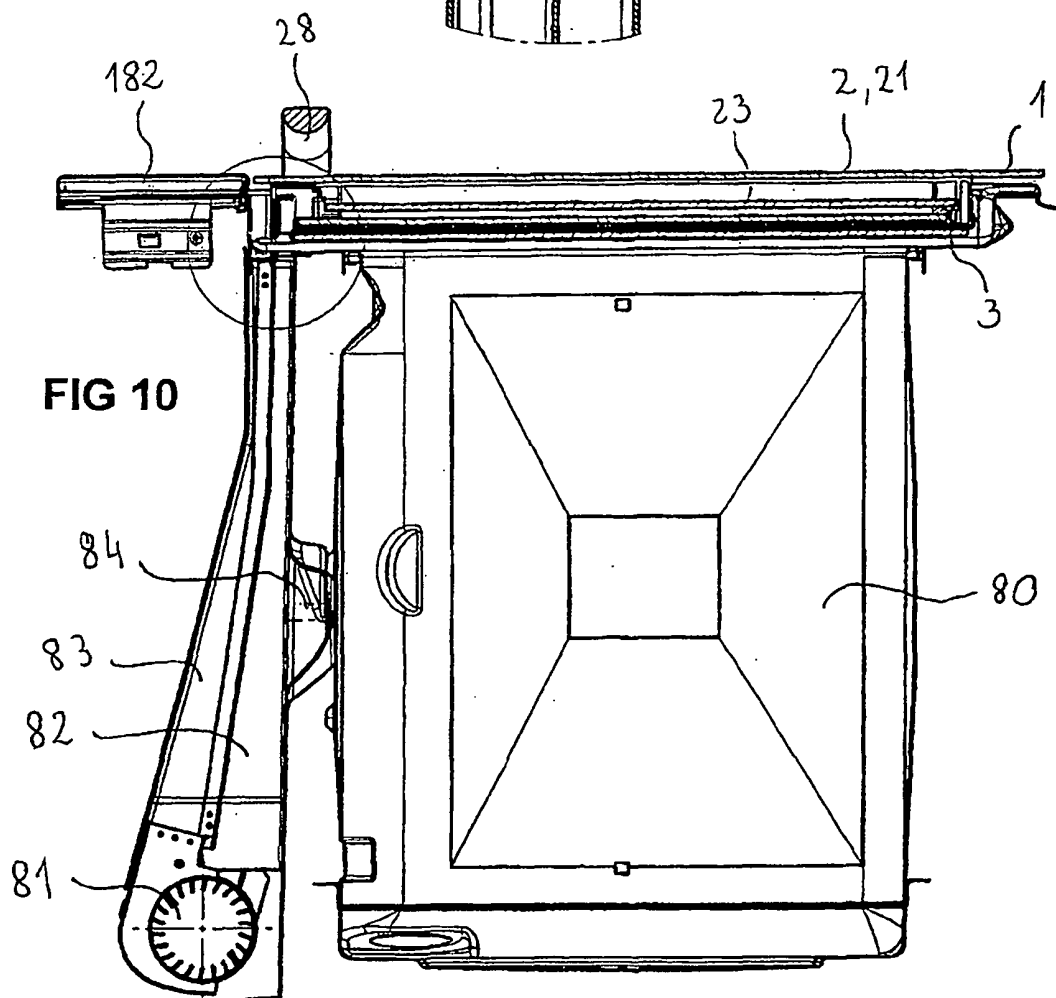
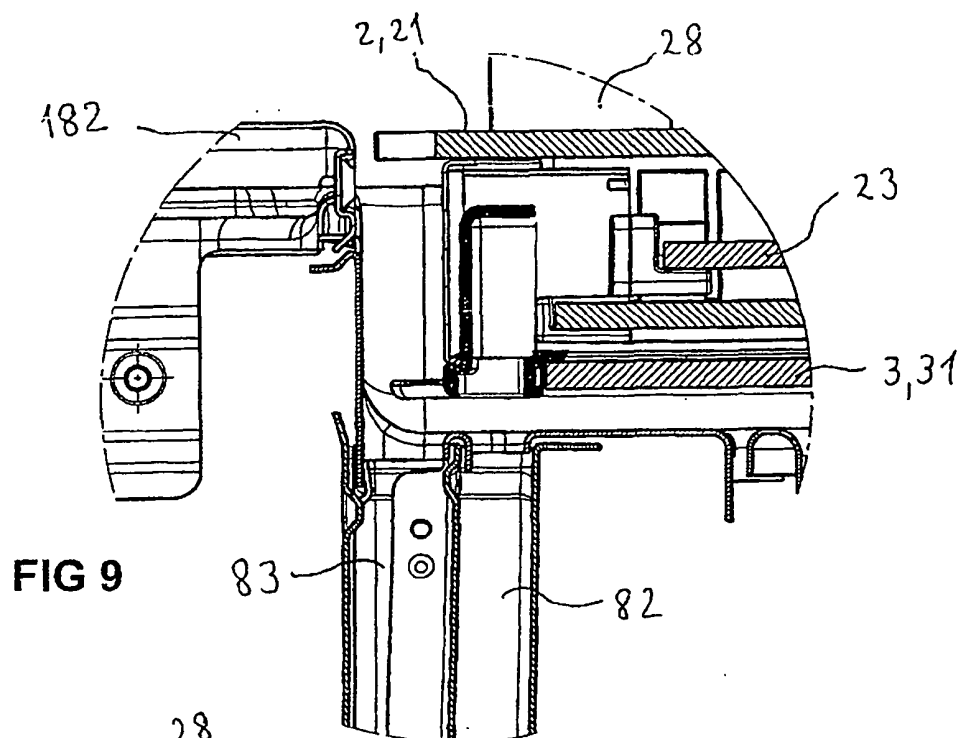
- 5 1. Porte de four (1, 1') pour fermer une cavité de cuisson d'un four, en particulier d'un four domestique, comprenant une unité extérieure (2, 2') et une unité intérieure (3, 3'), contenant une plaque interne (31), au moins l'une des unités (2, 3 ; 2', 3') étant pourvue d'au moins une ouverture de ventilation (33A, 33B, 33A', 33B') et l'unité interne (3) contenant un cadre (32) s'étendant sur la zone transversale supérieure (33B') de la plaque interne (31),
caractérisée en ce que
 le cadre (32) s'étend par-dessus les zones latérales (32B') de la plaque interne (31), l'unité externe (2') comprend au moins un crochet d'encliquetage (72B'), et l'unité interne (3') comprend, à la base de sa zone latérale (32B'), une encoche (73B') formée en tant qu'ouverture rectangulaire, de telle sorte que le crochet d'encliquetage (72B') puisse être poussé de manière amovible dans l'encoche (73B') pour connecter l'unité externe (2') et l'unité interne (3'), la connexion pouvant être à nouveau libérée en poussant le crochet d'encliquetage (72B'),
 la ventilation de la porte (1) étant assurée par un flux d'air (A) qui est aspiré depuis le fond, est guidé à travers l'intérieur de la porte (1) et est dirigé à travers l'au moins une ouverture de ventilation (33A, 33B) jusqu'à une zone d'aspiration d'air du four reliée à l'au moins une ouverture de ventilation (33A, 33B, 33A', 33B') dans une position fermée de la porte (1, 1') et l'au moins une ouverture de ventilation (33A, 33B) étant disposée à proximité de la zone transversale supérieure (33B') de la plaque interne (31) et étant située dans le même plan ou au même niveau que la plaque interne (31).
- 20 2. Porte de four (1) selon la revendication 1, **caractérisée en ce que** l'unité externe (2) contient une plaque avant (21), deux éléments verticaux (22A, 22B) agencés sur la plaque avant (21) et au moins une plaque intérieure (23) disposée entre les éléments verticaux (22A, 22B), un flux d'air (A) étant en particulier guidé entre la plaque avant (21) et la plaque intérieure (22).
- 25 3. Porte de four (1) selon la revendication 1 ou 2, **caractérisée en ce que** l'au moins une ouverture de ventilation (33A, 33B) présente approximativement la même largeur que la plaque intérieure (23).
- 30 4. Porte de four (1) selon l'une quelconque des revendications 1 à 3, **caractérisée en ce que** l'au moins une ouverture de ventilation (33A, 33B) est disposée entre la zone transversale supérieure du cadre (32) et la plaque interne (31).
5. Porte de four (1) selon la revendication 4, **caractérisée en ce que** l'au moins une ouverture de ventilation (33A, 33B) est disposée dans une barre de ventilation séparée.
- 35 6. Porte de four (1) selon la revendication 4 ou 5, **caractérisée en ce que** l'au moins une ouverture de ventilation (33A, 33B) est disposée dans un prolongement du cadre (32) qui est adjacent à la plaque interne (31) au niveau de la cavité de cuisson.
- 40 7. Porte de four (1) selon l'une quelconque des revendications précédentes, **caractérisée en ce que** l'intérieur de la porte (1) présente au moins une ouverture ou s'ouvre vers le bas, pour aspirer l'air ambiant.
- 45 8. Porte de four (1) selon la revendication 2 ou selon l'une quelconque des revendications précédentes dans la mesure où elles dépendent de la revendication 2, **caractérisée en ce que** le flux d'air (A), conduit à travers l'intérieur de la porte (1), est conduit à travers l'espace entre la plaque avant (21) et la plaque intérieure (23).
9. Porte de four (1) selon l'une quelconque des revendications précédentes, **caractérisée en ce que** l'unité interne (3) est montée sur l'unité externe (2).
- 50 10. Porte de four (1) selon l'une quelconque des revendications précédentes, **caractérisée en ce que** le cadre (32) est guidé par au moins un moyen de connexion dans les éléments verticaux (22A, 22B) de l'unité externe (2).
11. Porte de four (1) selon l'une quelconque des revendications précédentes, **caractérisée en ce que** le cadre (32) est fabriqué au moins en partie de métal, en particulier d'acier.
- 55 12. Four comprenant une cavité de cuisson et une porte de four, pour fermer la cavité de cuisson, selon l'une des revendications 1 à 11.











REFERENCES CITED IN THE DESCRIPTION

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