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(54) **OVEN DOOR FOR AN OVEN CAVITY OF A COOKING OVEN**

OFENTÜR FÜR EINEN OFENINNENRAUM EINES BACKOFENS

PORTE DE FOUR POUR UNE CAVITÉ DE FOUR D'UN FOUR DE CUISSON

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Description

[0001] The present invention relates to an oven door for an oven cavity of a cooking oven according to the preamble of claim 1. Further, the present invention relates to a cooking oven according to the preamble of claim 12. In particular, the present invention relates to an oven door and a cooking oven, respectively, for a domestic appliance.

[0002] For cooking ovens, several types of oven doors for closing the oven cavity are known in the prior art. An important aspect of the oven door is that the outer surface of said oven door is not heated-up too much during the cooking process. This improves the comfort of the cooking oven and decreases the risk of being burned. Another aspect of the oven door is that all components of the oven door have to withstand high temperatures. In particular, if a pyrolytic cleaning mode is activated, then temperatures up to 500°C occur in the oven cavity. For this purpose, an inner glass panel made of borosilicate glass is used as a first temperature protection shield. Further intermediate glass panels may be arranged inside the oven door. The glass panels are usually fixed at the oven door by a structure made of metal and/or plastics. Since standard plastic materials cannot withstand a very high temperature, the oven door has to be ventilated in order to cool down and to avoid the melting of plastic components.

[0003] EP 2 090 831 A1 discloses an oven door with a door frame made of steel. Said door frame surrounds at least partially the interior of the oven door. An inner plate is attached at an inner side of the door frame. An opening for ventilation is arranged between the inner glass panel and an upper frame part of the door frame.

[0004] In a closed state of the oven door, the opening for ventilation is connected to a suction area of an air channel of the oven.

[0005] It is an object of the present invention to provide an oven door with an improved heat resistance by low complexity.

[0006] The object is achieved by the oven door according to claim 1.

[0007] According to the present invention the ventilation opening is formed by a cut-out in the inner glass panel, so that a lower side and lateral sides of said ventilation opening are bordered by the inner glass panel and an upper side of said ventilation opening is bordered by the upper frame part, wherein either an inner side of the upper frame part is in the same plane as the inner side of the inner glass panel or the upper frame part protrudes inwardly.

[0008] The main idea of the present invention is the structure of the ventilation opening. Three sides of the ventilation opening are enclosed by one component, i.e. the inner glass panel, while the remaining side is bordered by the upper frame part. The inner side of the upper frame part is at least in the same plane as the inner side of the inner glass panel. Alternatively, the inner side of

the upper frame part protrudes inwardly, i.e. into the direction of the air channel.

[0009] Preferably, the inner glass panel is made of borosilicate glass. The borosilicate glass has a heat resistance sufficient for pyrolytic cleaning.

[0010] In particular, the lateral frame parts are made of metal, preferably of stainless steel. Metal and glass have substantially the same thermal expansion coefficient.

[0011] According to one embodiment, the upper frame part is made of metal, preferably of stainless steel.

[0012] According to another embodiment, the upper frame part is made of borosilicate glass. In this case, the ventilation opening is completely bordered by glass.

[0013] Further, the lateral frame parts may be glued at an outer side of the inner glass panel.

[0014] Moreover, the upper frame part may be glued on upper ends of the lateral frame parts.

[0015] In a similar way, the door columns are glued at the inner side of the front panel.

[0016] Additionally, at least one intermediate glass panel may be arranged or arrangeable between the inner glass panel and the front panel. Said intermediate glass panel may be arranged or arrangeable between the lateral frame parts and/or between the door columns.

[0017] Preferably, the first unit and the second unit are detachably connected or connectable to each other and form the oven door. This allows an easy cleaning of the oven door by the user.

[0018] Furthermore, the lateral frame part is connected or connectable to the corresponding door column by at least one snap-in mechanism, wherein preferably the lateral frame part includes at least one notch and the corresponding door column includes at least one snapping hook.

[0019] The oven door may comprise a door handle attached detachably or permanently at an outer side of the front panel.

[0020] Further, the present invention relates to a cooking oven comprising an oven cavity, an oven door for closing a front opening of said oven cavity and an air channel arranged above the oven cavity, wherein a suction hole of the air channel is arranged above the oven cavity, and wherein the oven door includes a ventilation opening connected or connectable to the suction hole, wherein the cooking oven comprises an oven door mentioned above.

[0021] In particular, the inner glass panel covers completely the front opening of the oven cavity, when the oven door is in a closed state.

[0022] Further, the cooking oven may include an exhaust opening of the air channel, wherein said exhaust opening is arranged above the suction hole of the air channel.

[0023] Preferably, the appendix of the upper frame part is arranged between the suction hole and the exhaust opening of the air channel, when the oven door is in the closed state. This allows an improved separation be-

tween the suction hole and the exhaust opening of the air channel.

[0024] Novel and inventive features of the present invention are set forth in the appended claims.

[0025] The present invention will be described in further detail with reference to the drawing, in which

FIG 1 illustrates a schematic perspective view of an oven door according to a first embodiment of the present invention,

FIG 2 illustrates a schematic exploded perspective view of the oven door according to the first embodiment of the present invention,

FIG 3 illustrates a schematic perspective view of the oven door according to a second embodiment of the present invention,

FIG 4 illustrates a schematic perspective view of an inner glass panel and a door frame for the oven door according to the second embodiment of the present invention,

FIG 5 illustrates a schematic exploded perspective view of the inner glass panel and the door frame for the oven door according to the second embodiment of the present invention,

FIG 6 illustrates a schematic sectional side view of an upper portion of the oven door according to the first embodiment of the present invention, and

FIG 7 illustrates a schematic sectional side view of the upper portion of the oven door according to a third embodiment of the present invention arranged at a cooking oven.

[0026] FIG 1 illustrates a schematic perspective view of an oven door 10 according to a first embodiment of the present invention. In particular, said oven door 10 is provided for closing and opening an oven cavity of a cooking oven. In this example, the oven door 10 is pivoting around a horizontal axis, wherein said horizontal axis is arranged below or in a lower portion of an opening of the oven cavity.

[0027] The oven door 10 comprises a front panel 12, an inner glass panel 14 and a door frame 20. The door frame 20 is substantially arranged between the inner glass panel 14 and the front panel 12. The door frame 20 includes an upper frame part 24 and two lateral frame parts 26. The height and width of the front panel 12 are bigger than the height and width of the inner glass panel 14. Further, the oven door 10 comprises a door handle 22 attached at an outer side of the front panel 12.

[0028] A ventilation opening 30 is formed as a cut-out in the upper portion of the inner glass panel 14. The ventilation opening 30 is formed as longitudinal cut-out ex-

tending along a horizontal direction. The ventilation opening 30 is formed as a gap between the inner glass panel 14 and the upper frame part 24 of the door frame 20.

[0029] The terms "outer", "inner", "upper", "horizontal" and they like relate to the mounted state and closed position of the oven door 10.

[0030] In the first embodiment, the upper frame part 24 and the two lateral frame parts 26 are made of metal. Preferably, the upper frame part 24 and the two lateral frame parts 26 are made of stainless steel. In this example, the inner glass panel 14 is made of borosilicate glass.

[0031] FIG 2 illustrates a schematic exploded perspective view of the oven door 10 according to the first embodiment of the present invention. The oven door 10 comprises the front panel 12, the inner glass panel 14 and the door frame 20. The door frame 20 includes the upper frame part 24 and the both lateral frame parts 26.

[0032] Two door columns 28 are attached at the inner side of the front panel 12. The door columns 28 extend vertically in the mounted and closed state of the oven door. Preferably, the door columns 28 are permanently attached at the front panel 12. The door frame 20 and the inner glass panel 14 form a first unit, which is attachable at the door columns 28. The front panel 12 and the door columns 28 form a second unit.

[0033] Each lateral frame part 26 includes at least one notch 32, while each door column 28 includes at least one corresponding snapping hook 34. In this example, each lateral frame part 26 includes one notch 32, and each door column 28 includes one snapping hook 34. The notch 32 of the lateral frame part 26 and the corresponding snapping hook 34 of the door column 28 form a snap-in mechanism. The first unit and the second unit are connectable by the snap-in mechanism.

[0034] Further, an outer intermediate glass panel 16 and an inner intermediate glass panel 18 are arranged between the inner glass panel 14 and the front panel 12. The outer intermediate glass panel 16 and the inner intermediate glass panel 18 are arranged between the door columns 28. Thus, the width of the inner glass panel 14 is bigger than the widths of the outer intermediate glass panel 16 and inner intermediate glass panel 18. In this example, the oven door comprises two intermediate glass panels 16 and 18. In general, the oven door may comprise one or more intermediate glass panels.

[0035] FIG 3 illustrates a schematic perspective view of the oven door 10 according to a second embodiment of the present invention. The oven door 10 according to the second embodiment is similar as the oven door 10 of the first embodiment.

[0036] The oven door 10 comprises the front panel 12, the inner glass panel 14 and the door frame 20. The door frame 20 is substantially arranged between the inner glass panel 14 and the front panel 12. The door frame 20 includes the upper frame part 24 and two lateral frame parts 26. The height and width of the front panel 12 are bigger than the height and width of the inner glass panel 14. Further, the oven door 10 comprises the door handle

22 attached at an outer side of the front panel 12.

[0037] The ventilation opening 30 is formed as the cut-out in the upper portion of the inner glass panel 14, wherein said ventilation opening 30 is formed as longitudinal cut-out extending along a horizontal direction. The ventilation opening 30 is formed as the gap between the inner glass panel 14 and the upper frame part 24 of the door frame 20.

[0038] In the second embodiment the upper frame part 24 of the glass frame 20 is made of glass, while the two lateral frame parts 26 are made of metal. In particular, the inner glass panel 14 and the upper frame part 24 are made of borosilicate glass. Preferably, the lateral frame parts 26 are made of stainless steel.

[0039] FIG 4 illustrates a schematic perspective view of the inner glass panel 14 and the door frame 20 for the oven door 10 according to the second embodiment of the present invention. The inner glass panel 14 and the door frame 20 form the first unit.

[0040] Preferably, the door frame 20 is permanently attached at the inner glass panel 14. The lateral frame parts 26 are attached at the outer side of the inner glass panel 14. The upper frame part 24 is attached at the upper ends of said lateral frame parts 26.

[0041] The ventilation opening 30 is formed as the cut-out in the upper portion of the inner glass panel 14. The ventilation opening 30 extends over the central upper portion of the inner glass panel 14. The width of the ventilation opening 30 is marginally smaller than the width of the inner glass panel 14. Thus, the lateral portions of the inner glass panel 14 have the full height of said inner glass panel 14. In contrast, the central portion of the inner glass panel 14 has a reduced height of said inner glass panel 14.

[0042] FIG 5 illustrates a schematic exploded perspective view of the inner glass panel 14 and the door frame 20 for the oven door 10 according to the second embodiment of the present invention.

[0043] The lateral frame parts 26 are attached at the outer side of the inner glass panel 14. Preferably, the lateral frame parts 26 are glued on the outer side of the inner glass panel 14. The upper frame part 24 is attached at the upper ends of said lateral frame parts 26. For example, the upper frame part 24 is glued on the upper ends of the lateral frame parts 26. The longitudinal ventilation opening 30 extend horizontally between the inner glass panel 14 and the upper frame part 24. The ventilation opening 30 extends over the central upper portion of the first unit. The width of the ventilation opening 30 is marginally smaller than the widths of the inner glass panel 14 and the upper frame part 26. The lateral portions of the inner glass panel 14 have the full height of said inner glass panel 14, while the central portion of the inner glass panel 14 has a reduced height of said inner glass panel 14.

[0044] FIG 6 illustrates a schematic sectional side view of an upper portion of the oven door 10 according to the first embodiment of the present invention.

[0045] The door handle 22 is attached at the outer side of the front panel 12. The door columns 28 are attached at the inner side of the front panel 12. The front panel 12 and the door columns 28 form the first unit. The lateral frame parts 26 are attached at the outer side of the inner glass panel 14. In turn, the upper frame part 24 is attached at the upper ends of said lateral frame parts 26. The inner glass panel 14 and the door frame 20 including the upper frame part 24 and the lateral frame parts 26 form the second unit. The first unit and second unit are connected by the snap-in mechanism between the lateral frame part 26 and door columns 28.

[0046] FIG 6 clarifies that the inner side of the upper frame part 24 is in the same plane as the inner side of the inner glass panel 14.

[0047] FIG 7 illustrates a schematic sectional side view of the upper portion of the oven door 10 according to a third embodiment of the present invention arranged at the cooking oven 36. The oven door 10 is in the closed state.

[0048] The oven door 10 comprises the front panel 12, the inner glass panel 14 and the door frame 20. The door frame 20 includes the upper frame part 24 and the two lateral frame parts 26. The height and width of the front panel 12 are bigger than the height and width of the inner glass panel 14. The oven door 10 comprises the door handle 22 attached at the outer side of the front panel 12. The outer intermediate glass panel 16 and the inner intermediate glass panel 18 are arranged between the inner glass panel 14 and the front panel 12. The ventilation opening 30 is arranged between the inner glass panel 14 and the upper frame part 24.

[0049] The oven door 10 is attached at the cooking oven 36. The oven door 10 is in the closed state. The cooking oven 36 comprises the oven cavity 40, a front frame 38 and an air channel 42. The front frame 38 encloses the front opening of the oven cavity 40. The air channel 42 is arranged above the oven cavity 40. The air channel 42 includes a suction hole 44 and an exhaust opening 46.

[0050] The ventilation opening 30 of the oven door 10 is arranged in front of the suction hole 44 of the air channel 42. Thus, the inner space of the oven door is connected to the air channel 42. The air channel 42 effects an air stream inside the oven door 10. In particular, the front panel 12 is cooled-down by said air stream. In the closed state of the oven door 10, the oven cavity 40 on the one hand and the air channel 42, the suction hole 44, the exhaust opening 48 and the ventilation opening 30 on the other hand are separated by a gasket 48.

[0051] The oven door 10 according to the third embodiment is similar as the oven door 10 of the first embodiment. The oven door 10 of the third embodiment differs from that of the first embodiment in that the upper frame part 24 protrudes at the inner side of the oven door 10. Thus, the inner side of the upper frame part 24 is closer to the front frame 38 of the cooking oven 36 as the inner glass panel 14. The upper frame part 24 includes an ap-

pendix 50. Said appendix 50 forms the innermost part of the upper portion of the oven door 10. The appendix 50 improves the spatial separation between the suction hole 44 and the exhaust opening 46. This avoids a bypass between the suction hole 44 and the exhaust opening 46.

[0052] The oven door 10 according to the present invention is suitable for pyrolytic cleanings. The inner glass panel 14 is made of a sufficiently heat resistant material, in particular borosilicate glass. The lower side and the lateral sides of the ventilation opening 30 are bordered by the inner glass panel 14 made of heat resistant material. The upper side of the ventilation opening 30 is bordered by the upper frame part 24 of the door frame 20. The upper frame part 24 is made of steel or glass, preferably stainless steel or borosilicate glass, respectively. According to the first and second embodiments, the inner side of the upper frame part 24 is in the same plane as the inner side of the inner glass panel 14. According to the third embodiment, the inner side of the upper frame part 24 protrudes and includes the appendix 50.

Metal and glass, in particular stainless steel and borosilicate glass have similar thermal expansion coefficients. The contact between the inner glass panel 14 and the metallic parts of the door frame 20 allows a substantially uniform heat distribution at the inner glass panel 14, so that a bending of the inner glass panel 14 is avoided.

List of reference numerals

[0053]

10	oven door
12	front panel
14	inner glass panel
16	outer intermediate glass panel
18	inner intermediate glass panel
20	door frame
22	door handle
24	upper frame part
26	lateral frame part
28	door column
30	ventilation opening
32	notch
34	snapping hook
36	cooking oven
38	front frame
40	oven cavity
42	air channel
44	suction hole
46	exhaust opening
48	gasket
50	appendix

Claims

1. An oven door (10) for an oven cavity (40) of a cooking oven (36), wherein

- the oven door (10) comprises a first unit (12, 28) and a second unit (14, 20),
- the first unit includes a front panel (12) and at least two door columns (28) permanently attached at an inner side of said front panel (12) relating to a mounted state and closed position of the oven door (10),
- the second unit includes an inner glass panel (14) and a door frame (20) permanently attached at said inner glass panel (14),
- the door frame (20) includes an upper frame part (24) and two lateral frame parts (26) relating to the mounted state and closed position of the oven door (10),
- the lateral frame parts (26) are permanently attached at an outer side of the inner glass panel (14) relating to the mounted state and closed position of the oven door (10),
- the upper frame part (24) is permanently attached at upper ends of the lateral frame parts (26) relating to the mounted state and closed position of the oven door (10),
- the lateral frame parts (26) are connected or connectable to the door columns (28) in each case, so that the first unit (12, 28) and the second unit (14, 20) are detachably or permanently connected or connectable, and
- a ventilation opening (30) is formed between the inner glass panel (14) and the upper frame part (24),

characterised in that

the ventilation opening (30) is formed by a cut-out in the inner glass panel (14), so that a lower side and lateral sides of said ventilation opening (30) are bordered by the inner glass panel (14) and an upper side of said ventilation opening (30) is bordered by the upper frame part (24), wherein either an inner side of the upper frame part (24) is in the same plane as the inner side of the inner glass panel (14) or the upper frame part (24) protrudes inwardly.

2. The oven door according to claim 1, **characterised in that** the inner glass panel (14) is made of borosilicate glass.
3. The oven door according to claim 1 or 2, **characterised in that** the lateral frame parts (26) are made of metal, preferably of stainless steel.
4. The oven door according to any one of the preceding claims, **characterised in that** the upper frame part (24) is made of metal, preferably of stainless steel.

5. The oven door according to any one of the claims 1 to 3,
characterised in that
the upper frame part (24) is made of borosilicate glass. 5
6. The oven door according to any one of the preceding claims,
characterised in that
the lateral frame parts (26) are glued at an outer side of the inner glass panel (14), wherein preferably the upper frame part (24) is glued on upper ends of the lateral frame parts (26). 10
7. The oven door according to any one of the preceding claims,
characterised in that
the door columns (28) are glued at the inner side of the front panel (12). 15
8. The oven door according to any one of the preceding claims,
characterised in that
at least one intermediate glass panel (16, 18) is arranged or arrangeable between the inner glass panel (14) and the front panel (12), wherein preferably the intermediate glass panel (16, 18) is arranged or arrangeable between the lateral frame parts (26) and/or between the door columns (28). 20
9. The oven door according to any one of the preceding claims,
characterised in that
the first unit (12, 28) and the second unit (14, 20) are detachably connected or connectable to each other and form the oven door (10). 25
10. The oven door according to claim 9,
characterised in that
the lateral frame part (26) is connected or connectable to the corresponding door column (28) by at least one snap-in mechanism, wherein preferably the lateral frame part (26) includes at least one notch (32) and the corresponding door column (28) includes at least one snapping hook. 30
11. The oven door according to any one of the preceding claims,
characterised in that
the oven door (10) comprises a door handle (22) attached detachably or permanently at an outer side of the front panel (12). 35
12. A cooking oven (36) comprising an oven cavity (40), an oven door (10) for closing a front opening of said oven cavity (40) and an air channel (42) arranged above the oven cavity (40), wherein a suction hole (44) of the air channel (42) is arranged above the 40

oven cavity (40), and wherein the oven door (10) includes a ventilation opening (30) connected or connectable to the suction hole (44), and wherein at least one gasket (48) is arranged between the oven cavity (40) and the air channel (42),

characterised in that

the cooking oven (36) comprises an oven door (10) according to an one of the claim 1 to 11.

13. The cooking oven according to claim 12,
characterised in that
the inner glass panel (14) covers completely the front opening of the oven cavity (40), when the oven door (10) is in a closed state. 15

14. The cooking oven according to claim 12 or 13,
characterised in that
the cooking oven (36) includes an exhaust opening (46) of the air channel (42), wherein said exhaust opening (46) is arranged above the suction hole (44) of the air channel (42). 20

15. The cooking oven according to claim 14,
characterised in that
the appendix (50) of the upper frame part (24) is arranged between the suction hole (44) and the exhaust opening (46) of the air channel (42), when the oven door (10) is in the closed state. 25

Patentansprüche

1. Ofentür (10) für einen Ofeninnenraum (40) eines Backofens (36), wobei
- die Ofentür (10) eine erste Einheit (12, 28) und eine zweite Einheit (14, 20) umfasst,
 - die erste Einheit eine Frontplatte (12) und wenigstens zwei Türsäulen (28) umfasst, die dauerhaft an einer Innenseite der Frontplatte (12), bezogen auf einen montierten Zustand und eine geschlossene Position der Ofentür (10), angebracht sind,
 - die zweite Einheit eine innere Glasplatte (14) und einen Türrahmen (20) umfasst, der permanent an der inneren Glasplatte (14) angebracht ist,
 - der Türrahmen (20) einen oberen Rahmenteil (24) und zwei seitliche Rahmentteile (26), bezogen auf den montierten Zustand und die geschlossene Position der Ofentür (10), aufweist,
 - die seitlichen Rahmentteile (26) an einer Außenseite der inneren Glasplatte (14) dauerhaft, bezogen auf den montierten Zustand und die geschlossene Position der Ofentür (10), angebracht sind,
 - der obere Rahmenteil (24) an oberen Enden der seitlichen Rahmentteile (26) dauerhaft be-

festigt ist, bezogen auf den montierten Zustand und die geschlossene Position der Ofentür (10),
 - die seitlichen Rahmenteile (26) jeweils mit den Türsäulen (28) verbunden beziehungsweise verbindbar sind, so dass die erste Einheit (12, 28) und die zweite Einheit (14, 20) lösbar oder dauerhaft verbunden oder verbindbar sind, und
 - eine Entlüftungsöffnung (30) zwischen der inneren Glasplatte (14) und dem oberen Rahmenteil (24) ausgebildet ist,

dadurch gekennzeichnet, dass

die Entlüftungsöffnung (30) durch einen Ausschnitt in der inneren Glasplatte (14) gebildet ist, so dass eine Unterseite und seitliche Seiten der Entlüftungsöffnung (30) von der inneren Glasplatte (14) begrenzt sind und eine Oberseite der Lüftungsöffnung (30) vom oberen Rahmenteil (24) begrenzt ist, wobei entweder eine Innenseite des oberen Rahmentells (24) in der gleichen Ebene wie die Innenseite der inneren Glasplatte (14) ist oder der obere Rahmenteil (24) nach innen vorragt.

2. Ofentür nach Anspruch 1,
dadurch gekennzeichnet, dass
 die innere Glasplatte (14) aus Borosilikatglas hergestellt ist.
3. Ofentür nach Anspruch 1 oder 2,
dadurch gekennzeichnet, dass
 die seitlichen Rahmenteile (26) aus Metall, vorzugsweise aus rostfreiem Stahl, hergestellt sind.
4. Ofentür nach einem der vorhergehenden Ansprüche,
dadurch gekennzeichnet, dass
 der obere Rahmenteil (24) aus Metall, vorzugsweise aus rostfreiem Stahl, hergestellt ist.
5. Ofentür nach einem der Ansprüche 1 bis 3,
dadurch gekennzeichnet, dass
 der obere Rahmenteil (24) aus Borosilikatglas hergestellt ist.
6. Ofentür nach einem der vorhergehenden Ansprüche,
dadurch gekennzeichnet, dass
 die seitlichen Rahmenteile (26) an einer Außenseite der inneren Glasscheibe (14) angeklebt sind, wobei vorzugsweise der obere Rahmenteil (24) an oberen Enden der seitlichen Rahmenteile (26) aufgeklebt ist.
7. Ofentür nach einem der vorhergehenden Ansprüche,
dadurch gekennzeichnet, dass
 die Türsäulen (28) an der Innenseite der Frontplatte (12) angeklebt sind.

8. Ofentür nach einem der vorhergehenden Ansprüche,
dadurch gekennzeichnet, dass
 wenigstens eine Zwischenglasplatte (16, 18) zwischen der inneren Glasplatte (14) und der Frontplatte (12) angeordnet oder anordenbar ist, wobei vorzugsweise die Zwischenglasplatte (16, 18) zwischen den seitlichen Rahmentteilen (26) und/oder zwischen den Türsäulen (28) angeordnet oder anordenbar ist.
9. Ofentür nach einem der vorhergehenden Ansprüche,
dadurch gekennzeichnet, dass
 die erste Einheit (12, 28) und die zweite Einheit (14, 20) abnehmbar miteinander verbunden oder verbindbar sind und die Ofentür (10) bilden.
10. Ofentür nach Anspruch 9,
dadurch gekennzeichnet, dass
 der seitliche Rahmenteil (26) mit der entsprechenden Türsäule (28) durch wenigstens einen Einrastmechanismus verbunden oder verbindbar ist, wobei vorzugsweise der seitliche Rahmenteil (26) wenigstens eine Kerbe (32) und die entsprechende Türsäule (28) wenigstens einen Einrasthaken umfasst.
11. Ofentür nach einem der vorhergehenden Ansprüche,
dadurch gekennzeichnet, dass
 die Ofentür (10) einen Türgriff (22) umfasst, der abnehmbar oder dauerhaft an einer Außenseite der Frontplatte (12) angebracht ist.
12. Backofen (36), umfassend einen Ofeninnenraum (40), eine Ofentür (10) zum Verschließen einer vorderen Öffnung des Ofeninnenraums (40) und einen Luftkanal (42), der oberhalb des Ofeninnenraums (40) angeordnet ist, wobei ein Ansaugloch (44) des Luftkanals (42) über dem Ofeninnenraum (40) angeordnet ist und wobei die Ofentür (10) eine Entlüftungsöffnung (30) aufweist, die mit dem Ansaugloch (44) verbunden oder verbindbar ist, und wobei wenigstens eine Dichtung (48) zwischen dem Ofeninnenraum (40) und dem Luftkanal (42) angeordnet ist,
dadurch gekennzeichnet, dass
 der Backofen (36) eine Ofentür (10) nach einem der Ansprüche 1 bis 11 umfasst.
13. Backofen nach Anspruch 12,
dadurch gekennzeichnet, dass
 die innere Glasplatte (14) die vordere Öffnung des Ofeninnenraums (40) vollständig abdeckt, wenn sich die Ofentür (10) in einem geschlossenen Zustand befindet.
14. Backofen nach Anspruch 12 oder 13,
dadurch gekennzeichnet, dass
 der Backofen (36) eine Abluftöffnung (46) des Luft-

kanals (42) aufweist, wobei die Abluftöffnung (46) oberhalb des Ansauglochs (44) des Luftkanals (42) angeordnet ist.

15. Backofen nach Anspruch 14,
dadurch gekennzeichnet, dass
der Fortsatz (50) des oberen Rahmenteils (24) zwischen dem Ansaugloch (44) und der Abluftöffnung (46) des Luftkanals (42) angeordnet ist, wenn sich die Ofentür (10) im geschlossenen Zustand befindet.

Revendications

1. Porte de four (10) pour une cavité de four (40) d'un four de cuisson (36),
la porte de four (10) comprenant une première unité (12, 28) et une seconde unité (14, 20),
la première unité comprenant un panneau avant (12) et au moins deux colonnes de porte (28) fixées en permanence au niveau d'un côté intérieur dudit panneau avant (12) par rapport à un état monté et à une position fermée de la porte de four (10),
la seconde unité comprenant un panneau de verre intérieur (14) et un cadre de porte (20) fixé en permanence au niveau dudit panneau de verre intérieur (14),
le cadre de porte (20) comprenant une partie de cadre supérieure (24) et deux parties de cadre latérales (26) par rapport à l'état monté et à la position fermée de la porte de four (10),
les parties de cadre latérales (26) étant fixées en permanence au niveau d'un côté extérieur du panneau de verre intérieur (14) par rapport à l'état monté et à la position fermée de la porte de four (10),
la partie de cadre supérieure (24) étant fixée en permanence au niveau d'extrémités supérieures des parties de cadre latérales (26) par rapport à l'état monté et à la position fermée de la porte de four (10),
les parties de cadre latérales (26) étant connectées ou pouvant être connectées aux colonnes de porte (28) dans chaque cas, de sorte que la première unité (12, 28) et la seconde unité (14, 20) soient connectées ou puissent être connectées amovibles ou de façon permanente, et
une ouverture de ventilation (30) étant formée entre le panneau de verre intérieur (14) et la partie de cadre supérieure (24),
caractérisée en ce que :

l'ouverture de ventilation (30) est formée par une découpe dans le panneau de verre intérieur (14), de sorte qu'un côté inférieur et des côtés latéraux de ladite ouverture de ventilation (30) soient longés par le panneau de verre intérieur (14) et qu'un côté supérieur de ladite ouverture de ventilation (30) soit longé par la partie de cadre supérieure (24), un côté intérieur de la partie

de cadre supérieure (24) étant dans le même plan que le côté intérieur du panneau de verre intérieur (14) ou la partie de cadre supérieure (24) faisant saillie vers l'intérieur.

2. Porte de four selon la revendication 1,
caractérisée en ce que :
le panneau de verre intérieur (14) est en verre borosilicaté.
3. Porte de four selon la revendication 1 ou 2,
caractérisée en ce que :
les parties de cadre latérales (26) sont en métal, de préférence en acier inoxydable.
4. Porte de four selon l'une quelconque des revendications précédentes,
caractérisée en ce que :
la partie de cadre supérieure (24) est en métal, de préférence en acier inoxydable.
5. Porte de four selon l'une quelconque des revendications 1 à 3,
caractérisée en ce que :
la partie de cadre supérieure (24) est en verre borosilicaté.
6. Porte de four selon l'une quelconque des revendications précédentes,
caractérisée en ce que :
les parties de cadre latérales (26) sont collées au niveau d'un côté extérieur du panneau de verre intérieur (14), de préférence la partie de cadre supérieure (24) étant collée sur des extrémités supérieures des parties de cadre latérales (26).
7. Porte de four selon l'une quelconque des revendications précédentes,
caractérisée en ce que :
les colonnes de porte (28) sont collées au niveau du côté intérieur du panneau avant (12).
8. Porte de four selon l'une quelconque des revendications précédentes,
caractérisée en ce que :
au moins un panneau de verre intermédiaire (16, 18) est disposé ou peut être disposé entre le panneau de verre intérieur (14) et le panneau avant (12), de préférence le panneau de verre intermédiaire (16, 18) étant disposé ou pouvant

être disposé entre les parties de cadre latérales (26) et/ou entre les colonnes de porte (28).

9. Porte de four selon l'une quelconque des revendications précédentes,
caractérisée en ce que :

la première unité (12, 28) et la seconde unité (14, 20) sont connectées ou peuvent être connectées amovibles l'une à l'autre et forment la porte de four (10).

10. Porte de four selon la revendication 9,
caractérisée en ce que :

la partie de cadre latérale (26) est connectée ou peut être connectée à la colonne de porte correspondante (28) par au moins un mécanisme d'encliquetage, de préférence la partie de cadre latérale (26) comprenant au moins une encoche (32) et la colonne de porte (28) correspondante comprenant au moins un crochet d'encliquetage.

11. Porte de four selon l'une quelconque des revendications précédentes,
caractérisée en ce que :

la porte de four (10) comprend une poignée de porte (22) fixée amovible ou de façon permanente au niveau d'un côté extérieur du panneau avant (12).

12. Four de cuisson (36) comprenant une cavité de four (40), une porte de four (10) permettant de fermer une ouverture avant de ladite cavité de four (40), et un canal d'air (42) disposé au-dessus de la cavité de four (40), un orifice d'aspiration (44) du canal d'air (42) étant disposé au-dessus de la cavité de four (40), et la porte de four (10) comprenant une ouverture de ventilation (30) connectée ou pouvant être connectée à l'orifice d'aspiration (44), et au moins un joint (48) étant disposé entre la cavité de four (40) et le canal d'air (42),
caractérisé en ce que :

le four de cuisson (36) comprend une porte de four (10) selon l'une quelconque des revendications 1 à 11.

13. Four de cuisson selon la revendication 12,
caractérisé en ce que :

le panneau de verre intérieur (14) couvre complètement l'ouverture avant de la cavité de four (40) quand la porte de four (10) est dans un état fermé.

14. Four de cuisson selon la revendication 12 ou 13,
caractérisé en ce que :

le four de cuisson (36) comprend une ouverture d'échappement (46) du canal d'air (42), ladite ouverture d'échappement (46) étant disposée au-dessus de l'orifice d'aspiration (44) du canal d'air (42).

15. Four de cuisson selon la revendication 14,
caractérisé en ce que :

l'appendice (50) de la partie de cadre supérieure (24) est disposé entre l'orifice d'aspiration (44) et l'ouverture d'échappement (46) du canal d'air (42) quand la porte de four (10) est dans l'état fermé.

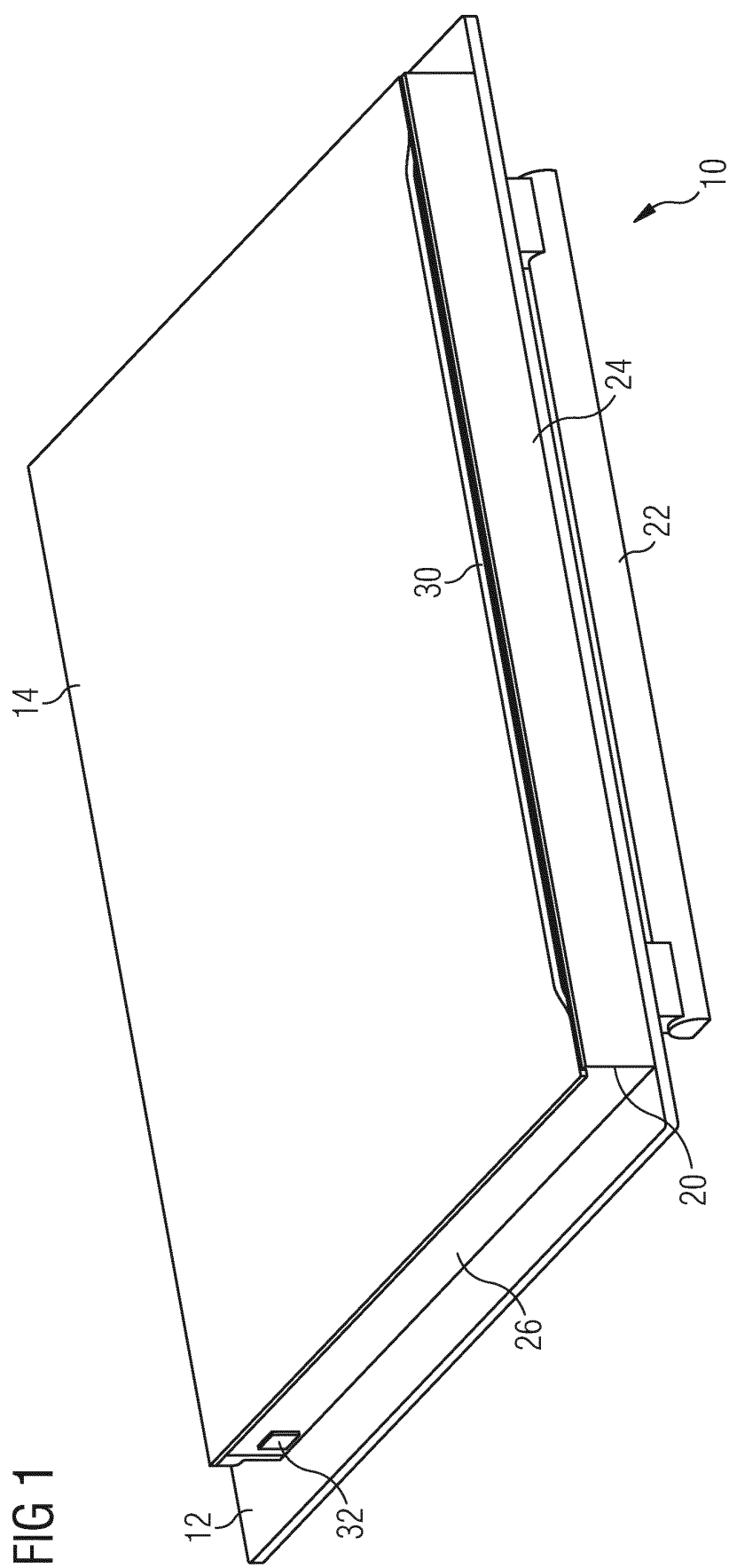


FIG 2

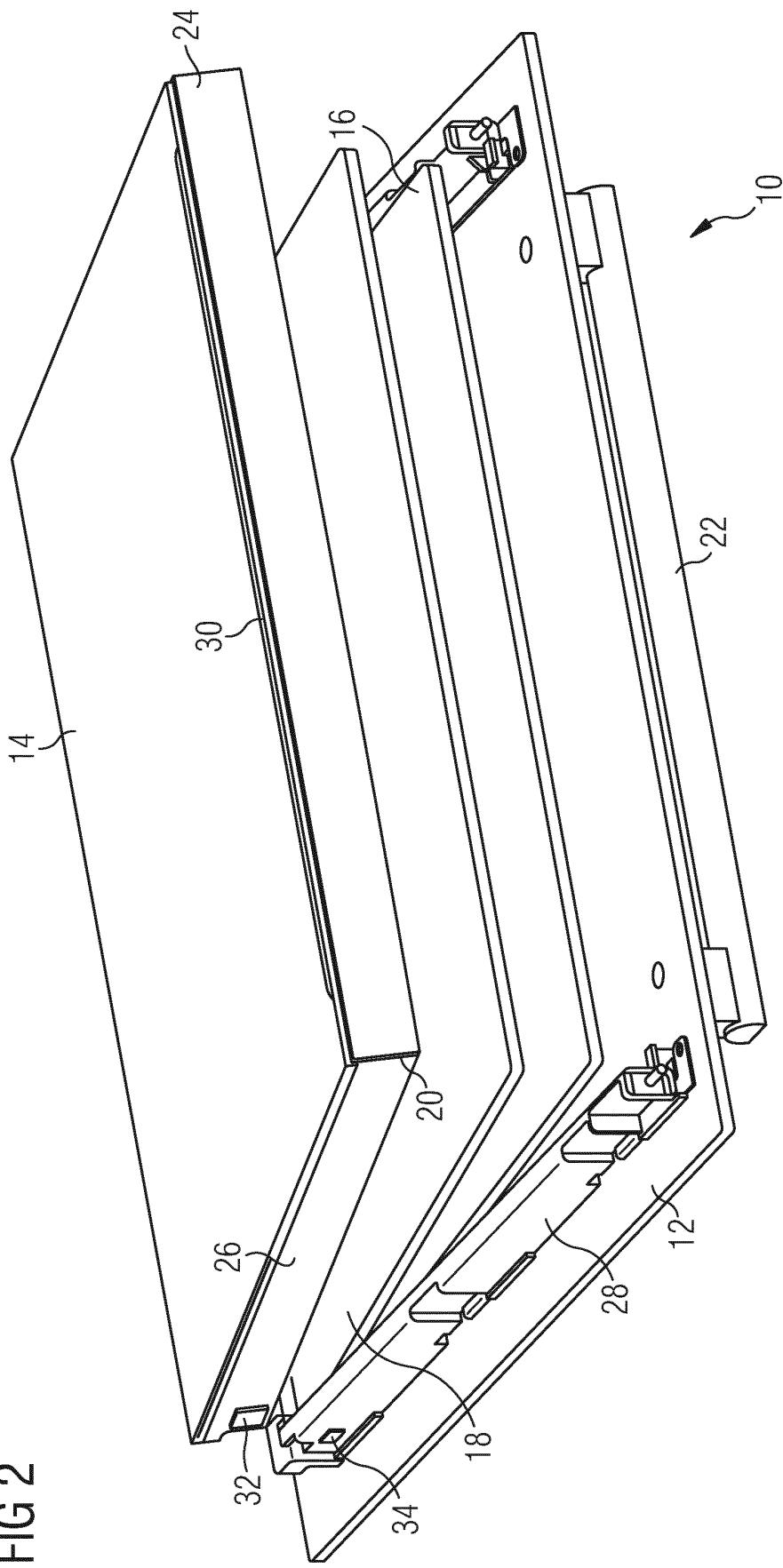


FIG 3

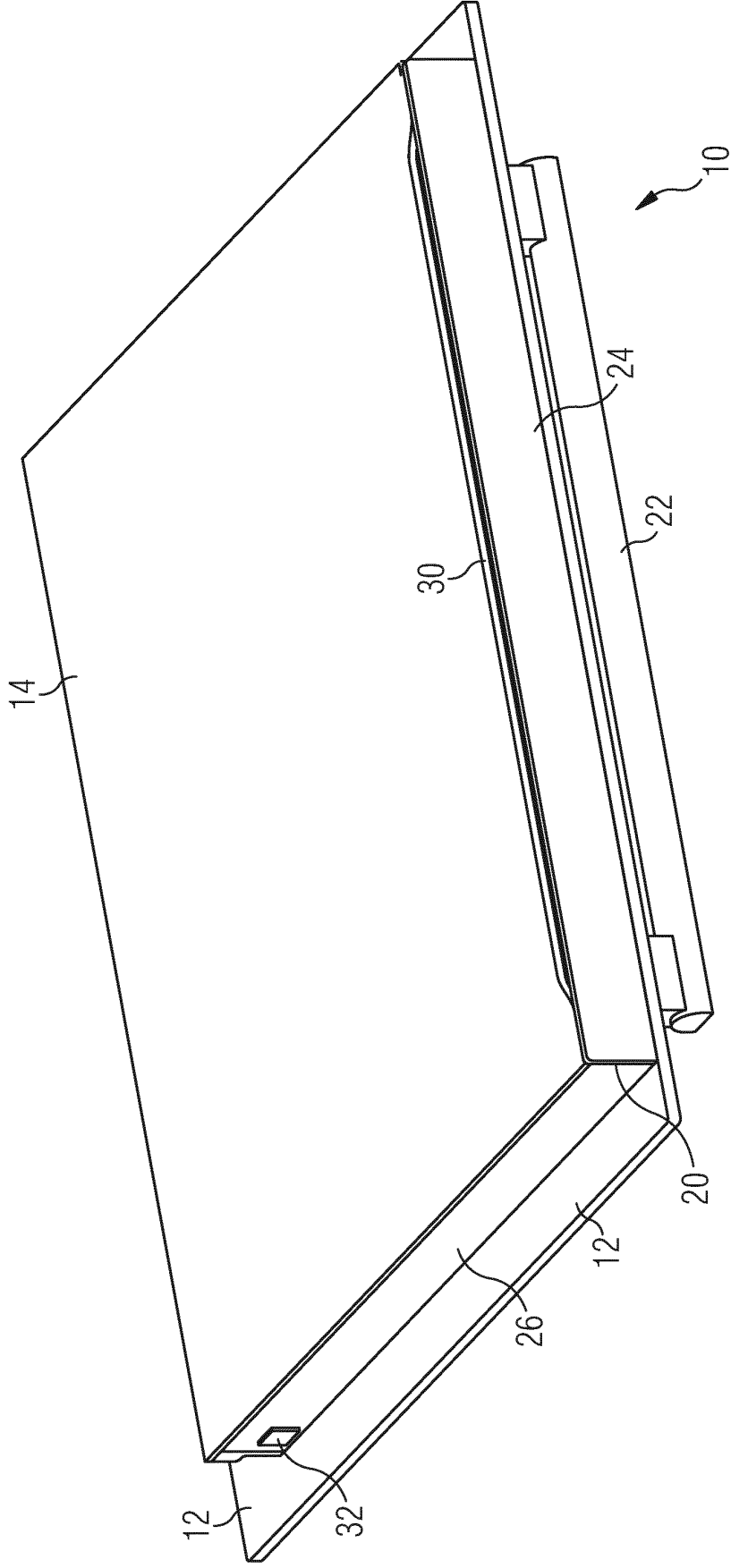


FIG 4

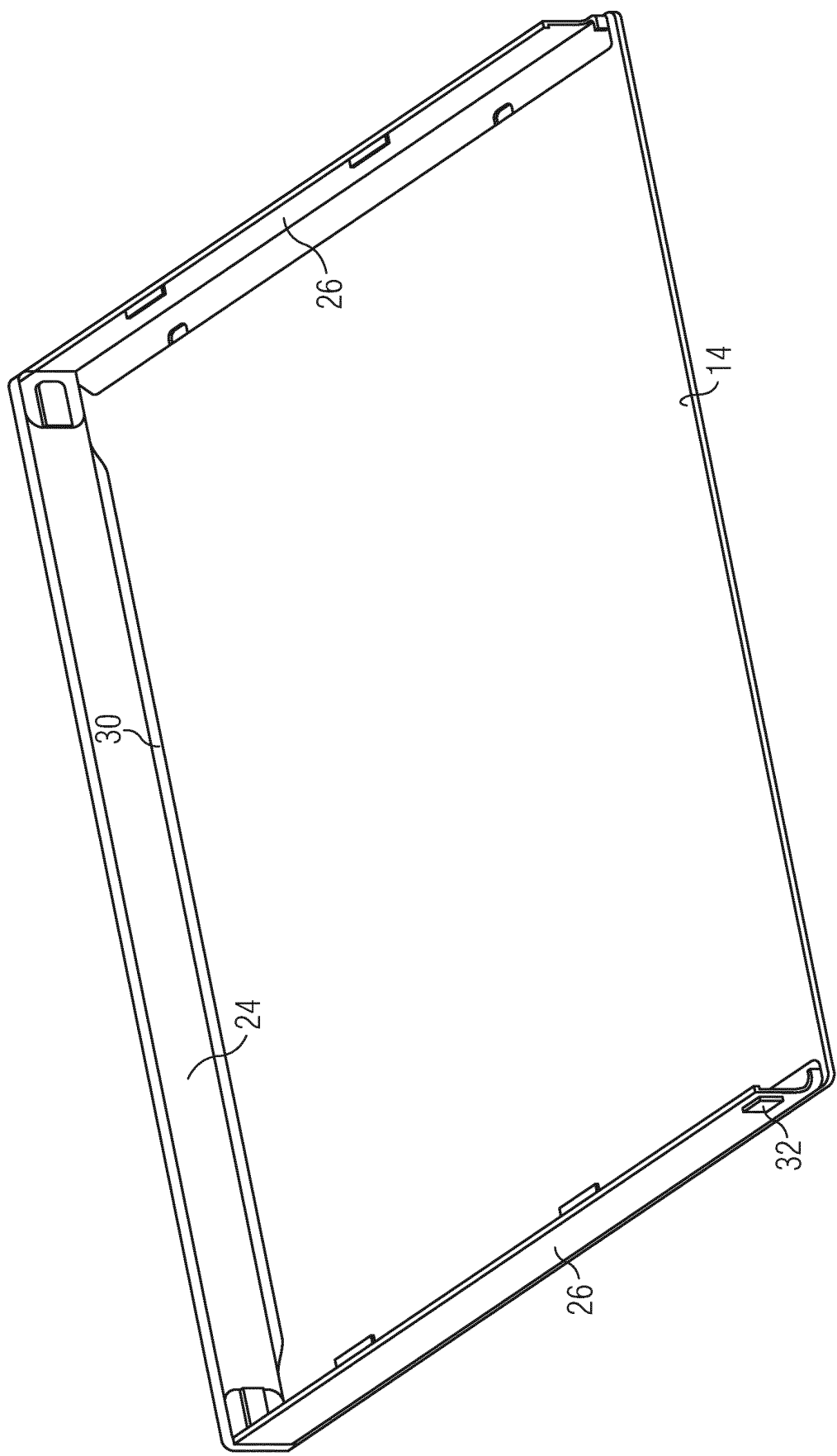


FIG 5

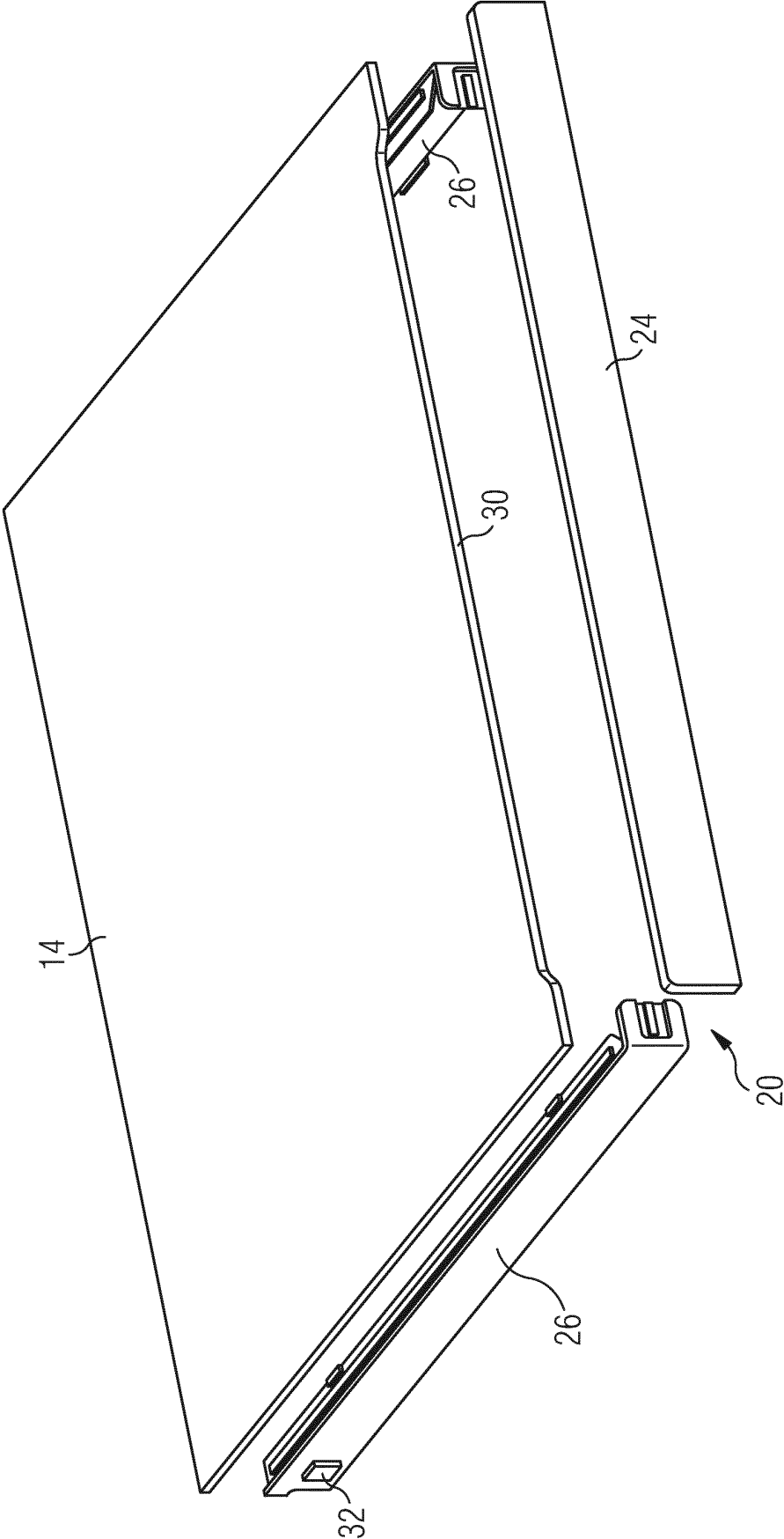


FIG 6

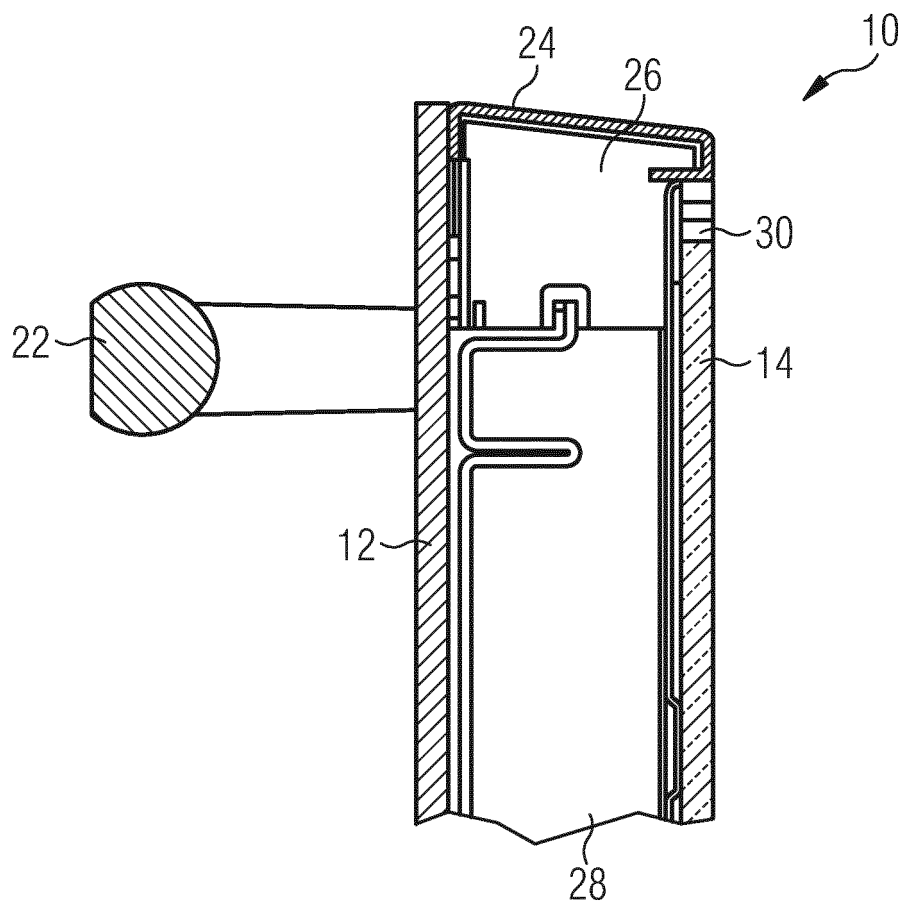
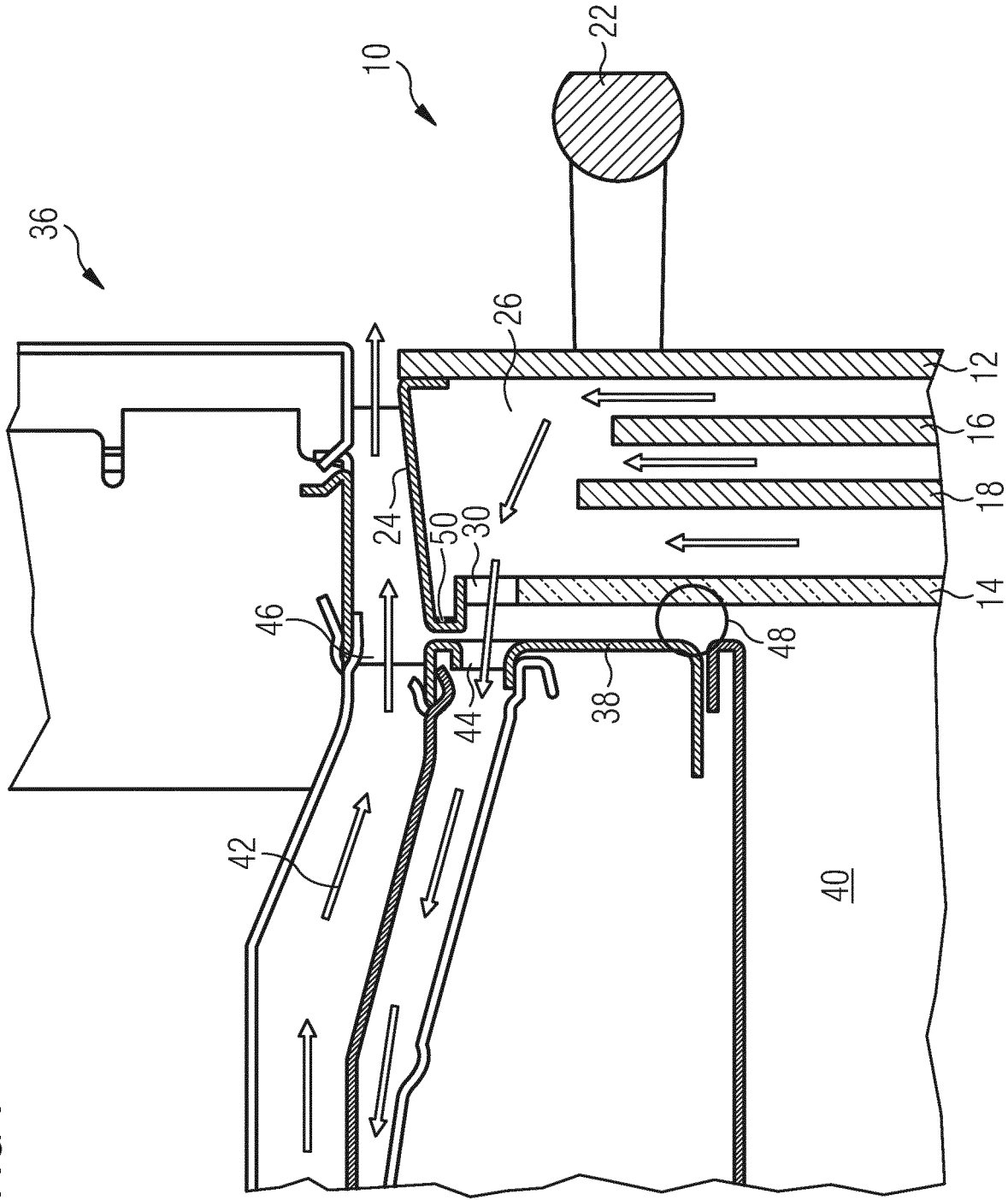


FIG 7



REFERENCES CITED IN THE DESCRIPTION

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