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# (54) COMBINATION APPLIANCE AND METHOD FOR ASSEMBLING THE SAME

KOMBINATIONSGERÄT UND VERFAHREN ZU DESSEN ZUSAMMENBAU

APPAREIL COMBINÉ ET SON PROCÉDÉ D'ASSEMBLAGE

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## Description

**[0001]** The present invention relates to a combination appliance comprising a cooking hob and an extraction device for removing air, specifically cooking vapours, from an area above the cooking hob according to the preamble of claim 1. The present invention further relates to a method for assembling a combination appliance comprising a cooking hob and an extraction device according to claim 11.

**[0002]** During the performance of cooking activities under use of a cooking hob, cooking vapours are generated, which are distributed over the cooking area. In order to avoid these cooking vapours to be spread throughout the entire kitchen space, an arrangement of an extraction device, particularly an extractor hood, is common. Said extraction device is operated in parallel to the cooking hob, thereby sucking in those cooking vapours in order to filter out particles and tiny droplets from the vapours and/or to blow the vapours to the outside of the building. While it has been common to arrange such an extractor hood above the cooking area, in recent years downdraft extraction devices have been finding a growing market. Such kind of extraction device is usually arranged below a worktop of the related cooking hob and it comprises at least one fan for sucking air from the cooking area through an opening arranged in the worktop. Such a configuration of a cooking hob and an extraction device being connected together in a combined arrangement is commonly called a combination appliance.

**[0003]** There are combination appliances known, in which the airstream is directed across the cooking hob in a vertical direction towards a lower area where the fan is located. The airstream is guided through a recess that commonly houses a filter unit. Said recess is shielded by an initial channel section unit, which separates the airflow from the interior of the cooking hob, notably in order to protect components, in particular electronic components, from getting into contact with the aspirated air that comprises cooking vapours. In order to keep the aspirated air including cooking vapours and respective moisture entirely away from the cooking hob components, the channel is sealed against casing parts of the cooking hob or of the combination appliance, respectively. To this end it is known to provide a sealed joint by using extra components like sponges squeezed between the top plate of the cooking hob and the initial channel section unit. According to the known solution, the sealing level is located above the upper surface of the top plate and a circumferential edge of the initial channel section unit compresses the sealant from above. This type of channel section installation from above, results in a loss of an unobstructed mobility of cookware during cooking activities, because of an absence of a flat cooking surface.

**[0004]** DE 10 2017 121367 A1 discloses the preamble of claim 1, disclosing a downdraft extractor hood with an air conveying channel having a box-shaped design and being positioned below a cooking surface. The air conveying channel is vertically arranged and includes two channel halves, which each communicate in a lower lateral area with an exhaust air suction chamber. A bottom wall of the air conveying channel is arranged in close proximity to a bottom wall of the exhaust air suction chamber.

**[0005]** US 2018/229171 A1 discloses a filter unit for a fume extraction device of a combination appliance, also comprising a cooktop. The fume extraction device includes a filter unit with a filter element and a collection region partially surrounding the filter unit for collecting a liquid. The collection region is formed in an overflow container, which is fixedly connected to the cover plate of the cooktop. Between the overflow container and the cover plate of the cooktop, a sealing ring is provided, which is received in a sealing slot on an upper edge of the overflow container.

**[0006]** DE 10 2016 130828 A1 discloses an extractor hood for the extraction of fumes below a hob plate through a suction opening. An air conveying channel is positioned below the suction opening. The air conveying channel includes a filter element for the filtration of the air stream. After passing the filter element, the air stream leaves the air conveying channel through an air outlet opening at a lower section of a channel side wall and is forwarded to a fan, which is configured to produce the airflow.

**[0007]** It is an object of the present invention to provide a combination appliance of the above-described nature that has a design allowing unhindered movements of cookware, specifically sliding motions, during cooking processes. According to a further object, a method for assembling a combination appliance shall be proposed, which provides a simple structure and an easy and inexpensive manufacturing.

**[0008]** The object is achieved for a combination appliance according to the preamble of claim 1 by the features of the characterizing part of claim 1.

**[0009]** A combination appliance, in particular for domestic use, comprises a cooking hob and an extraction device. The cooking hob, configured for cooking a food item thereon, is covered by a top plate or a worktop, which may be a glass plate. The top plate or worktop includes an opening or a recess that is formed therein providing a passage through the top plate or worktop. The extraction device is arranged below the top plate or worktop and comprises at least one fan for sucking air from an area above the cooking hob through the opening or recess of the top plate or worktop and for conveying the air through an air channel of the extraction device. The air channel of the extraction device includes a channel section, which is arranged downstream of the opening or recess and upstream of the fan. The channel section is further arranged adjacent to components, in particular electrical and/or electronic components, of the cooking hob. More specifically because of an impenetrable wall, the channel section forms a barrier for the prevention of the conveyed

air to get in contact with the components of the cooking hob. The channel section comprises an upper portion and a lower portion. The upper portion, which is particularly a top edge or top surface, abuts a surface zone of the top plate or worktop, particularly of the bottom of the top plate or worktop. Moreover, the lower portion, which is particularly a bottom surface, abuts and/or is supported by a wall section of the cooking hob. Said wall section is in particular a bottom wall section or a side wall section or an intermediate wall section.

**[0010]** The cooking hob being the source for the aspirated cooking vapours may be of any type including electric or gas cooking hobs. In particular, the electric cooking hob is an induction cooking hob. The cooking hob may further be an autarkic cooking appliance, particularly integrated in a countertop of kitchen furniture, or it may be part of a stove.

**[0011]** A top surface of the top plate or worktop, which is accessible to a user, may be used for putting cookware thereon, specifically in order to perform a cooking process. To this end, the cooking hob preferably comprises at least one heating element defining a cooking zone on the worktop or, specifically, the glass plate, which is favourably made out of glass ceramics.

**[0012]** One particular advantage of the solution according to the present invention is the fact that the top surface of the top plate or worktop is entirely kept in a flat execution and there are no obstacles provided to the user of the appliance, when moving the cookware along the cooking surface.

**[0013]** Said channel section, particularly also further sections of the air channel, may be made in plastic or any other suitable material, e. g. sheet metal.

**[0014]** More specifically, in order to provide an air discharge for conveyed air, the extraction device comprises an exhaust opening for blowing out the air into the atmosphere. Said exhaust opening is notably arranged at the end of the air channel downstream of the fan. Moreover, in order to purify the conveyed air from particles inside of the aspirated cooking vapours, at least one filter element or a filter unit may be arranged in the extraction device, more specifically in the path of the air stream, particularly inside of the air channel.

**[0015]** A preferred embodiment of the present invention provides for a sealing means, which is arranged or arrangeable at the upper portion of the channel section, in particular between the upper portion and the surface zone of the top plate or worktop. Additionally, or alternatively, the sealing means may be arranged or arrangeable at the lower portion of the channel section, in particular between the lower portion and the wall section of the cooking hob. Said sealing means are adapted to hermetically seal the cooking hob, in particular components of the cooking hob, off from the air conveyed through the air channel. This allows an entire aspiration of the cooking vapours through the opening or recess and prevents any air bypass.

**[0016]** One specific solution for the sealing means comprises a layer of glue, which is particularly a circumferential glue bead applied on or contacting the upper portion of the channel section. The upper portion of the channel section preferably surrounds a cross-sectional area of the interior space of the channel section. More preferably, the upper portion of the channel section surrounds a wall of the channel section. An entirely circumferential glue spread surrounding the interior of the channel section not only cares for a fixed connection between the top plate or worktop and the channel section, but also avoids any air bypass and allows to skip any specific additional sealing means.

**[0017]** The upper portion of the channel section may comprise a circumferential rim or collar laterally protruding from the channel section wall. The circumferential rim or collar and the bottom of the top plate or worktop are preferably aligned parallel to one another. Additionally, or alternatively, the circumferential rim or collar are preferably arranged or arrangeable spaced from the bottom of the top plate or worktop. The space between the circumferential rim or collar and the bottom of the top plate or worktop particularly forms a receiving space for the layer of glue. That way, the layer of glue is not squeezed out at any point of the area or its application, which would entail the risk of air leakage at a point without gluing.

**[0018]** According to an embodiment, the channel section comprises a pipe section, which includes an insertion space for housing a filter element or a filter unit. The channel section and/or pipe section may have any shape with an arbitrary cross section, however, a rectangular cross section, is a preferred solution for such section(s).

**[0019]** The channel section may comprise a supporting means, notably a first supporting means, or a fixation means for a, preferably releasably, fixed positioning of a filter element or a filter unit. In addition to that, or as an alternative solution, a supporting means, notably a second supporting means, for supporting a grid or a lid adapted to cover the opening or recess may be included. Said second supporting means is particularly a supporting surface or supporting frame or supporting element.

**[0020]** The extraction device according to the present invention may also be characterized by an outlet port of the channel section, which opens out into a suction compartment arranged downstream thereof and upstream of the fan. By this means, after having passed the channel section, the conveyed air is supplied, particularly directly supplied, to the fan.

**[0021]** According to embodiments, a circumferential protection edge is arranged at the upper portion of the channel section, which protection edge abuts lateral edges of a cutout of the top plate or worktop, wherein the cutout is specified by the opening or recess. In particular, the cutout is rectangular, specifically when also the channel section is of a rectangular shape. More specifically, the protection edge is arranged at an inlet port located at the opening or recess, thus protecting the edges of the cutout from any mechanical damages.

**[0022]** The combination appliance is advantageously

characterized by a wall of the channel section, which comprises a double-walled structure including an inner channel section wall and an outer channel section wall. Moreover, the inner channel section wall opens out into a suction compartment arranged downstream thereof and upstream of the fan and particularly penetrates the bottom wall. The outer channel section wall is preferably supported by the bottom wall section of the cooking hob.

**[0023]** Supporting ribs may be arranged between the inner channel section wall and the outer channel section wall. Said supporting ribs are particularly orthogonally arranged to the inner and outer channel section walls.

**[0024]** According to the present invention, a lower portion, which is a lower end surface, of the channel section wall is supported by a bottom wall section of the cooking hob. Said bottom wall section is more specified by a protrusion of the bottom wall protruding from a box or a compartment defined by walls, which comprise the bottom wall and a side wall adjacent to the channel section wall. As an alternative, the bottom wall section is a circumferential edge of a cutout in the bottom wall.

**[0025]** A sealing function may be integrated at the lower portion as well. This may be designed in that way that a suction effect of the fan only affects the interior of the channel section, while no suction effect affecting the interior of the cooking hob is performed. Therefore, the lower sealing means are designed in a way that no or at least a very low bypass air suction is established. This is particularly received by respective surfaces and/or edges of both walls, i. e. the inner channel section wall and the outer channel section wall, of the double-walled channel section, which abut at least one cooking hob wall. This way of two contacting areas with only small gaps implemented in series increase the sealing effect. Additionally, or alternatively, the double-walled concept may include a labyrinth sealing.

**[0026]** The object is further achieved for a method for assembling a combination appliance comprising a cooking hob and an extraction device according to the features of claim 11.

**[0027]** A method for assembling a combination appliance comprising a cooking hob and an extraction device, comprises at least a first and a second assembly step. In the first step, a channel section of an air channel of the extraction device is connected to a top plate or worktop of the cooking hob in a way that an inlet port of the channel section is assigned to an opening or recess formed in the top plate or worktop. The connection between channel section and top plate or worktop is preferably performed in an airtight, i. e. hermetical, manner. More preferably, the channel section is glued on the top plate or worktop. In the second step, the top plate or worktop is positioned on a substructure, in particular on a lower hob box, of the cooking hob. In doing so, the channel section is arranged alongside the substructure or penetrates the channel section, so that, as a result, the channel section extends from the opening or recess of the top plate or worktop to or through a bottom wall, in particular to or through a cutout in the bottom wall, of the cooking hob. Moreover, an outlet port of the channel section opens out or is provided to open out into a suction compartment of a fan of the extraction device. Said fan is configured for sucking air from the area above the cooking hob through the opening or recess of the top plate or worktop and for conveying the air through an air channel of the extraction device. The suction compartment of the fan is arranged beneath the cooking hob in an assembly step prior to the first step, between first and second steps or after the second step. The first assembly step may be performed at an installation location different from that one of the second assembly step. In particular, the first assembly step may be executed on a pre-assembly line.

**[0028]** According to a specific embodiment of the method according to the present invention, the channel section is connected during the first step to the top plate or worktop in a way that the central axis of the channel section passes through the centre of the opening or recess. That way, full alignment between the two involved components is established.

**[0029]** Prior to or at the beginning of the first step, a glue bead may be circumferentially applied on an upper portion, in particular on a top surface or top edge, of the channel section. The upper section preferably surrounds a cross-sectional area of the interior space of the channel section. More preferably, the upper section surrounds a wall of the channel section. Alternatively, the glue bead may by circumferentially applied on a border around the opening or recess of the bottom side of the top plate or worktop. More specifically, after said application of the glue bead, a glued joint is established between the upper portion of the channel section and the top plate or worktop. Said glue bead is not only provided for establishing a fixed connection, but also works as a sealing means for preventing air to pass through the respective junction.

**[0030]** In order to establish a particular compact structure and, more specifically, in order to further increase airtightness between the interior of the channel section and the interior of the cooking hob, the lower portion of the channel section is set down during the second step on the bottom wall of the cooking hob. This joining of the two components is performed in particular in a final stage of the second step. On this occasion an at least approximately airtight junction is preferably established at the contact zone. Said lower portion may be a bottom surface or bottom edge of the channel section.

**[0031]** Novel and inventive features of the present invention are set forth in the appended claims.

**[0032]** The present invention will be described in further detail with reference to the drawings, in which

Fig. 1 is a perspective view of a combination appliance comprising a cooking hob and a downdraft extraction device installed in a kitchen cabinet according to a first embodiment;

Fig. 2 is a cross-sectional perspective view of the dis-

assembled combination appliance of Fig. 1 with a frontal surface cut away;

Fig. 3 is a cross-sectional view of the cooking hob section of Fig. 2 along the line III - III, but with a filter assembly removed;

Fig. 4 is an enlarged view of detail IV as indicated in Fig. 3;

Fig. 5 illustrates a second example being an alternative solution to the embodiment of Fig. 3;

Fig. 6 is a perspective bottom view of the embodiment of Fig. 5; and

Fig. 7 illustrates a third example being yet another alternative solution to the embodiments of Figs. 3 and 5.

**[0033]** In all figures the same or equivalent part are marked with the same reference numbers.

**[0034]** Fig. 1 illustrates a combination appliance 10 comprising a cooking hob 12 and a downdraft extraction device 14 installed in a kitchen cabinet 16. The cooking hob 12 is implemented in a cutout of a kitchen countertop 18 forming a top cover plate of the kitchen cabinet 16. The downdraft extraction device 14 is configured to take away cooking vapours occurring during cooking processes, in particular when cooking with uncovered cookware. The cooking hob 12 comprises cooking regions 20a, 20b arranged on a left half and a right half of a cooktop 22 of the cooking hob 12, which left and right halves are separated from each other by a suction opening 24 for an intake of the cooking vapours, the suction opening 24 being arranged alongside a cooktop centreline. The suction opening 24 is covered by a cover grid 26 for preventing items, e. g. cookware, to fall into the suction opening 24. Instead of the cover grid 26 a lid may be used for entirely covering the suction opening when the extraction device 14 is out of use, but for the operation of the extraction device 14 the lid is pivotable into an upright open position.

**[0035]** A casing 28 of the extraction device 14 is shown in Fig. 1 in transparent illustration. Said casing 28 provides a closed outer shell or channel segment for a flow of the sucked-in cooking vapours on their way from the suction opening 24 to an exhaust opening 30 in a base area 32 of the kitchen cabinet 16. Said exhaust opening 30 is also covered, namely by an outlet grille 34.

**[0036]** The flow of the sucked-in cooking vapours through the extraction device 14 is driven by the operation of an extraction fan 36 arranged inside of the casing 28. Said extraction fan 36 comprises a bottom-sided intake opening 38 for sucking the cooking vapours from the interior space of the casing 28.

**[0037]** A rear-sided fan outlet (not shown) is arranged for a horizontal exit of the air blown out backwards from the extraction fan housing 42. The fan outlet is connected to a first end of an air duct 44 designed as a rectangular tube and forms a second channel arranged downstream the above-mentioned first channel. Directly at the passage from the fan outlet to the air duct 44, an air duct bending by 90 degrees is implemented, which redirects the air flow from horizontal to vertical downwards. The air duct 44 may be guided alongside a rear side of the kitchen cabinet 16 and may be bent again by 90 degrees close to a rear lower edge of the kitchen cabinet 16 in order to direct the airflow towards exhaust opening 30 in the base area 32 of the kitchen cabinet 16. Accordingly, the second end of the air duct 44 is connected to the exhaust opening 30. The embodiment illustrated in Fig. 1 shows a solution of the air duct 44 with an inclined section of its downwardly directed portion, directed slightly to the right. Naturally, a solution with said portion arranged in an exact vertical direction is considerable as well.

**[0038]** The course of the cooking vapours from the cooking area through the extraction device 14 to a reentry into ambient air is illustrated in Fig. 1 by dotted arrows $46^1$ to $46^5$. On their way through the extraction device 14, the cooking vapours pass through a filter assembly 48, which is arranged downstream directly behind the suction opening 24 for providing a purification of the conveyed air. Said filter assembly 48 includes a filter carrier 50 supporting a filter element (not shown) that is usually configured for filtering out grease particles and droplets.

**[0039]** The cross-sectional view of Fig. 2 further shows two power boards 54, one for the left cooking region 20a and one for the right cooking region 20b, the power boards 54 providing cooking zones in the left and right cooking regions 20a, 20b with electrical power. In the present embodiment, the cooking hob 12 is an induction cooking hob and the cooking zones are defined by induction coils (not shown) that are arranged below the cooktop 22 of the cooking hob 12. Attached to the bottom side of the power board 54 assigned to the right cooking region 20b, a further circuit board is arranged forming a control electronics 56 for the combination appliance 10.

**[0040]** Fig. 3 illustrates a cross-sectional view of the upper section of the combination appliance 10 representing the area of localisation of the cooking hob 12. This means, that the combination appliance section beneath the cooking hob 12 is cut away. The viewing direction providing the illustration of Fig. 3 is shown in Fig. 2. It is to be noted that the presentation according to Fig. 3 represents the status of the filter assembly 48 being removed from its operating position according to Figs. 1 and 2 and shows a vertical cross-section through an initial channel section 58. The initial channel section is formed as a pipe section with a rectangular horizontal cross-section, which is defined by its front and rear (from user's perspective) channel walls 58a as well as its lateral channel walls 58b, the channel walls 58a, 58b forming a cuboid tube, with an inlet opening directly downstream of the suction opening 24 and an outlet opening opening out into the interior of

the casing 28, which is a subsequent air channel segment directly downstream of the initial channel section 58. In addition, the casing 28 also works as a suction compartment, which provides the conveyed air to the fan 36 that aspirates the air through the intake opening 38. As previously mentioned, in Fig. 3 the filter assembly 48 is not present, however, the suction opening 24 is covered with grid 26.

**[0041]** On its bottom side, defining also the outlet opening, the initial channel section 58, more precisely the channel walls 58a, 58b of the channel section 58, rests on a bottom wall 60 of the cooking hob 12.

**[0042]** The top sides of the channel walls 58a, 58b of the initial channel section 58 abut with their upper front faces a border around the suction opening 24 on the bottom surface of the cooktop 22. That way, the initial channel section 58 is sandwiched between the upper side of the bottom wall 60 of the cooking hob 12 and the bottom side of the cooktop 22.

**[0043]** In order to provide a hermetical sealing of the conveyed air in the interior of the initial channel section 58 against the interior of the cooking hob 12, more precisely against the electrical and electronic components arranged in the interior of the cooking hob 12, in particular on the power boards 54 and control electronics 56, sealing means are arranged between the initial channel section 58, on the one hand, and the bottom surface of the cooktop 22 as well as the bottom wall 60 of the cooking hob 12, on the other hand.

**[0044]** As is shown in more detail by the enlarged detail view according to Fig. 4, the sealing means on the top side of the initial channel section 58 is realized by a circumferential glue bead 62 continuously surrounding the upper front faces of the channel walls 58a, 58b of the initial channel section 58. In order to provide a receiving space for the glue bead 62, the upper portion of the initial channel section 58 comprises a circumferential rim 64 laterally protruding from the upper end of the channel walls 58a, 58b. The circumferential rim 64 and the bottom surface of the cooktop 22 are aligned parallel to one another and the circumferential rim 64 is arranged spaced from the bottom surface of the cooktop 22, wherein the space between the circumferential rim 64 and the bottom surface of the cooktop 22 forms said receiving space for the glue bead 62.

**[0045]** The sealing on the bottom side of the initial channel section 58 according to the embodiment of Figs 3 and 4 is simply realized by a firm touching or pressing of the lower front faces of the channel walls 58a, 58b of the initial channel section 58 onto the upper side of the bottom wall 60 of the cooking hob 12, or more precisely, on a border around a cutout in the bottom wall 60 adjacent to the outlet opening of the initial channel section 58, which cutout provides a passage for the conveyed air from the initial channel section 58 to the interior of the casing 28.

**[0046]** Figs. 5 and 6 illustrate a second example of the initial channel section 58. In contrast to the first example according to Figs. 3 and 4, the initial channel section 58 comprises a double-walled structure including an inner channel section wall 66a and an outer channel section wall 66b. Naturally, as in the first example above, both inner and outer channel section walls 66a, 66b comprise four single walls, analogous to front and rear walls 58a and lateral walls 58b of the above-described first example. The inner channel section wall 66a opens out into the casing 22 and penetrates the bottom wall 60 of the cooking hob 12, thereby protruding somewhat from the lower surface of the bottom wall 60. In this example, the outer channel section wall 66b rests on the bottom wall section of the cooking hob 12.

**[0047]** While the first example according to Figs. 3 and 4 relies on a simple sealing in its bottom region by said firm touching or pressing of the lower front faces of the channel walls 58a, 58b against the bottom wall 60, the sealing effect of the second example is increased by an arrangement of two such minimized gaps in series, i. e. both the inner channel section wall 66a and the outer channel section wall 66b of the double-walled channel section about the bottom wall 60 of the cooking hob 12, either on the top surface of the bottom wall 60 (see outer channel section wall 66b) or laterally against the cutout edge (see inner channel section wall 66a). This way of two contacting areas with only small gaps implemented in series increase the sealing effect.

**[0048]** Moreover, in order to provide both inner and outer channel section walls 66a, 66b in a straight design and parallel to one another, supporting ribs 68 are arranged between the inner channel section wall 66a and the outer channel section wall 66b. Said supporting ribs 68 are orthogonally arranged to the inner 66a and outer 66b channel section walls. Further supporting ribs 68 are arranged at the outer surface of the outer channel section wall 66b, which are adapted to rest against an inner wall 70 of the cooking hob 12.

**[0049]** With Fig. 7 a third example of the initial channel section 58 is shown. The embodiment according to this third example is almost entirely congruent with the embodiment of the first example (see particularly Fig. 3). The only difference to the first example concerns a circumferential protection edge 72, which is arranged at the inlet port located at the suction opening 24 of the channel section 58. The protection edge 72 abuts against lateral edges of the cutout of the glass cooktop 22, which cutout is specified by the suction opening 24. Due to its function of covering said cutout edges, the circumferential protection edge 72 thus protects these cutout edges from any mechanical damages.

**List of reference numerals**

**[0050]**

| | |
|---|---|
| 10 | combination appliance |
| 12 | cooking hob |
| 14 | downdraft extraction device |

| | |
|---|---|
| 16 | kitchen cabinet |
| 18 | kitchen countertop |
| 20a,20b | cooking regions |
| 22 | cooktop |
| 24 | suction opening |
| 26 | cover grid |
| 28 | casing |
| 30 | exhaust opening |
| 32 | base area |
| 34 | outlet grille |
| 36 | extraction fan |
| 38 | intake opening |
| 42 | fan housing |
| 44 | air duct |
| $46^{1 \text{ to } 5}$ | arrows indicating air flow |
| 48 | filter assembly |
| 50 | filter carrier |
| 54 | power boards |
| 56 | control electronics |
| 58 | initial channel section |
| 58a | front and rear walls |
| 58b | lateral wall |
| 60 | bottom wall |
| 62 | glue bead |
| 64 | rim |
| 66a | inner channel section wall |
| 66b | outer channel section wall |
| 68 | supporting rib |
| 70 | inner wall |
| 72 | protection edge |

## Claims

**1.** A combination appliance (10) comprising

- a cooking hob (12), which is covered by a top plate or a worktop (22), in particular a glass plate, having an opening (24) or a recess formed therein,
and
- an extraction device (14), which is arranged below the top plate or worktop (22) and comprises at least one fan (36) for sucking air from an area above the cooking hob (12) through the opening (24) or recess of the top plate or worktop (22) and for conveying the air through an air channel of the extraction device (14),
wherein the air channel of the extraction device (14) includes a channel section (58), which is arranged downstream of the opening (24) or recess and upstream of the fan (36), which channel section (58) is arranged adjacent to components, in particular electrical and/or electronic components, of the cooking hob (12), the channel section (58) thereby forming a barrier for preventing the conveyed air to get in contact with the components of the cooking hob (12),
and wherein the channel section (58) comprises

- an upper portion, particularly a top edge or top surface, abutting a surface zone of the top plate or worktop (22), particularly of the bottom of the top plate or worktop (22),
and
- a lower portion, particularly a bottom surface, abutting and/or being supported by a wall section, in particular a bottom wall section (60) or a side wall section or an intermediate wall section, of the cooking hob (12),

**characterized in that**
a lower end surface of the channel section wall (58a, 58b, 66b) is supported by a bottom wall section (60) of the cooking hob (12)

- by a protrusion of the bottom wall (60) protruding from a box or a compartment defined by walls, which comprise the bottom wall (60) and a side wall adjacent to the channel section wall (58a, 58b, 66b),
or
- by a circumferential edge or border of a cutout in the bottom wall (60).

**2.** The combination appliance (10) according to claim 1, **characterized in that**

a sealing means is arranged or arrangeable

- at the upper portion of the channel section (58), in particular between the upper portion and the surface zone of the top plate or worktop (22),
and/or
- at the lower portion of the channel section (58), in particular between the lower portion and the wall section (60) of the cooking hob (12),

the sealing means being adapted to hermetically seal the cooking hob (12), in particular components of the cooking hob (12), off from the air conveyed through the air channel.

**3.** The combination appliance (10) according to claim 2, **characterized in that**
the sealing means comprises a layer of glue, in particular a circumferential glue bead (62) applied on or contacting the upper portion of the channel section (58), wherein the upper portion of the channel section (58) preferably surrounds a cross-sectional area of the interior space of the channel section (58).

**4.** The combination appliance (10) according to claim 2 or 3,

**characterized in that**
the upper portion of the channel section (58) comprises a circumferential rim (64) or collar laterally protruding from the channel section wall (58a, 58b), the circumferential rim (64) or collar being arranged or arrangeable spaced from the bottom of the top plate or worktop (22), the space between the circumferential rim (64) or collar and the bottom of the top plate or worktop (22) particularly forming a receiving space for the layer of glue (62).

**5.** The combination appliance (10) according to anyone of the preceding claims,
**characterized in that**
the channel section (58) comprises a pipe section, in particular having a rectangular cross section, which includes an insertion space for housing a filter element or a filter unit (48) .

**6.** The combination appliance (10) according to anyone of the preceding claims,
**characterized in that**
the channel section (58) comprises

- a first supporting means or fixation means for a, preferably releasably, fixed positioning of a filter element or a filter unit (48),
and/or
- a second supporting means, particularly a supporting surface or supporting frame or supporting element, for supporting a grid (26) or a lid for covering the opening (24) or recess.

**7.** The combination appliance (10) according to anyone of the preceding claims,
**characterized in that**
an outlet port of the channel section (58) opens out into a suction compartment (28) arranged upstream of the fan (36).

**8.** The combination appliance (10) according to anyone of the preceding claims,
**characterized in that**
a circumferential protection edge (72) is arranged at the upper portion, in particular at an inlet port located at the opening (24) or recess, of the channel section (58), which protection edge (72) abuts lateral edges of a, particularly rectangular, cutout of the top plate or worktop (22).

**9.** The combination appliance (10) according to anyone of the preceding claims,
**characterized in that**
a wall (58a, 58b) of the channel section (58) comprises a double-walled structure including an inner channel section wall (66a) and an outer channel section wall (66b), the outer channel section wall (66b) preferably being supported by the bottom wall section (60) of the cooking hob (12), wherein the inner channel section wall (66a) opens out into a suction compartment (28) arranged upstream of the fan (36) and particularly penetrates the bottom wall (60) of the cooking hob (12).

**10.** The combination appliance (10) according to claim 9,
**characterized in that**
supporting ribs (68) are arranged between the inner channel section wall (66a) and the outer channel section wall (66b), which supporting ribs (68) are particularly orthogonally arranged to the inner (66a) and outer (66b) channel section walls.

**11.** A method for assembling a combination appliance (10) comprising a cooking hob (12) and an extraction device (14) according to any of the preceding claims, wherein

- in a first step, a channel section (58) of an air channel of the extraction device (14) is connected to, preferably glued on, a top plate or worktop (22) of the cooking hob (12) in a way that an inlet port of the channel section (58) is assigned to an opening (24) or recess formed in the top plate or worktop (22),
and
- in a second step, the top plate or worktop (22) is positioned on a substructure, in particular on a lower hob box, of the cooking hob (12), thereby arranging the channel section (58) alongside the substructure or penetrating the substructure by the channel section (58), so that the channel section (58) extends from the opening (24) or recess of the top plate or worktop (22) to or through a bottom wall (60), in particular to or through a cutout in the bottom wall (60), of the cooking hob (12), wherein an outlet port of the channel section (58) opens out or is provided to open out into a suction compartment (28) of a fan (36) of the extraction device (14), the fan (36) being configured for sucking air from the area above the cooking hob (12) through the opening (24) or recess of the top plate or worktop (22) and for conveying the air through an air channel of the extraction device (14),

and wherein the suction compartment (28) of the fan (36) is arranged beneath the cooking hob (12) prior to the first step, between first and second steps or after the second step.

**12.** The method according to claim 11,
**characterized in that**
during the first step, the channel section (58) is connected to the top plate or worktop (22) in a way that the central axis of the channel section (58) passes through the centre of the opening (24) or

recess.

**13.** The method according to claim 11 or 12,
**characterized in that**
prior to or at the beginning of the first step, a glue bead (62) is circumferentially applied

- on an upper portion, in particular on a top surface or top edge, of the channel section (58), the upper section preferably surrounding a cross-sectional area of the interior space of the channel section (58) or a wall (58a, 58b) of the channel section (58), or
- on a border around the opening (24) or recess of the bottom side of the top plate or worktop (22).

**14.** The method according to anyone of the claims 11 to 13,
**characterized in that**
during the second step, in particular in a final stage thereof, the lower portion, in particular a bottom surface or a bottom edge, of the channel section (58) is set down on the bottom wall (60) of the cooking hob (12), in particular by establishing on this occasion an at least approximately airtight junction at the contact zone.

**Patentansprüche**

**1.** Kombinationshaushaltsgerät (10), das Folgendes umfasst:

- ein Kochfeld (12), das durch eine obere Platte oder eine Arbeitsfläche (22), insbesondere eine Glasplatte mit einer in ihr gebildeten Öffnung (24) oder Aussparung, abgedeckt ist,
und
- eine Extraktionsvorrichtung (14), die unter der oberen Platte oder der Arbeitsfläche (22) angeordnet ist und mindestens ein Gebläse (36) umfasst, um Luft von einem Bereich über dem Kochfeld (12) durch die Öffnung (24) oder die Aussparung der oberen Platte oder der Arbeitsfläche (22) anzusaugen und die Luft durch einen Luftkanal der Extraktionsvorrichtung (14) abzuleiten,
wobei der Luftkanal der Extraktionsvorrichtung (14) einen Kanalabschnitt (58) enthält, der der Öffnung (24) oder der Aussparung nachgelagert und dem Gebläse (36) vorgelagert angeordnet ist, wobei der Kanalabschnitt (58) angrenzend an Komponenten, insbesondere elektrische und/oder elektronische Komponenten, des Kochfelds (12) angeordnet ist, wodurch der Kanalabschnitt (58) eine Barriere bildet, um zu verhindern, dass abgeleitete Luft mit den Komponenten des Kochfelds (12) in Kontakt kommt,
und wobei der Kanalabschnitt (58) Folgendes umfasst:

- einen oberen Teil, insbesondere einen oberen Rand oder eine obere Fläche, die an einen Oberflächenbereich der oberen Platte oder der Arbeitsfläche (22), insbesondere der Unterseite der oberen Platte oder der Arbeitsfläche (22), anstößt,
und
- einen unteren Teil, insbesondere eine untere Fläche, die an einen Wandabschnitt, insbesondere einen unteren Wandabschnitt (60) oder einen Seitenwandabschnitt oder einen Zwischenwandabschnitt des Kochfelds (12), anstößt und/oder durch diesen getragen wird,

**dadurch gekennzeichnet, dass**
eine untere Stirnfläche der Kanalabschnittswand (58a, 58b, 66b) durch einen unteren Wandabschnitt (60) des Kochfelds (12),

- durch einen Vorsprung der unteren Wand (60), der von einem Kasten oder einem Fach, das durch Wände definiert wird, die die untere Wand (60) und eine Seitenwand angrenzend an die Kanalabschnittswand (58a, 58b, 66b) umfassen, vorsteht,
oder
- durch einen Umfangsrand oder eine Begrenzung eines Ausschnitts in der unteren Wand (60) getragen wird.

**2.** Kombinationshaushaltsgerät (10) nach Anspruch 1, **dadurch gekennzeichnet, dass**

ein Dichtungsmittel

- an dem oberen Teil des Kanalabschnitts (58), insbesondere zwischen dem oberen Teil und dem Oberflächenbereich der oberen Platte oder der Arbeitsfläche (22),
und/oder
- an dem unteren Teil des Kanalabschnitts (58), insbesondere zwischen dem unteren Teil und dem Wandabschnitt (60) des Kochfelds (12) angeordnet ist oder angeordnet werden kann,

wobei die Dichtungsmittel ausgelegt sind, das Kochfeld (12), insbesondere Komponenten des Kochfelds (12), von der Luft, die durch den Luftkanal abgeleitet wird, hermetisch abzudichten.

**3.** Kombinationshaushaltsgerät (10) nach Anspruch 2, **dadurch gekennzeichnet, dass**

die Dichtungsmittel eine Klebschicht, insbesondere eine Umfangsklebraupe (62), die auf den oberen Teil des Kanalabschnitts (58) aufgebracht ist oder diesen kontaktiert, umfasst, wobei der obere Teil des Kanalabschnitts (58) vorzugsweise eine Querschnittsfläche des inneren Raums des Kanalabschnitts (58) umgibt.

**4.** Kombinationshaushaltsgerät (10) nach Anspruch 2 oder 3,
**dadurch gekennzeichnet, dass**
der obere Teil des Kanalabschnitts (58) einen Umfangsrand (64) oder -kragen umfasst, der seitlich von der Kanalabschnittswand (58a, 58b) vorsteht, wobei der Umfangsrand (64) oder -kragen von der Unterseite der oberen Platte oder der Arbeitsfläche (22) beabstandet angeordnet ist oder angeordnet werden kann, wobei der Raum zwischen dem Umfangsrand (64) oder dem Umfangskragen und der Unterseite der oberen Platte oder der Arbeitsfläche (22) insbesondere einen Aufnahmeraum für die Klebschicht (62) bildet.

**5.** Kombinationshaushaltsgerät (10) nach einem der vorhergehenden Ansprüche,
**dadurch gekennzeichnet, dass**
der Kanalabschnitt (58) einen Röhrenabschnitt, insbesondere mit einem rechteckigen Querschnitt, umfasst, der einen Einführraum zum Unterbringen eines Filterelements oder einer Filtereinheit (48) umfasst.

**6.** Kombinationshaushaltsgerät (10) nach einem der vorhergehenden Ansprüche,
**dadurch gekennzeichnet, dass**
der Kanalabschnitt (58) Folgendes umfasst:

- erste Tragmittel oder Befestigungsmittel für eine vorzugsweise lösbare feste Positionierung eines Filterelements oder einer Filtereinheit (48),
und/oder
- zweite Tragmittel, insbesondere eine Tragfläche oder einen Tragrahmen oder ein Tragelement, um ein Gitter (26) oder einen Deckel zum Bedecken der Öffnung (24) oder der Aussparung zu tragen.

**7.** Kombinationshaushaltsgerät (10) nach einem der vorhergehenden Ansprüche,
**dadurch gekennzeichnet, dass**
eine Auslassöffnung des Kanalabschnitts (58) in ein Saugfach (28) mündet, das dem Gebläse (36) vorgelagert angeordnet ist.

**8.** Kombinationshaushaltsgerät (10) nach einem der vorhergehenden Ansprüche,
**dadurch gekennzeichnet, dass**
ein Umfangsschutzrand (72) an dem oberen Teil, insbesondere an einer Einlassöffnung, die sich an der Öffnung (24) oder der Aussparung befindet, des Kanalabschnitts (58) angeordnet ist, wobei der Schutzrand (72) an seitlichen Ränder eines insbesondere rechteckigen Ausschnitts der oberen Platte oder der Arbeitsfläche (22) anliegt.

**9.** Kombinationshaushaltsgerät (10) nach einem der vorhergehenden Ansprüche,
**dadurch gekennzeichnet, dass**
eine Wand (58a, 58b) des Kanalabschnitts (58) eine Doppelwandstruktur umfasst, die eine innere Kanalabschnittswand (66a) und eine äußere Kanalabschnittswand (66b) umfasst, wobei die äußere Kanalabschnittswand (66b) vorzugsweise durch den unteren Wandabschnitt (60) des Kochfelds (12) getragen wird, wobei sich die innere Kanalabschnittswand (66a) in ein Saugfach (28) öffnet, das dem Gebläse (36) vorgelagert angeordnet ist und insbesondere die untere Wand (60) des Kochfelds (12) durchdringt.

**10.** Kombinationshaushaltsgerät (10) nach Anspruch 9,
**dadurch gekennzeichnet, dass**
Tragrippen (68) zwischen der inneren Kanalabschnittswand (66a) und der äußeren Kanalabschnittswand (66b) angeordnet sind, wobei die Tragrippen (68) insbesondere senkrecht zu der inneren (66a) und der äußeren (66b) Kanalabschnittswand angeordnet sind.

**11.** Verfahren zum Montieren eines Kombinationshaushaltsgeräts (10), das ein Kochfeld (12) und eine Extraktionsvorrichtung (14) nach einem der vorhergehenden Ansprüche umfasst, wobei

- in einem ersten Schritt ein Kanalabschnitt (58) eines Luftkanals der Extraktionsvorrichtung (14) mit einer oberen Platte oder Arbeitsfläche (22) des Kochfelds (12) in einer Weise verbunden, insbesondere darauf geklebt, wird, dass eine Einlassöffnung des Kanalabschnitts (58) einer in der oberen Platte oder der Arbeitsfläche (22) gebildeten Öffnung (24) oder Aussparung zugewiesen wird,
und
- in einem zweiten Schritt die obere Platte oder Arbeitsfläche (22) auf einer Unterstruktur, insbesondere auf einem unteren Kochfeldkasten, des Kochfelds (12) positioniert wird, wobei der Kanalabschnitt (58) entlang der Unterstruktur angeordnet wird oder die Unterstruktur von dem Kanalabschnitt (58) durchdrungen wird, so dass sich der Kanalabschnitt (58) von der Öffnung (24) oder der Aussparung der oberen Platte oder Arbeitsfläche (22) zu einer unteren Wand (60) des Kochfelds oder durch diese,

insbesondere zu einem Ausschnitt in der unteren Wand (60) des Kochfelds (12) oder durch diesen, erstreckt, wobei eine Auslassöffnung des Kanalabschnitts (58) in ein Saugfach (28) eines Gebläses (36) der Extraktionsvorrichtung (14) mündet oder vorgesehen ist, zu münden, wobei das Gebläse (36) konfiguriert ist, Luft aus dem Bereich über dem Kochfeld (12) durch die Öffnung (24) oder die Aussparung der oberen Platte oder Arbeitsfläche (22) anzusaugen und die Luft durch einen Luftkanal der Extraktionsvorrichtung (14) abzuleiten,

und wobei das Saugfach (28) des Gebläses (36) vor dem ersten Schritt, zwischen dem ersten und dem zweiten Schritt oder nach dem zweiten Schritt unter dem Kochfeld (12) angeordnet wird.

**12.** Verfahren nach Anspruch 11,
**dadurch gekennzeichnet, dass**
während des ersten Schritts der Kanalabschnitt (58) mit der oberen Platte oder der Arbeitsfläche (22) in einer Weise verbunden wird, dass die zentrale Achse des Kanalabschnitts (58) durch den Mittelpunkt der Öffnung (24) oder der Aussparung führt.

**13.** Verfahren nach Anspruch 11 oder 12,
**dadurch gekennzeichnet, dass**
vor dem ersten Schritt oder zu Beginn des ersten Schritts eine Klebraupe (62) in Umfangsrichtung

- auf einen oberen Teil, insbesondere auf eine obere Fläche oder einen oberen Rand des Kanalabschnitts (58) aufgetragen wird, wobei der obere Teil vorzugsweise eine Querschnittsfläche des inneren Raums des Kanalabschnitts (58) oder eine Wand (58a, 58b) des Kanalabschnitts (58) umgibt, oder
- auf eine Begrenzung um die Öffnung (24) oder die Aussparung der unteren Seite der oberen Platte oder der Arbeitsfläche (22) aufgetragen wird.

**14.** Verfahren nach einem der Ansprüche 11 bis 13,
**dadurch gekennzeichnet, dass**
während des zweiten Schritts, insbesondere in seiner Endstufe, der untere Teil insbesondere eine untere Fläche oder ein unterer Rand, des Kanalabschnitts (58) auf die untere Wand (60) des Kochfelds (12), insbesondere durch Einrichten bei dieser Gelegenheit einer zumindest annähernd luftdichten Verbindung an dem Kontaktbereich, gesetzt wird.

## Revendications

**1.** Appareil combiné (10), comprenant

- une table de cuisson (12), qui est recouverte d'une plaque de dessus ou d'un plan de travail (22), en particulier d'une plaque de verre, dans lesquels sont ménagés une ouverture (24) ou un renfoncement,
et
- un dispositif d'extraction (14), qui est agencé au-dessous de la plaque de dessus ou du plan de travail (22) et comprend au moins un ventilateur (36) destiné à aspirer l'air d'une région située au-dessus de la table de cuisson (12) à travers l'ouverture (24) ou le renfoncement de la plaque de dessus ou du plan de travail (22) et destiné à acheminer l'air à travers un canal d'air du dispositif d'extraction (14),
le canal d'air du dispositif d'extraction (14) comportant un tronçon de canal (58), qui est agencé en aval de l'ouverture (24) ou du renfoncement et en amont du ventilateur (36), lequel tronçon de canal (58) est agencé adjacent à des composants, en particulier à des composants électriques et/ou électroniques, de la table de cuisson (12), le tronçon de canal (58) formant de cette manière une barrière destinée à empêcher l'air acheminé d'entrer au contact des composants de la table de cuisson (12),
et le tronçon de canal (58) comprenant

- une partie supérieure, en particulier un bord de dessus ou une surface de dessus, venant en butée contre une zone de surface de la plaque de dessus ou du plan de travail (22), en particulier du dessous de la plaque de dessus ou du plan de travail (22),
et
- une partie inférieure, en particulier une surface de dessous, venant en butée contre un tronçon de paroi et/ou supportée par lui, en particulier un tronçon de paroi de dessous (60) ou un tronçon de paroi latéral ou un tronçon de paroi intermédiaire, de la table de cuisson (12),

**caractérisé en ce que**
une surface d'extrémité inférieure de la paroi (58a, 58b, 66b) de tronçon de canal est supportée par un tronçon de paroi de dessous (60) de la table de cuisson (12)

- par une protubérance de la paroi de dessous (60) en saillie depuis un caisson ou un compartiment défini par des parois, lesquelles comprennent la paroi de dessous (60) et une paroi latérale adjacente à la paroi (58a, 58b, 66b) de tronçon de canal,
ou
- par un bord ou une bordure circonférentiels d'une découpe dans la paroi de des-

sous (60).

**2.** Appareil combiné (10) selon la revendication 1, **caractérisé en ce que**

un moyen faisant étanchéité est agencé ou agençable

- au niveau de la partie supérieure du tronçon de canal (58), en particulier entre la partie supérieure et la zone de surface de la plaque de dessus ou du plan de travail (22),
et/ou
- au niveau de la partie inférieure du tronçon de canal (58), en particulier entre la partie inférieure et le tronçon de paroi (60) de la table de cuisson (12),

le moyen faisant étanchéité étant adapté à rendre la table de cuisson (12), en particulier des composants de la table de cuisson (12), hermétiques à l'air acheminé à travers le canal d'air.

**3.** Appareil combiné (10) selon la revendication 2, **caractérisé en ce que**
le moyen faisant étanchéité comprend une couche de colle, en particulier un cordon circonférentiel de colle (62) appliqué sur la partie supérieure du tronçon de canal (58) ou venant à son contact, la partie supérieure du tronçon de canal (58) entourant de préférence une section transversale de l'espace intérieur du tronçon de canal (58).

**4.** Appareil combiné (10) selon la revendication 2 ou 3, **caractérisé en ce que**
la partie supérieure du tronçon de canal (58) comprend un rebord circonférentiel (64) ou une bride circonférentielle faisant saillie latéralement depuis la paroi (58a, 58b) de tronçon de canal, le rebord circonférentiel (64) ou la bride circonférentielle étant agencés ou agençables espacés du dessous de la plaque de dessus ou du plan de travail (22), l'espace entre le rebord circonférentiel (64) ou la bride circonférentielle et le dessous de la plaque de dessus ou du plan de travail (22) formant plus particulièrement un espace de réception pour la couche de colle (62).

**5.** Appareil combiné (10) selon l'une quelconque des revendications précédentes,
**caractérisé en ce que**
le tronçon de canal (58) comprend un tronçon de conduit, en particulier pourvu d'une section transversale rectangulaire, qui comporte un espace d'insertion pour accueillir un élément de filtration ou une unité de filtration (48).

**6.** Appareil combiné (10) selon l'une quelconque des revendications précédentes,
**caractérisé en ce que**
le tronçon de canal (58) comprend

- un premier moyen de support ou moyen de fixation pour positionner de manière fixe, de préférence amovible, un élément de filtration ou une unité de filtration (48),
et/ou
- un deuxième moyen de support, de préférence une surface de support ou un cadre de support ou un élément de support, pour supporter une grille (26) ou un couvercle pour recouvrir l'ouverture (24) ou le renfoncement.

**7.** Appareil combiné (10) selon l'une quelconque des revendications précédentes,
**caractérisé en ce que**
un orifice de sortie du tronçon de canal (58) débouche dans un compartiment d'aspiration (28) agencé en amont du ventilateur (36).

**8.** Appareil combiné (10) selon l'une quelconque des revendications précédentes,
**caractérisé en ce que**
un bord de protection circonférentiel (72) est agencé au niveau de la partie supérieure, en particulier au niveau d'un orifice d'entrée situé au niveau de l'ouverture (24) ou du renfoncement, du tronçon de canal (58), lequel bord de protection (72) vient en butée contre des bords latéraux d'une découpe, plus particulièrement rectangulaire, de la plaque de dessus ou du plan de travail (22).

**9.** Appareil combiné (10) selon l'une quelconque des revendications précédentes,
**caractérisé en ce que**
une paroi (58a, 58b) du tronçon de canal (58) comprend une structure à double paroi comportant une paroi intérieure (66a) de tronçon de canal et une paroi extérieure (66b) de tronçon de canal, la paroi extérieure (66b) de tronçon de canal étant de préférence supportée par le tronçon de paroi de dessous (60) de la table de cuisson (12), la paroi intérieure (66a) de tronçon de canal débouchant dans un compartiment d'aspiration (28) agencé en amont du ventilateur (36) et, plus particulièrement, pénétrant dans la paroi de dessous (60) de la table de cuisson (12).

**10.** Appareil combiné (10) selon la revendication 9, **caractérisé en ce que**
des nervures de support (68) sont agencées entre la paroi intérieure (66a) de tronçon de canal et la paroi extérieure (66b) de tronçon de canal, lesquelles nervures de support (68) sont plus particulièrement agencées orthogonalement aux parois intérieure

(66a) et extérieure (66b) de tronçon de canal.

**11.** Procédé d'assemblage d'un appareil combiné (10) comprenant une table de cuisson (12) et un dispositif d'extraction (14) selon l'une quelconque des revendications précédentes, dans lequel

- à une première étape, un tronçon de canal (58) d'un canal d'air du dispositif d'extraction (14) est relié à, de préférence collé sur, une plaque de dessus ou un plan de travail (22) de la table de cuisson (12) de telle manière qu'un orifice d'entrée du tronçon de canal (58) est assigné à une ouverture (24) ou un renfoncement ménagés dans la plaque de dessus ou le plan de travail (22),

et

- à une deuxième étape, la plaque de dessus ou le plan de travail (22) sont positionnés sur une sous-structure, en particulier un caisson de table inférieur, de la table de cuisson (12), de manière à agencer le tronçon de canal (58) le long de la sous-structure ou à faire pénétrer le tronçon de canal (58) dans la sous-structure, de sorte que le tronçon de canal (58) s'étend depuis l'ouverture (24) ou le renfoncement de la plaque de dessus ou du plan de travail (22) jusqu'à ou à travers une paroi de dessous (60), en particulier jusqu'à ou à travers une découpe dans la paroi de dessous (60), de la table de cuisson (12), un orifice de sortie du tronçon de canal (58) débouchant ou étant ménagé pour déboucher dans un compartiment d'aspiration (28) d'un ventilateur (36) du dispositif d'extraction (14), le ventilateur (36) étant configuré pour aspirer l'air de la région située au-dessus de la table de cuisson (12) à travers l'ouverture (24) ou le renfoncement de la plaque de dessus ou du plan de travail (22) et pour acheminer l'air à travers un canal d'air du dispositif d'extraction (14),

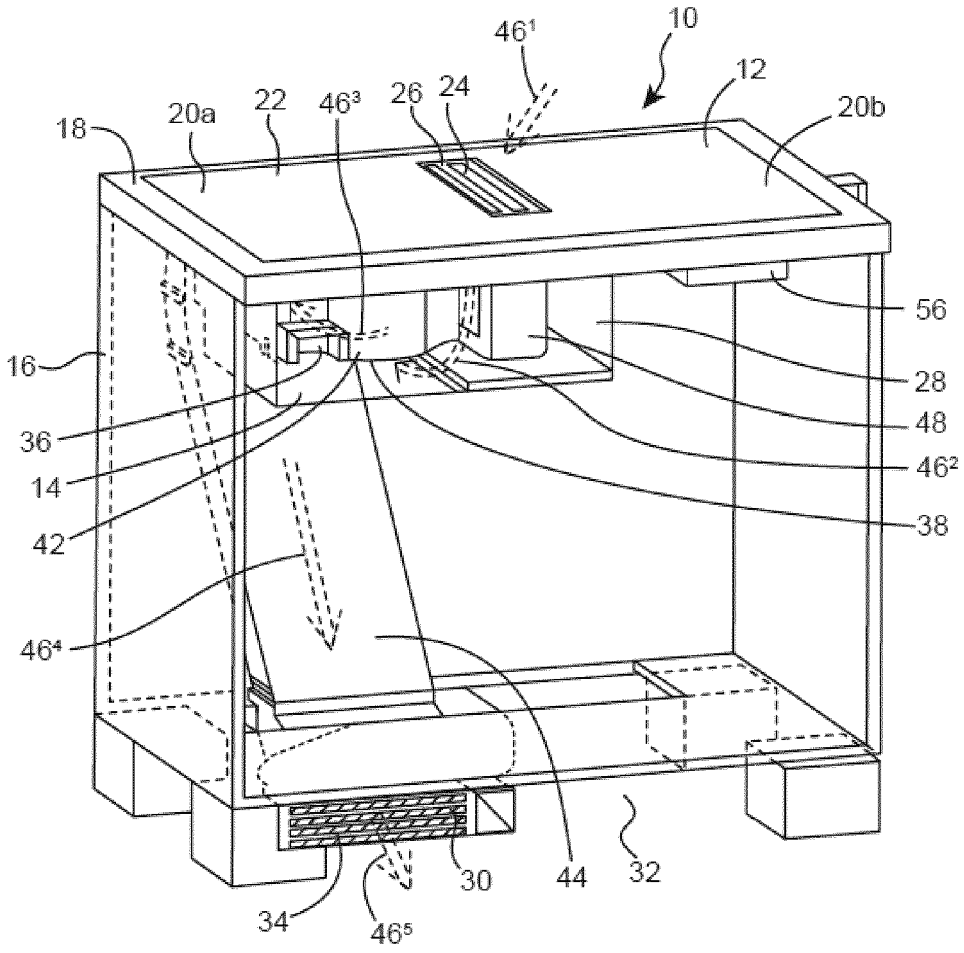
et dans lequel le compartiment d'aspiration (28) du ventilateur (36) est agencé au-dessous de la table de cuisson (12) préalablement à la première étape, entre les première et deuxième étapes ou à la suite de la deuxième étape.

**12.** Procédé selon la revendication 11,
**caractérisé en ce que**
au cours de la première étape, le tronçon de canal (58) est relié à la plaque de dessus ou au plan de travail (22) de telle manière que l'axe central du tronçon de canal (58) passe par le centre de l'ouverture (24) ou du renfoncement.

**13.** Procédé selon la revendication 11 ou 12,
**caractérisé en ce que**
préalablement à la première étape ou au début de celle-ci, un cordon de colle (62) est appliqué circonférentiellement

- sur une partie supérieure, en particulier sur une surface de dessus ou un bord de dessus, du tronçon de canal (58), la partie supérieure entourant de préférence une section transversale de l'espace intérieur du tronçon de canal (58) ou une paroi (58a, 58b) du tronçon de canal (58), ou
- sur une bordure autour de l'ouverture (24) ou du renfoncement du côté de dessous de la plaque de dessus ou du plan de travail (22).

**14.** Procédé selon l'une quelconque des revendications 11 à 13,
**caractérisé en ce que**
au cours de la deuxième étape, en particulier dans sa phase finale, la partie inférieure, en particulier une surface de dessous ou un bord de dessous, du tronçon de canal (58) est posée sur la paroi de dessous (60) de la table de cuisson (12), en particulier en établissant à cette occasion une jonction au moins approximativement étanche à l'air au niveau de la zone de contact.


46¹
10
12
18
20a
22
46³
26
24
20b
56
16
28
48
36
46²
14
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42
46⁴
44
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34
46⁵

FIG. 1

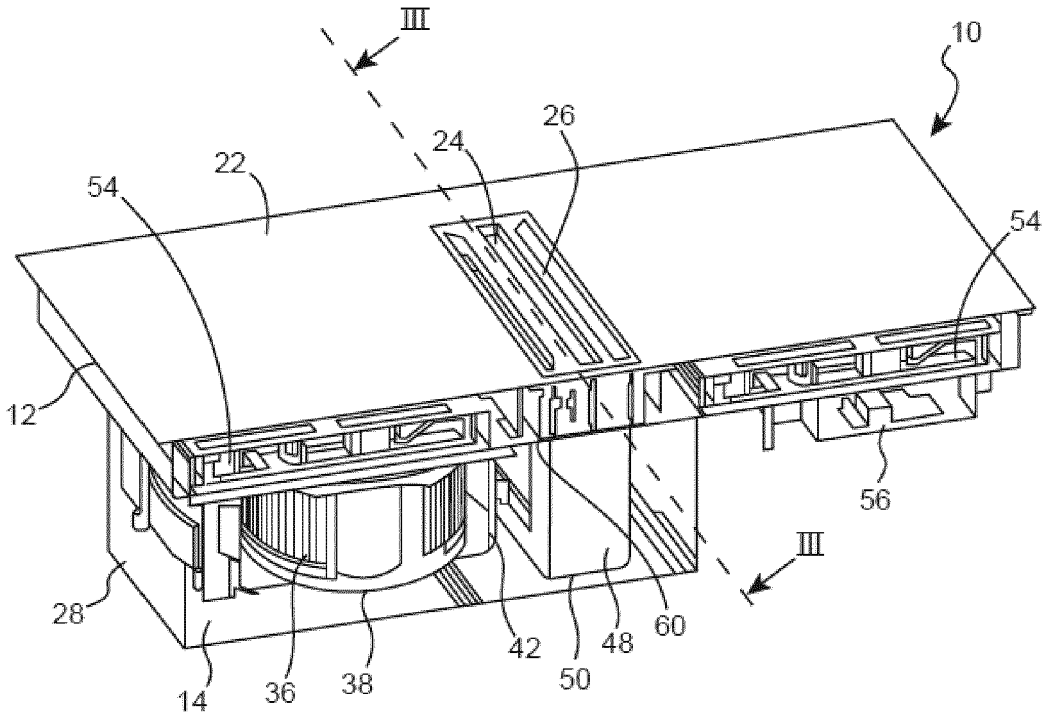
III
10
26
24
22
54
54
12
56
III
28
42
48
60
50
14
36
38

FIG. 2

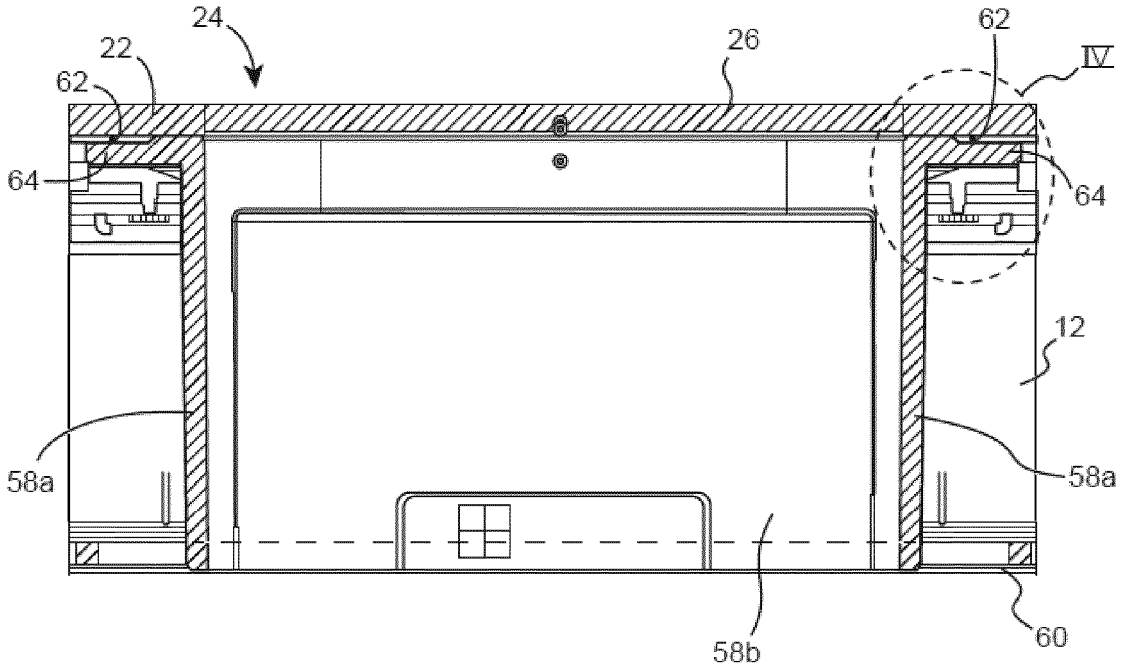
24
62
26
62
IV
22
64
64
12
58a
58a
58b
60

FIG. 3

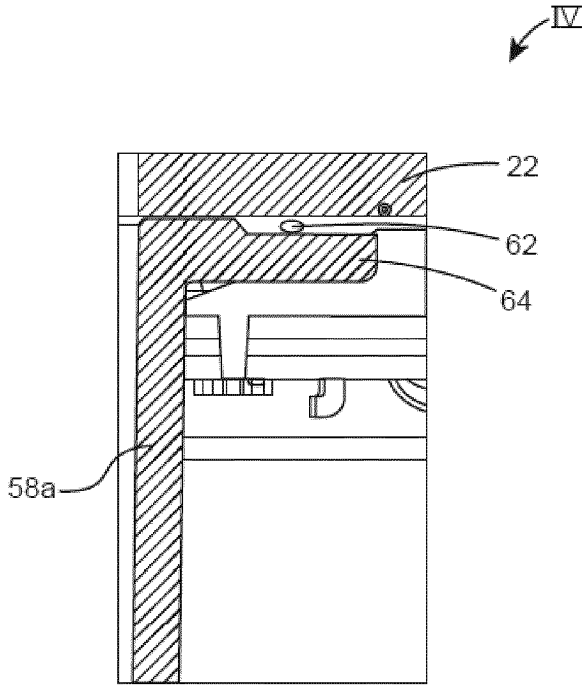
IV
22
62
64
58a

FIG. 4

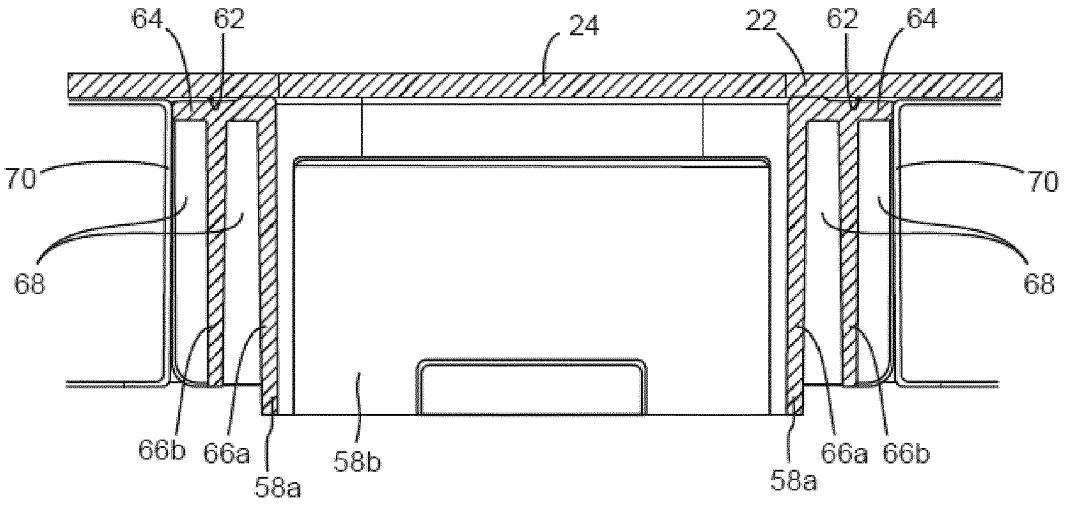
64
62
24
22
62
64
70
70
68
68
66b
66a
58a
58b
58a
66a
66b

FIG. 5

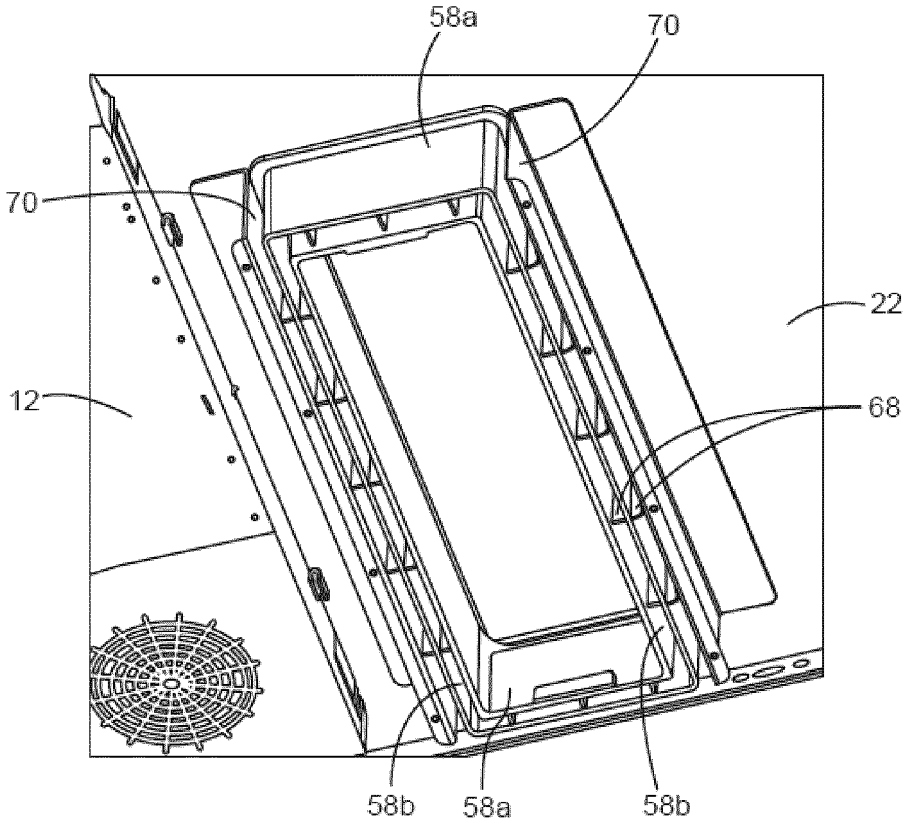


FIG. 6

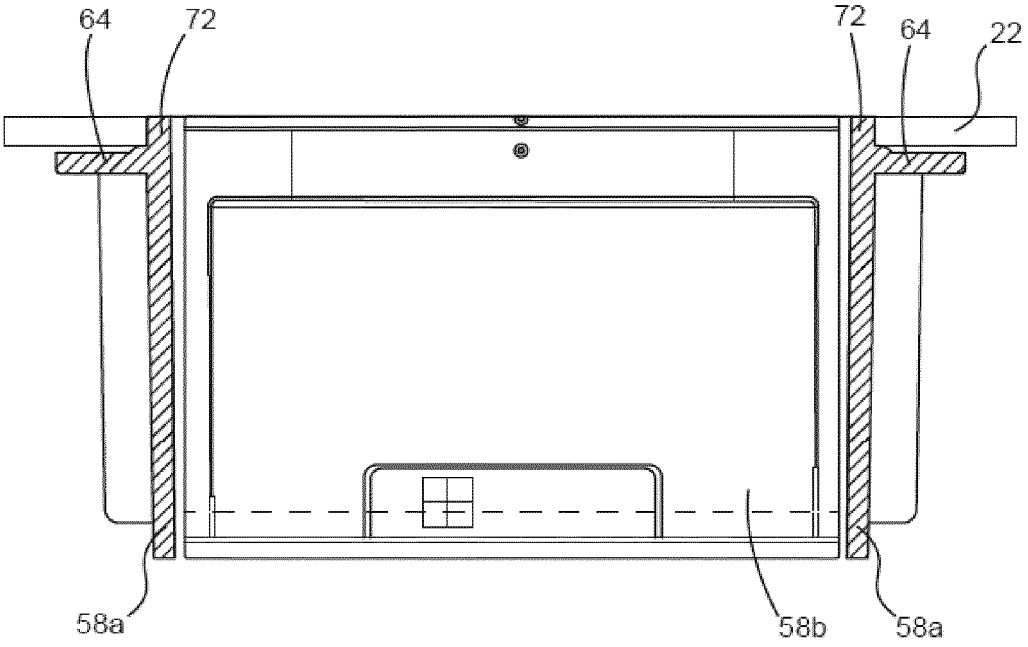


FIG. 7

## REFERENCES CITED IN THE DESCRIPTION

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### Patent documents cited in the description


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