

(19) **DANMARK**

(10) **DK/EP 4151909 T3**



Patent- og
Varemærkestyrelsen

(12) **Oversættelse af
europæisk patentskrift**

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- (51) Int.Cl.: **F 24 C 15/20 (2006.01)**
- (45) Oversættelsen bekendtgjort den: **2025-05-19**
- (80) Dato for Den Europæiske Patentmyndigheds bekendtgørelse om meddelelse af patentet: **2025-02-12**
- (86) Europæisk ansøgning nr.: **22196094.1**
- (86) Europæisk indleveringsdag: **2022-09-16**
- (87) Den europæiske ansøgnings publiceringsdag: **2023-03-22**
- (30) Prioritet: **2021-09-17 DE 202021105043 U** **2021-10-11 DE 202021105496 U**
- (84) Designerede stater: **AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR**
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- (74) Fuldmægtig i Danmark: **COPA COPENHAGEN PATENTS K/S, Rosenvængets Allé 25, 2100 København Ø, Danmark**
- (54) Benævnelse: **Kogeplademodul**
- (56) Fremdragne publikationer:
EP-A1- 3 722 678
EP-A1- 3 789 680
WO-A1-2019/081271
WO-A1-2019/081274
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DESCRIPTION OF THE INVENTION

[0001] The present invention relates to a hob module having a housing, a setting plate provided on the upper side of the housing and a vapor extractor device having a fan in order to suck away hazes and vapors produced during cooking from the upper side of the setting plate downwards in a flow direction, wherein an air inflow chamber is formed in the housing, which is accessible from the outside through an air inlet opening provided in the setting plate and wherein the fan is accommodated in the housing downstream of the air inflow chamber, wherein the extractor device has a holder for a grease filter in the flow direction upstream of the fan and comprises fastening means for attaching an odour filter, and wherein the fastening means for the odour filter are provided in the housing between the holder for the grease filter and the fan as viewed in the flow direction.

[0002] Hob modules of this type with an integrated trough-steam extraction device, by means of which steams and vapours produced during cooking are extracted downwards from the upper side of the actual hotplate/setting plate of the cooking device, are known. For example, EP 3 505 830 B1 discloses a hob module with a housing, on the top side of which a hob with a cooktop or a setting plate is provided. The hob itself has a frame in which the technology for the hob is accommodated. The hob module also has a trough or downdraft vapor extractor device in order to suck off and clean steams and vapours which are produced during cooking from the upper side of the hotplate downwards. For this purpose, an air inlet opening is provided in the hotplate, through which air to be cleaned is sucked down into an air inflow chamber provided in the housing. In the region of the air inlet opening, a grease filter is provided, which is suspended in the air inlet opening and projects into the region of the air inflow chamber. The extractor device further comprises a fan, which is arranged downstream of the grease filter, and an odour filter, which is arranged behind the fan as viewed in the direction of flow. The arrangement is made such that the odour filter is accessible from the air inflow chamber, so that the air filter is inserted through the air inflow chamber. However, due to the limited space, the replacement of the odour filter is sometimes difficult from the outside of the reaction vessel. From WO 2019/081271 A1 and WO 2017/081274 A1 such hob modules are likewise known in the art. US 2021/0156569 A1 discloses a hob module in which the grease filters and odour filters are introduced into the housing from the rear side thereof.

[0003] Thus, the object of the present invention is that it enables simple replacement of the odour filter.

[0004] The object is obtained by a hob module of the type mentioned at the beginning in that the fastening means for the odour filter have a receptacle which is accessible from a front side of the hob module and into which an odour filter can be inserted from the front side of the hob module,

and in that the receptacle is accessible from the front side of the hob module and has a downwardly pointing insertion opening into which an odour filter can be inserted from the front side of the hob module by sliding it upwards from below. The receptacle for the odor filter can be embodied closed on its top side and/or bottom side.

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[0005] The side surfaces of the receptacles can be closed by grid-like holding means, between which through-flow openings are formed.

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[0006] This embodiment combines a secure hold and an optimum positioning with simultaneously good flowability of the odour filter.

[0007] In these embodiments, the receptacle for odour filters is accessible from the outside, namely from the front side of the hob module, whereby a particularly simple replacement is ensured.

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[0008] Finally, according to one embodiment of the invention, it is provided that a liquid collecting tray is provided at the base of the air inflow chamber, which is inserted into the housing from the front side of the hob.

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[0009] An exemplary embodiment of a hob module according to the invention is explained below with reference to the attached drawing. The drawing shows

Figure 1 an embodiment of a hob module according to the present invention in a perspective view obliquely from the front,

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Figure 2 the hob module from Figure 1 with the hob removed in a perspective view,

Figure 3 the hob module from FIG. 1 in a perspective view obliquely from the rear,

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Figure 4 the hob module from FIG. 1 in a sectional side view and

Figure 5 the hob module from FIG. 1 in a sectional front view.

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[0010] The drawing shows a hob module according to the invention below. The hob model comprises a housing 1 and a hob 2, which is fastened to the open upper side of the housing 1. The hob 2 has a frame 3, on the top side of which a setting plate 4, for example made of glass ceramic, is provided and on which pots, pans etc. can be placed for cooking. The frame 3 is closed on the underside and serves to accommodate the technology of the hob 2.

[0011] The hob module further comprises a vapor extraction device which is designed as a trough or downdraft extraction device and serves to suck off and clean steams and vapours which are produced during cooking from the upper side of the placement surface 4 downwards. The vapor extraction device is substantially accommodated in the housing 1 and includes a grease filter 5, an odour filter 6, and a fan 7 arranged in this order one after another in a flow direction of the vapor extraction device. Specifically, an air inlet chamber 8 is formed in the housing 1, which is open toward its upper side. For this purpose, a central air inlet opening 9 is provided in the setting plate 4 between the actual cooking areas of the hob 2. The air inlet opening 9 is bounded by an edge which forms a retaining web via which the grease filter 5 is suspended through the air inlet opening 9 into the air inlet chamber 8. A cover plate 10 is placed on the top side of the grease filter 5, in which air slots 11 are formed.

[0012] The air inlet chamber 8 is connected to a fan chamber 12 of the housing 1, in which the fan 7 is accommodated, via a connecting opening 13 extending along the upper edge of the housing 1. In the region of this connecting opening 13, the odour filter 6 is provided in order to free an air stream from odour materials before it enters the fan chamber 12. For fixing the odour filter 6, a receptacle 14 is provided, which is accessible from the front side of the hob module and has a downwardly pointing insertion opening 15, through which the odour filter 6 can be inserted into the receptacle 14 from below.

[0013] It can be clearly seen in FIG. 2 that the receptacle 14 has an approximately L-shaped cross section, wherein the long L-web runs parallel to the housing top side and the short L-web is curved in order to simplify the insertion of the odour filter 6. The insertion opening 15 is closed by a cover 16 detachably attached to the housing 1.

[0014] The receptacle 14 is embodied closed on its upper side and on its lower side but is closed on its side surfaces facing the air inlet chamber 8 and the fan chamber 12 only by grid-like holding means 17 which define passage openings for the air to be purified.

[0015] At the bottom of the air inlet chamber 8, a collecting tray 18 for liquids entering the housing 1 is provided. The collecting tray 18 is designed in the form of a drawer which is inserted into the air inlet chamber 8 of the housing 1 from the front side of the hob module.

[0016] During operation, air to be purified is sucked via the fan 7 through the air inlet opening 9 into the air inlet chamber 8 of the housing 1, wherein the grease filter removes solids from the air stream. Liquids entering at the same time are collected in the collecting tray 18, and the air thus

prepurified is sucked into the fan chamber 12, wherein it flows through the odour filter 6 and is freed of odour materials prior to the purified air being blown out of the housing 1 again through an air outlet opening 19 at the rear side of the fan chamber 12.

5 **[0017]** The grease filter 5 can be cleaned in a simple manner by removing the cover plate 10 and removing the grease filter 5 upwardly through the air inlet opening 9 from the cooking module. Likewise, the collecting tray 18 can be pulled out of the housing 1 for cleaning.

10 **[0018]** If cleaning of the odour filter 6 is required, the cover 16 is removed and the odour filter 6 is pulled downward out of the receptacle 14.

List of reference numerals

[0019]

15

1 Housing

2 Hob Top

3 Frames

4 Setting plate

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5 Fat Filter

6 Odour filter

7 Fan

8 Air Inlet Chamber

9 Air Inlet Opening

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10 Cover plate

11 Air Slot

12 Fan Chamber

13 Connecting Opening

14 Receptacle

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15 Insertion Opening

16 Cover

17 Holding means

18 Collecting Tray

19 Air outlet opening

KRAV

5 **1.** Kogeplademodul med et hus (1), en plade (4) tilvejebragt på oversiden af huset (1), og en dampudsugningsanordning med en ventilator (7) til bortsugning af røg og dampe dannet under
10 tilberedningen fra oversiden af pladen (4) nedad i en strømningsretning, hvor et luftindstrømningskammer er tilvejebragt i huset (1), hvilket luftindstrømningskammer er tilgængeligt udefra gennem en luftindtagsåbning i pladen (4), og hvor blæseren (7) er anbragt i huset (1) nedstrøms i forhold til luftindtagskammeret (8), hvor udsugningsanordningen har en holder til et fedtfilter (5) foran ventilatoren (7) i strømningsretningen og omfatter fastgørelsesmidler til
15 fastgørelse af et lugtfilter (6), og hvor fastgørelsesmidlerne til lugtfilteret (6) er tilvejebragt mellem holderen til fedtfilteret (5) og ventilatoren (7) i huset (1) set i strømningsretningen, **kendetegnet ved at** fastgørelsesmidlerne til lugtfilteret (6) har en beholder (14) som er tilgængelig fra en forside af kogeplademodulet og ind i hvilken et lugtfilter (6) kan indsættes fra forsiden af kogeplademodulet, og **ved at** beholderen (14) er tilgængelig fra forsiden af kogeplademodulet og har en nedadpegende
indføringsåbning (15) i hvilken et lugtfilter (6) kan indsættes fra forsiden af kogeplademodulet ved at skubbe det opad nedefra.

2. Kogeplademodul ifølge krav 1, **kendetegnet ved at** beholderen (14) til lugtfilteret (6) er lukket på sin overside og/eller underside.

20 **3.** Kogeplademodul ifølge et af de foregående krav, **kendetegnet ved at** sidefladerne af beholderen (14) er lukket af gitterlignende holdemidler (17) mellem hvilke der er dannet gennemstrømningsåbninger.

4. Kogeplademodul ifølge et af de foregående krav, **kendetegnet ved at** en opsamlingsbakke (18), som er indsat i huset (1) fra forsiden af kogepladen (2), er tilvejebragt på basen af luftindstrømningskammeret.

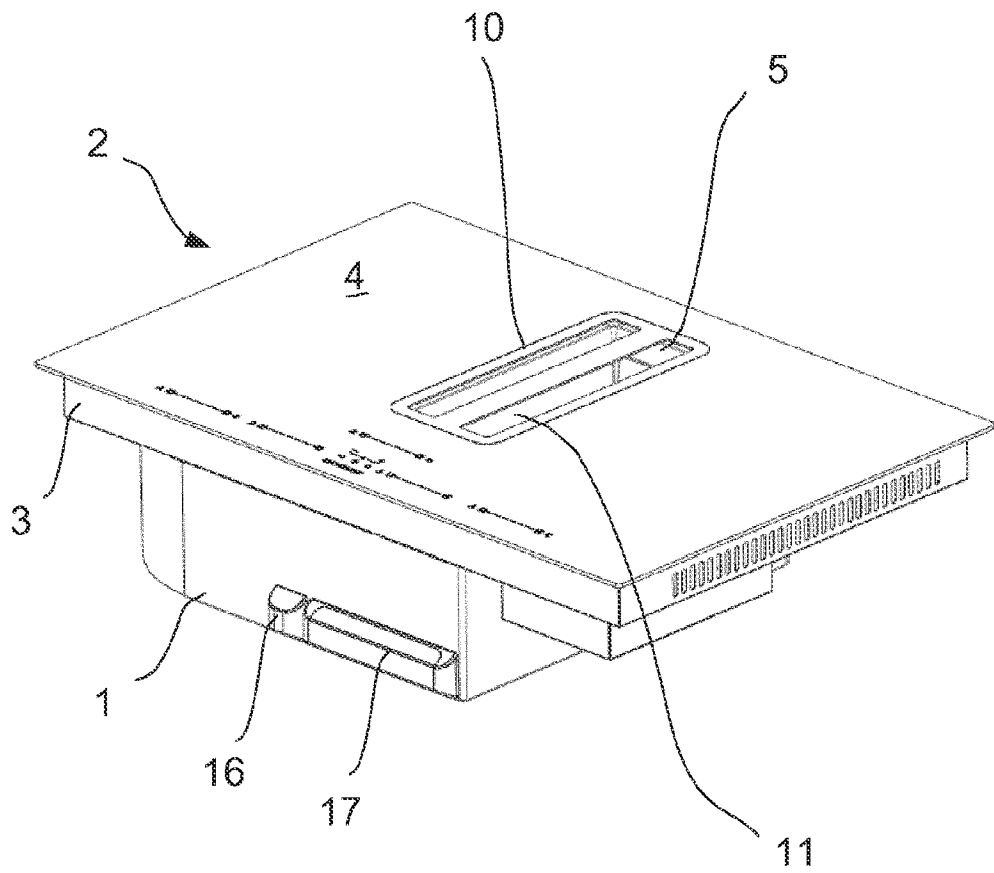


FIG. 1

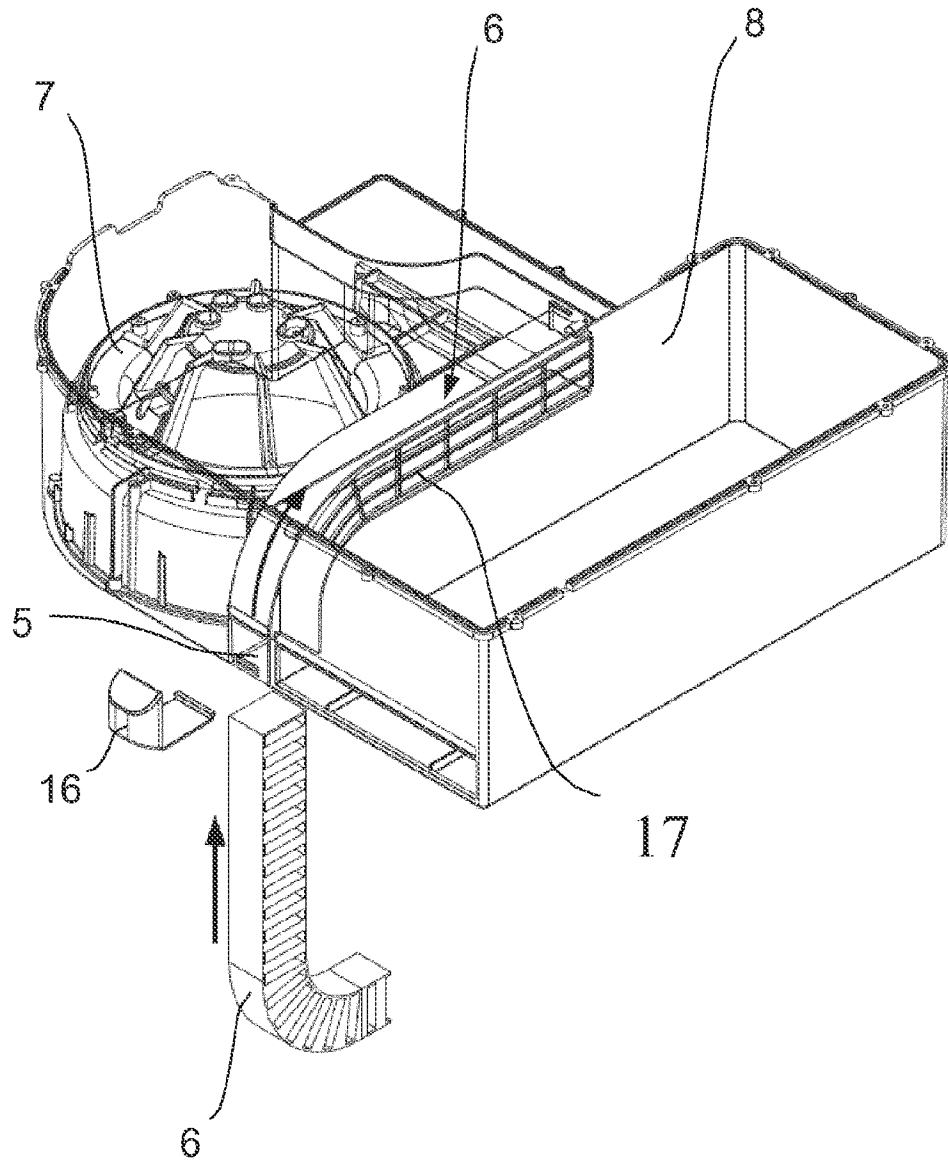


FIG. 2

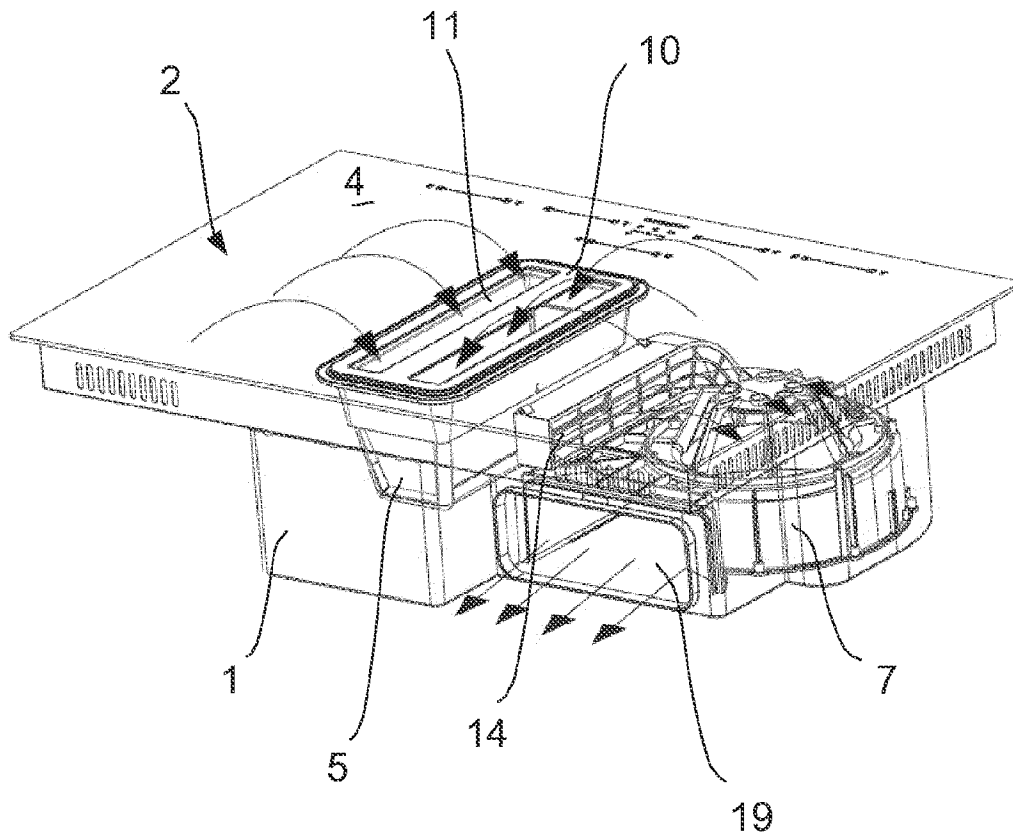


FIG. 3

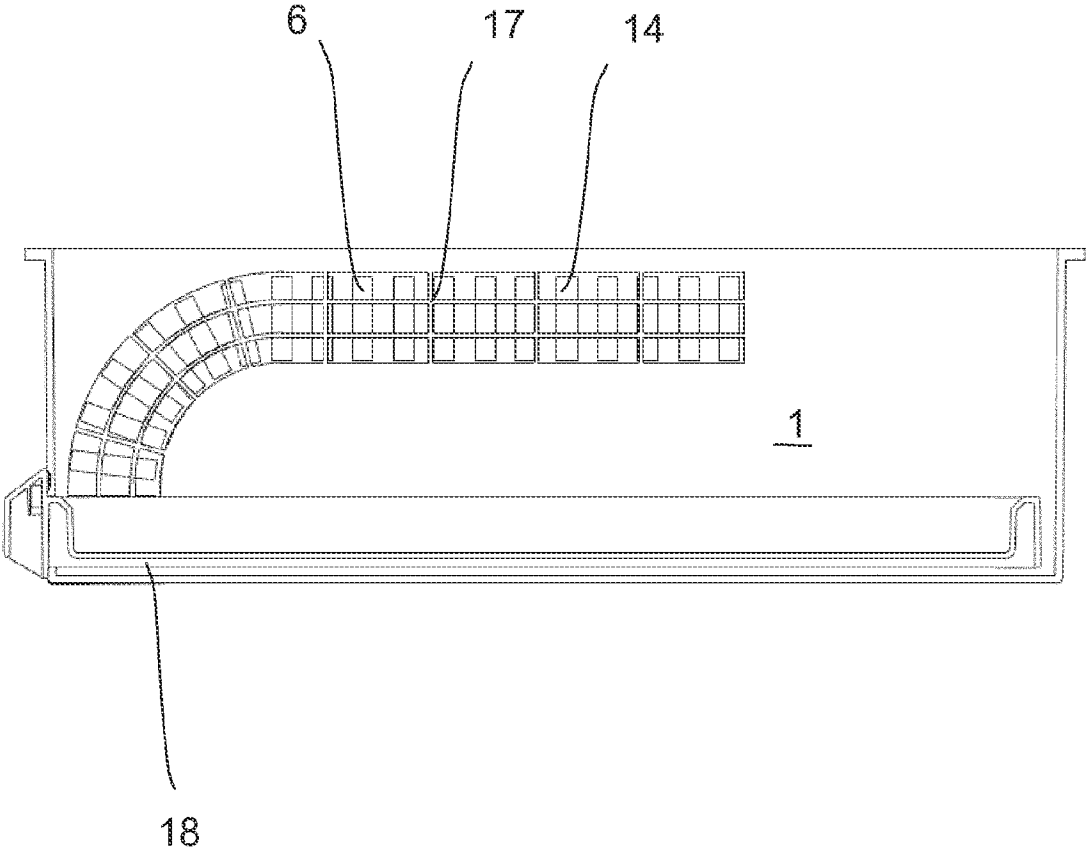


FIG. 4

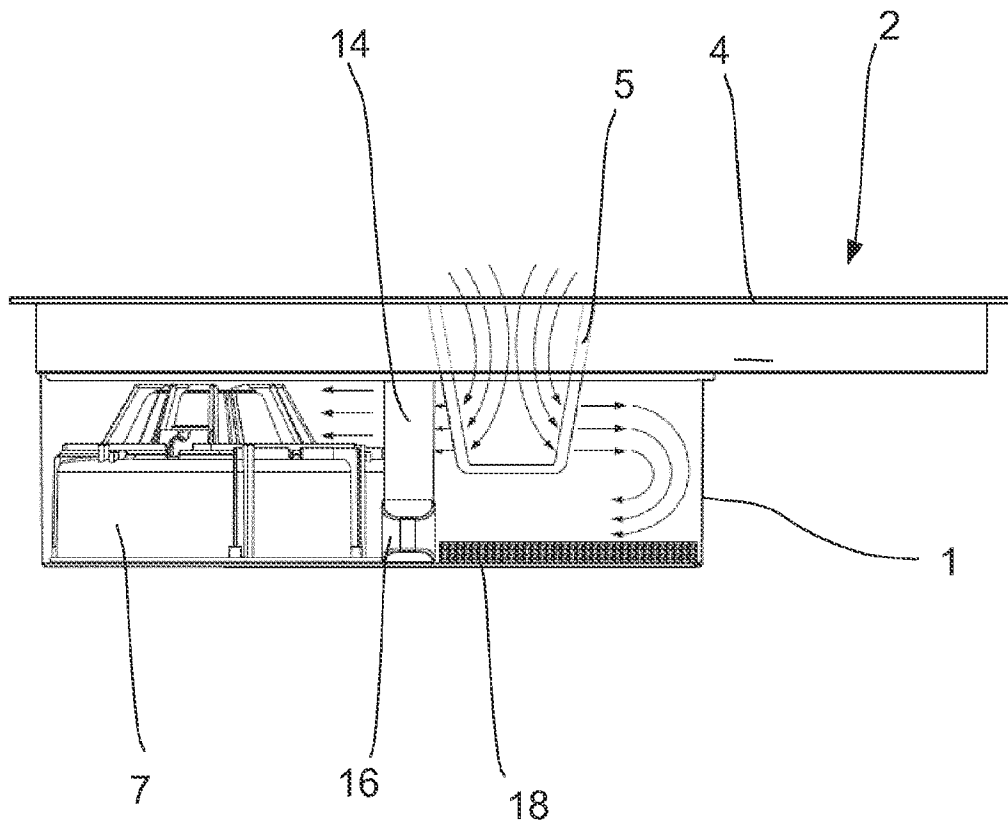


FIG. 5