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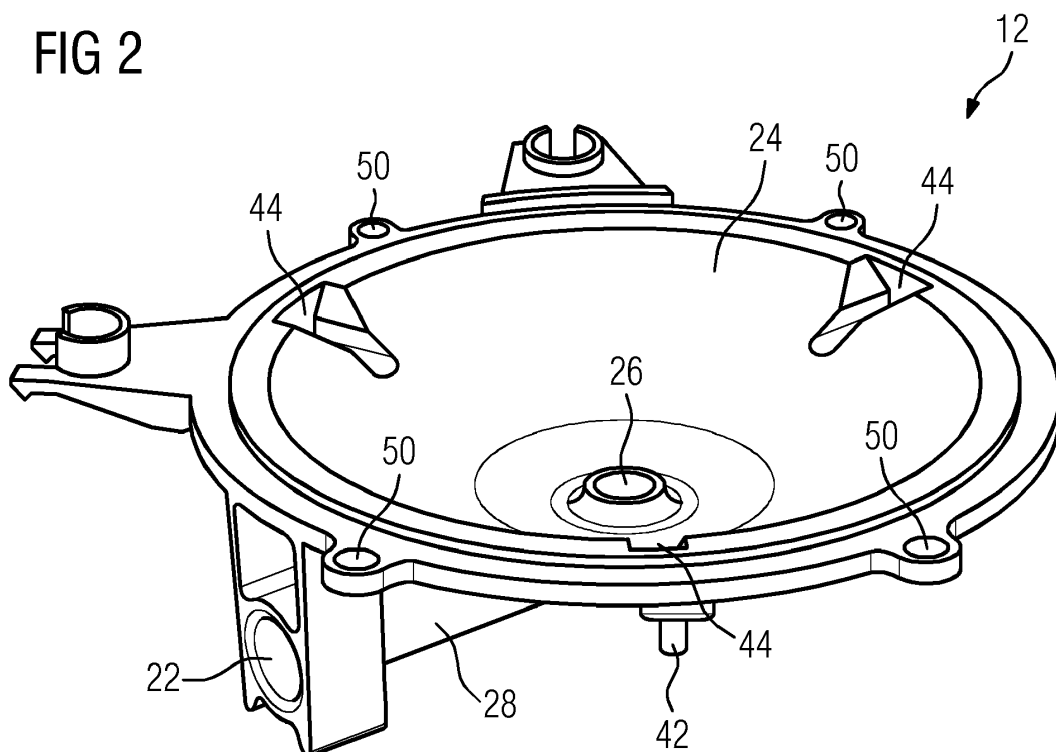
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(54) BASE PART FOR A GAS BURNER ASSEMBLY

(57) The present invention relates to a base part (12) for a gas burner assembly (10) of a gas cooking appliance, in particular of a domestic gas cooking hob. The base part (12) includes a shell (24) with an open top side. The base part (12) includes and/or supports at least one injector (26; 26A, 26B) arranged in the central and deep-

est position of the shell (24). The inner side of the shell (24) is formed as a circumferential surface of a truncated cone. Further, the present invention relates to a gas burner assembly (10). Moreover, present invention relates to a gas cooking appliance, in particular a domestic gas cooking hob.

FIG 2**EP 3 748 230 A1**

Description

[0001] The present invention relates to a base part for a gas burner assembly. Further, the present invention relates to a gas burner assembly for a gas cooking appliance. Moreover, the present invention relates to a gas cooking appliance, in particular a domestic gas cooking hob.

[0002] Conventional gas burner assemblies often include a base part acting as a holder for an injector. Usually, such base parts have a rectangular cross section and forming a kind of shell. However, such base parts are over-dimensioned and require a lot of material. Further the weight of the gas burner assembly with the base part is relative high. Moreover, the manufacturing of such base parts and gas burner assemblies is very complex.

[0003] It is an object of the present invention to provide a base part for a gas burner assembly, which allows improved flow conditions of the gas-air mixture by low complexity.

[0004] The object is achieved by the base for the gas burner assembly according to claim 1.

[0005] According to the present invention a base part for a gas burner assembly of a gas cooking appliance, in particular of a domestic gas cooking hob, is provided, wherein:

- the base part includes a shell with an open top side,
- the base part includes and/or supports at least one injector arranged in the central and deepest position of the shell, and
- the inner side of the shell is formed as a circumferential surface of a truncated cone.

[0006] The core of the present invention is the shape of the shell. The inner side of the shell is formed as a circumferential surface of a truncated cone, wherein the at least one injector is arranged in the deepest position of said shell. This allows a very smooth inner surface around the injector. In particular, the smooth surface around the injector improves the composition and the flow conditions of the gas-air mixture within the shell. Further, the smooth surface of the shell is easy to clean.

[0007] In particular, the base part includes at least one gas inlet arranged beneath the shell, wherein preferably said gas inlet is arranged in a lower and/or outer portion of the base part.

[0008] Preferably, the base part includes at least one gas channel, in particular a horizontal gas channel, interconnected between the gas inlet and the injector.

[0009] Further, the inner side of the shell of the base part may be formed as smooth surface without any bends.

[0010] Moreover, one or more pockets may be formed in the upper portion of the shell of the base part, wherein said pocket is provided for receiving an element of a burner crown.

[0011] Additionally, the base part may include at least

one pin, preferably at least two or at least three pins, for fixing and/or aligning said base part on a bottom of the gas cooking appliance. In particular, said pin or pins, respectively, extend downwards.

[0012] According to another embodiment of the present invention, the shell of the base part is formed as an integrated part of a work plate of the gas cooking appliance. Preferably, the shell of the base part is embossed in the work plate of the gas cooking appliance. In particular, the shell of the base part is a deformation in the work plate of the gas cooking appliance. The shell of the base part may be obtained by forging the sheet for the work plate. Further, the shell of the base part may be obtained by cold stamping the sheet for the work plate. Alternatively, the shell of the base part may be a separate component fixed to the work plate by suitable fastening elements. The shell formed as integrated part of the work plate reduces the number of components of the gas burner assembly.

[0013] Further, the present invention relates to a gas burner assembly for a gas cooking appliance, wherein said gas burner assembly comprises at least one base part mentioned above.

[0014] In particular, the gas burner assembly comprises an intermediate part arranged above the base part, wherein preferably said intermediate part includes a vertical Venturi pipe in its central portion, so that the Venturi pipe is arranged above the injector.

[0015] Additionally, the gas burner assembly may comprise a burner crown arranged above the intermediate part, wherein the burner crown includes a plurality of flame ports, and wherein preferably a prechamber is formed between the burner crown and the intermediate part.

[0016] Further, the gas burner assembly may comprise at least one burner cap arranged above the burner crown and covering at least one chamber of said burner crown.

[0017] According to a preferred embodiment, the burner crown includes an inner central chamber and an outer annular chamber, wherein the inner central chamber is covered by an inner burner cap and the outer annular chamber is covered by an outer burner cap.

[0018] For example, a plurality of inner flame ports is formed in a circumferential side wall of the inner central chamber, wherein preferably the inner burner cap is formed as a circular disk.

[0019] Additionally, a plurality of outer flame ports may be formed in an inner and/or outer circumferential side wall of the outer annular chamber, wherein preferably the outer burner cap is formed as a circular ring.

[0020] According to the preferred embodiment, the plurality of outer flame ports is formed in the outer circumferential side wall of the outer annular chamber, wherein preferably the outer burner cap is formed as the circular ring and inclined in radial direction, so that the level of the outer burner cap rises from inside to outside.

[0021] In particular, an upper side of the base part is open, so that the gas burner assembly takes primary

fresh air from outside of the work plate.

[0022] Further, the present invention relates to a gas cooking appliance, in particular a domestic gas cooking hob, wherein the gas cooking appliance comprises at least one gas burner assembly mentioned above.

[0023] Novel and inventive features of the present invention are set forth in the appended claims.

[0024] The present invention will be described in further detail with reference to the drawing, in which

FIG 1 illustrates a schematic sectional side view of a gas burner assembly according to a first embodiment of the present invention,

FIG 2 illustrates a schematic perspective view of a base part for the gas burner assembly according to the first embodiment of the present invention,

FIG 3 illustrates a schematic sectional side view of a base part of the gas burner assembly according to a second embodiment of the present invention,

FIG 4 illustrates a schematic sectional side view of the gas burner assembly according to a third embodiment of the present invention,

FIG 5 illustrates a schematic perspective view of a base part for the gas burner assembly according to the third embodiment of the present invention, and

FIG 6 illustrates a schematic perspective view of the gas burner assembly according to the third embodiment of the present invention.

[0025] FIG 1 illustrates a schematic sectional side view of a gas burner assembly 10 according to a first embodiment of the present invention. The gas burner assembly 10 is provided for a gas cooking appliance, in particular for a domestic gas cooking hob.

[0026] The gas burner assembly 10 comprises a base part 12, an intermediate part 14, a burner crown 16, an outer burner cap 18 and an inner burner cap 20. The intermediate part 14 is arranged above the base part 12. In turn, the burner crown 16 is arranged above the intermediate part 14. The outer burner cap 18 and the inner burner cap 20 are arranged on the burner crown 16. The outer burner cap 18 is formed as a circular ring and inclined in radial direction, wherein the level of the outer burner cap 18 rises from inside to outside. The inner burner cap 20 is formed as a circular disk.

[0027] The base part 12 includes a gas inlet 22, a shell 24 and a horizontal gas channel 28. The gas channel 28 is only provided for delivering gas up to the level of the injector 26. An external gas supply tube is connectable to the gas inlet 22 forming the entrance of the gas channel

28. The shell 24 has an open top side. An injector 26 is arranged in the centre of the shell 24, wherein said centre is the deepest position of the shell 24. The gas inlet 22 is arranged in a lower and outer portion of the base part 12. The horizontal gas channel 28 is interconnected between the gas inlet 22 and the centre of the shell 24, wherein the injector 26 is arranged. Further, the base part 12 includes a pin 42 for fixing and/or aligning said base part 12 on a bottom 46 of the gas cooking appliance. In this example, said pin 42 extends downwards.

[0028] The inner side of the shell 24 is formed as a circumferential surface of a truncated cone. The inner surface of the shell 24 is very smooth. Said smooth surface allows that the shell 24 and the base part 12 are easy to clean. In particular, the smooth surface around the injector 26 improves the composition and the flow conditions of the gas-air mixture within the shell 24.

[0029] Optionally, also the outer side of the shell 24 is formed as a circumferential surface of a truncated cone. In this case, the wall thickness of the shell 24 may be relative small resulting in low costs of material. This allows a light weight construction of the base part 12. Further, this contributes to a lightweight and compact construction of the gas burner assembly 10. The intermediate part 14 is arranged above the base part 12. A vertical Venturi pipe 30 is formed in the centre of said intermediate part 14. Thus, the vertical Venturi pipe 30 is arranged above the injector 26. The burner crown 16 is arranged above the intermediate part 14. A prechamber 32 is formed between the intermediate part 14 and the burner crown 16. The height of said prechamber 32 increases radially, from inside to outside. The burner crown 16 includes an inner central chamber 34 and an outer annular chamber 36 connected to the prechamber 32.

[0030] The burner crown 16 includes a plurality of inner flame ports 38 and a plurality of outer flame ports 40. The inner flame ports 38 are formed in a circumferential side wall of the inner central chamber 34. The outer flame ports 40 are formed in a circumferential side wall of the outer annular chamber 36. Thus, an outer ring of flames encloses the outer annular chamber 36, while an inner ring of flames is arranged between the inner central chamber 34 and the outer annular chamber 36.

[0031] The inner central chamber 34 is covered by the inner burner cap 20, while the outer annular chamber 36 is covered by the outer burner cap 18 formed as circular ring. The outer burner cap 18 and the inner burner cap 20 are arranged concentrically to each other. Substantially, the outer burner cap 18 and the inner burner cap 20 are arranged at the same level. The outer ring of flames encloses the outer burner cap 18, while the inner ring of flames is arranged between the inner burner cap 20 and the outer burner cap 18.

[0032] The gas burner assembly 10 is arranged within a cut-out of a work plate 48 of the gas cooking hob. The intermediate part 14, the burner crown 16, the outer burner cap 18 and the inner burner cap 20 are arranged above the base part 12 which in turn is arranged within the cut-

out of the work plate 48. The base part 12 is substantially arranged beneath the work plate 48, the intermediate part 14 and the burner crown 16. The outer burner cap 18 and the inner burner cap 20 are supported by the base part 12. The intermediate part 14 and the burner crown 16 are joined. The outer burner cap 18 and the inner burner cap 20 are arranged above the burner crown 16. The burner crown 16 is supported by the base part 12 and fixed through the cut-out of the work plate 48. The base part 12 includes a number of screw holes 50 for fastening said base part on the work plate 48. In this example, the base part 12 includes four screw holes 50.

[0033] FIG 2 illustrates a schematic perspective view of the base part 12 of the gas burner assembly 10 according to the first embodiment of the present invention.

[0034] The base part 12 includes the gas inlet 22, the shell 24 with the open top side, the horizontal gas channel 28 and the pin 42. The injector 26 is arranged in the centre of the shell 24, which is the deepest position of the shell 24. The gas inlet 22 is arranged in the lower and outer portion of the shell 24. The horizontal gas channel 28 is interconnected between the gas inlet 22 and the centre of the shell 24. The pin 42 is provided for fixing and/or aligning the base part 12 on the bottom 46 of the gas cooking appliance. Preferably, at least three pins 42 for fixing and/or aligning the base part 12 on the bottom of the gas cooking appliance are provided. In particular, said pins 42 extend downwards.

[0035] The inner side of the shell 24 is formed as a circumferential surface of a truncated cone. The smooth surface allows that the shell 24 and the base part 12 are easy to clean. Further, the smooth surface around the injector 26 improves the composition and the flow conditions of the gas-air mixture within the shell 24. Moreover, the shell 24 of the base part 12 includes pockets 44 in its upper portion for assembling and centring the burner crown 16, the outer burner cap 18 and the inner burner cap 20. The injector 26 withdraws fresh air on the top side of the work plate 48. The gas burner assembly 10 is a top-breather burner. In contrast, the shell 24 does not have any opening arranged beneath said work plate 48. Thus, the injector 26 cannot suck air from the bottom side of the work plate 48.

[0036] FIG 3 illustrates a schematic sectional side view of a base part 12 of the gas burner assembly 10 according to a second embodiment of the present invention.

[0037] The base part 12 of the second embodiment is an integrated part of the work plate 48 of the gas cooking hob. The shell 24 of the base part 12 is a deformation in the work plate 48. The shell 24 of the base part 12 is obtained by embossing the sheet for the work plate 48 or other manufacturing techniques. For example, the shell 24 of the base part 12 is obtained by forging the sheet for the work plate 48. Further, the shell 24 of the base part 12 may be obtained by cold stamping the sheet for the work plate 48. This embodiment reduces the number of components of the gas burner assembly 10.

[0038] The base part 12 includes the gas inlet 22, the

shell 24 with the open top side, the horizontal gas channel 28 and the gas inlet 22. A gas supply tube 52 is inserted into the gas inlet 22. The injector 26 is arranged in the centre of the shell 24. Said centre is the deepest position of the shell 24. The gas inlet 22 is arranged in the lower portion of the shell 24. The horizontal gas channel 28 is interconnected between the gas inlet 22 and the centre of the shell 24. In this example, the shell 24 is formed as a circumferential surface of a truncated cone. Alternatively, the shell 24 of the base part 12 may be a separate component and fixed to the work plate 48 by suitable fastening elements.

[0039] FIG 4 illustrates a schematic sectional side view of the gas burner assembly 10 according to a third embodiment of the present invention.

[0040] The gas burner assembly 10 comprises the base part 12, the intermediate part 14, the burner crown 16, the outer burner cap 18 and the inner burner cap 20. The intermediate part 14 is arranged above the base part 12, while the burner crown 16 is arranged above the intermediate part 14. The outer burner cap 18 and the inner burner cap 20 are arranged on the burner crown 16. The outer burner cap 18 is formed as circular ring and inclined in radial direction, wherein the level of the outer burner cap 18 rises from inside to outside. The inner burner cap 20 is formed as circular disk.

[0041] The base part 12 includes a first gas inlet 22A and a second gas inlet 22B, wherein only the first gas inlet 22A is explicitly shown in FIG 4. Further, the base part 12 includes the shell 24, a first horizontal gas channel 28A and a second horizontal gas channel 28B. Three injectors 26A and 26B are arranged in the centre of the shell 24, wherein said centre is the deepest position of the shell 24. The injectors 26A and 26B are arranged in series. Two outer injectors 26A are supplied by the first horizontal gas channel 28A. The first horizontal gas channel 28A includes the first gas inlet 22A. The second horizontal gas channel 28B is arranged above and perpendicular to the first horizontal gas channel 28A. The second horizontal gas channel 28B includes the second gas inlet 22B and supplies an inner injector 26B. The gas channels 28A and 28B are only provided for delivering gas up to the level of the injectors 26A and 26B. External gas supply tubes are connectable to the gas inlets 22A and 22B. The both gas inlets 22A and 22B allow a separate control of the gas supplies for the inner injector 26B on the one hand and the outer injectors 26A on the other hand. The heat distribution above the gas burner assembly 10 may be adjusted.

[0042] The intermediate part 14 is arranged above the base part 12. Three vertical Venturi pipes 30 are formed in the centre of said intermediate part 14, wherein each vertical Venturi pipe 30 is arranged above one of the injectors 26A and 26B. The burner crown 16 is arranged above the intermediate part 14. The prechamber 32 is formed between the intermediate part 14 and the burner crown 16. The height of said prechamber 32 increases radially, from inside to outside. The burner crown 16 in-

cludes the inner central chamber and the outer annular chamber connected to the prechamber 32. The burner crown 16 includes the plurality of inner and outer flame ports 40. The inner central chamber 34 is covered by the inner burner cap 20, while the outer annular chamber 36 is covered by the outer burner cap 18 formed as circular ring. The outer burner cap 18 and the inner burner cap 20 are arranged concentrically to each other. Preferably, the outer burner cap 18 and the inner burner cap 20 are arranged at the same level.

[0043] FIG 5 illustrates a schematic perspective view of a base part 12 for the gas burner assembly 10 according to the third embodiment of the present invention.

[0044] The injectors 26A and 26B are arranged in the centre of the shell 24. The centre is the deepest position of the shell 24. The gas inlets 22A and 22B are arranged in the lower portion of the shell 24 and arranged perpendicular to each other. The first gas inlet 22A on the right hand side in FIG 5 supplies the inner injector 26B, while the second gas inlet 22B on the left hand side in FIG 5 supplies the both outer injectors 26A.

[0045] Further, the shell 24 of the base part 12 includes pockets 44 in its upper portion for assembling and centring the burner crown 16, the outer burner cap 18 and/or the inner burner cap 20. Moreover, the base part 12 includes screw holes 50 for fastening said base part on the work plate 48.

[0046] FIG 6 illustrates a schematic perspective view of the gas burner assembly 10 according to the third embodiment of the present invention.

[0047] The horizontal gas channels 28A and 28B with the gas inlets 22A and 22B are arranged in the lower portion of the shell 24. The horizontal gas channels 28A and 28B are arranged perpendicular to each other. The first horizontal gas channel 28A on the right hand side in FIG 6 supplies the inner injector 26B, while the second horizontal gas channel 28B on the left hand side in FIG 6 supplies the both outer injectors 26A. External gas supply tubes are connectable to the gas inlets 22A and 22B of the horizontal gas channels 28A and 28B, respectively. The both horizontal gas channels 28A and 28B allow a separate control of the gas supplies for the inner injector 26B on the one hand and the outer injectors 26A on the other hand. A fine tuning of the heat above the gas burner assembly 10 is possible. Further, the heat distribution above the gas burner assembly 10 may be adjusted.

[0048] Although illustrative embodiments of the present invention have been described herein with reference to the accompanying drawings, it is to be understood that the present invention is not limited to those precise embodiments, and that various other changes and modifications may be affected therein by one skilled in the art without departing from the scope or spirit of the invention. All such changes and modifications are intended to be included within the scope of the invention as defined by the appended claims.

List of reference numerals

[0049]

5	10	gas burner assembly
	12	base part
	14	intermediate part
	16	burner crown
	18	outer burner cap
10	20	inner burner cap
	22	gas inlet
	22A	first gas inlet
	22B	second gas inlet
	24	shell
15	26	injector
	26A	outer injector
	26B	inner injector
	28	horizontal gas channel
	28A	first horizontal gas channel
20	28B	second horizontal gas channel
	30	vertical Venturi pipe
	32	prechamber
	34	inner central chamber
	36	outer annular chamber
25	38	inner flame port
	40	outer flame port
	42	pin
	44	pocket
	46	bottom sheet
30	48	work plate
	50	screw hole
	52	gas supply tube

35 Claims

1. A base part (12) for a gas burner assembly (10) of a gas cooking appliance, in particular of a domestic gas cooking hob, wherein:

- the base part (12) includes a shell (24) with an open top side,
- the base part (12) includes and/or supports at least one injector (26; 26A, 26B) arranged in the central and deepest position of the shell (24), and
- the inner side of the shell (24) is formed as a circumferential surface of a truncated cone.

2. The base part according to claim 1, **characterised in that** the base part (12) includes at least one gas inlet (22; 22A, 22B) arranged beneath the shell (24), wherein preferably said gas inlet (22; 22A, 22B) is arranged in a lower and/or outer portion of the base part (12).

3. The base part according to claim 2, **characterised in that**

the base part (12) includes at least one gas channel (28; 28A, 28B), in particular a horizontal gas channel (28; 28A, 28B), interconnected between the gas inlet (22; 22A, 22B) and the injector (26; 26A, 26B).

4. The base part according to any one of the preceding claims,

characterised in that

the inner side of the shell (24) of the base part (12) is formed as a smooth surface.

5. The base part according to any one of the preceding claims,

characterised in that

one or more pockets (44) are formed in the upper portion of the shell (24) of the base part (12), wherein said pocket (44) is provided for receiving an element of a burner crown (16) .

6. The base part according to any one of the preceding claims,

characterised in that

the base part (12) includes at least one pin (42), in particular at least two or at least three pins (42), for fixing and/or aligning said base part (12) on a bottom (46) of the gas cooking appliance, wherein preferably said pin (42) extends downwards.

7. The base part according to any one of the claims 1 to 5,

characterised in that

the shell (24) of the base part (12) is formed as an integrated part of a work plate (48) of the gas cooking appliance, wherein preferably the shell (24) of the base part (12) is embossed in the work plate (48) of the gas cooking appliance.

8. A gas burner assembly (10) comprising at least one base part (12) according to any one of the preceding claims,

characterised in that

the gas burner assembly (10) comprises an intermediate part (14) arranged above the base part (12), wherein preferably said intermediate part (14) includes a vertical Venturi pipe (30) in its central portion, so that the Venturi pipe (30) is arranged above the injector (26; 26A, 26B).

9. The gas burner assembly according to claim 8,

characterised in that

the gas burner assembly (10) comprises a burner crown (16) arranged above the intermediate part (14), wherein the burner crown (16) includes a plurality of flame ports (38, 40), and wherein preferably a prechamber (32) is formed between the burner crown (16) and the intermediate part (14).

10. The gas burner assembly according to claim 9,

characterised in that

the gas burner assembly (10) comprises at least one burner cap (18, 20) arranged above the burner crown (16) and covering at least one chamber (34, 36) of said burner crown (16).

11. The gas burner assembly according to claim 9 or 10,

characterised in that

the burner crown (16) includes an inner central chamber (34) and an outer annular chamber (36), wherein the inner central chamber (34) is covered by an inner burner cap (20) and the outer annular chamber (36) is covered by an outer burner cap (18) .

12. The gas burner assembly according to claim 11,

characterised in that

a plurality of inner flame ports (38) is formed in a circumferential side wall of the inner central chamber (34), wherein preferably the inner burner cap (20) is formed as a circular disk.

13. The gas burner assembly according to claim 11 or 12,

characterised in that

a plurality of outer flame ports (40) is formed in an inner and/or outer circumferential side wall of the outer annular chamber (36), wherein preferably the outer burner cap (18) is formed as a circular ring.

14. The gas burner assembly according to claim 13,

characterised in that

the plurality of outer flame ports (40) is formed in the outer circumferential side wall of the outer annular chamber (36), wherein preferably the outer burner cap (18) is formed as the circular ring and inclined in radial direction, so that the level of the outer burner cap (18) rises from inside to outside.

15. The gas burner assembly according to any one of the preceding claims,

characterised in that

an upper side of the base part (12) is open, so that the gas burner assembly takes primary fresh air from outside of the work plate (48).

16. A gas cooking appliance, in particular a domestic gas cooking hob, comprising at least one gas burner assembly (10) according to any one of the claims 8 to 15.

FIG 3

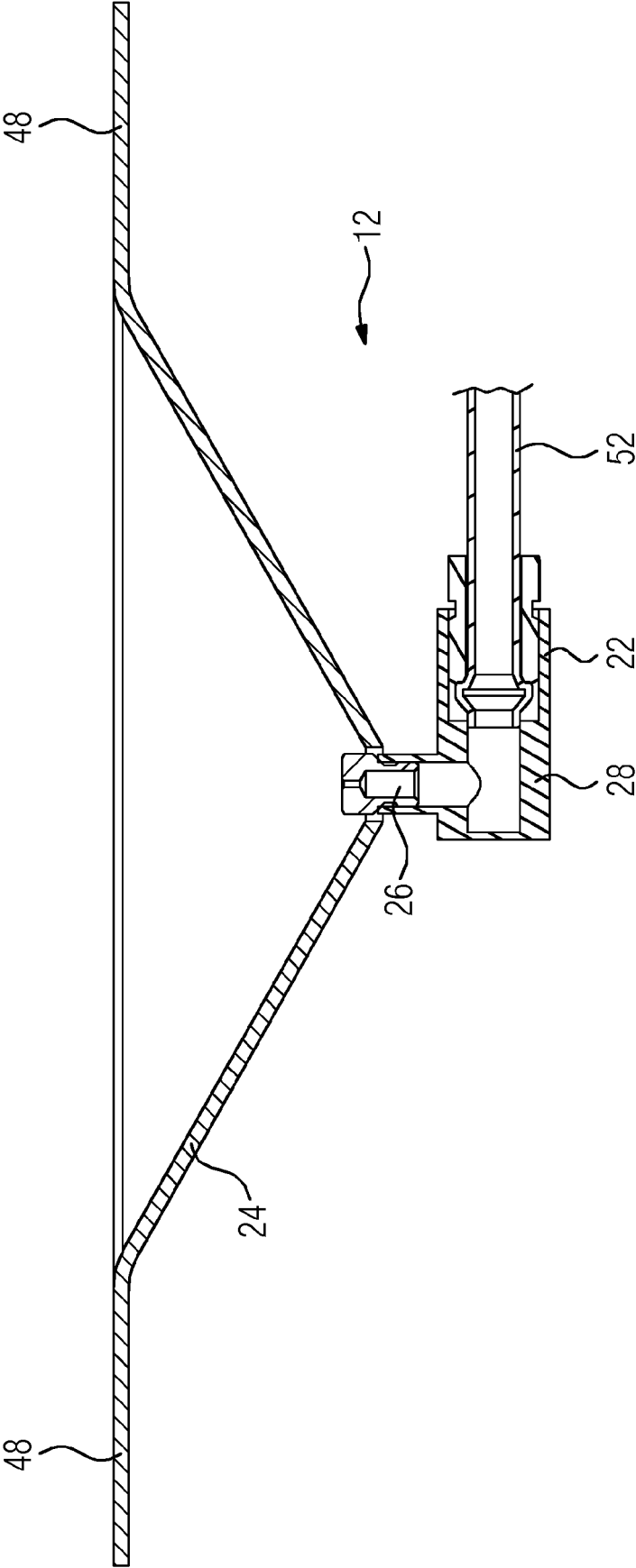


FIG 4

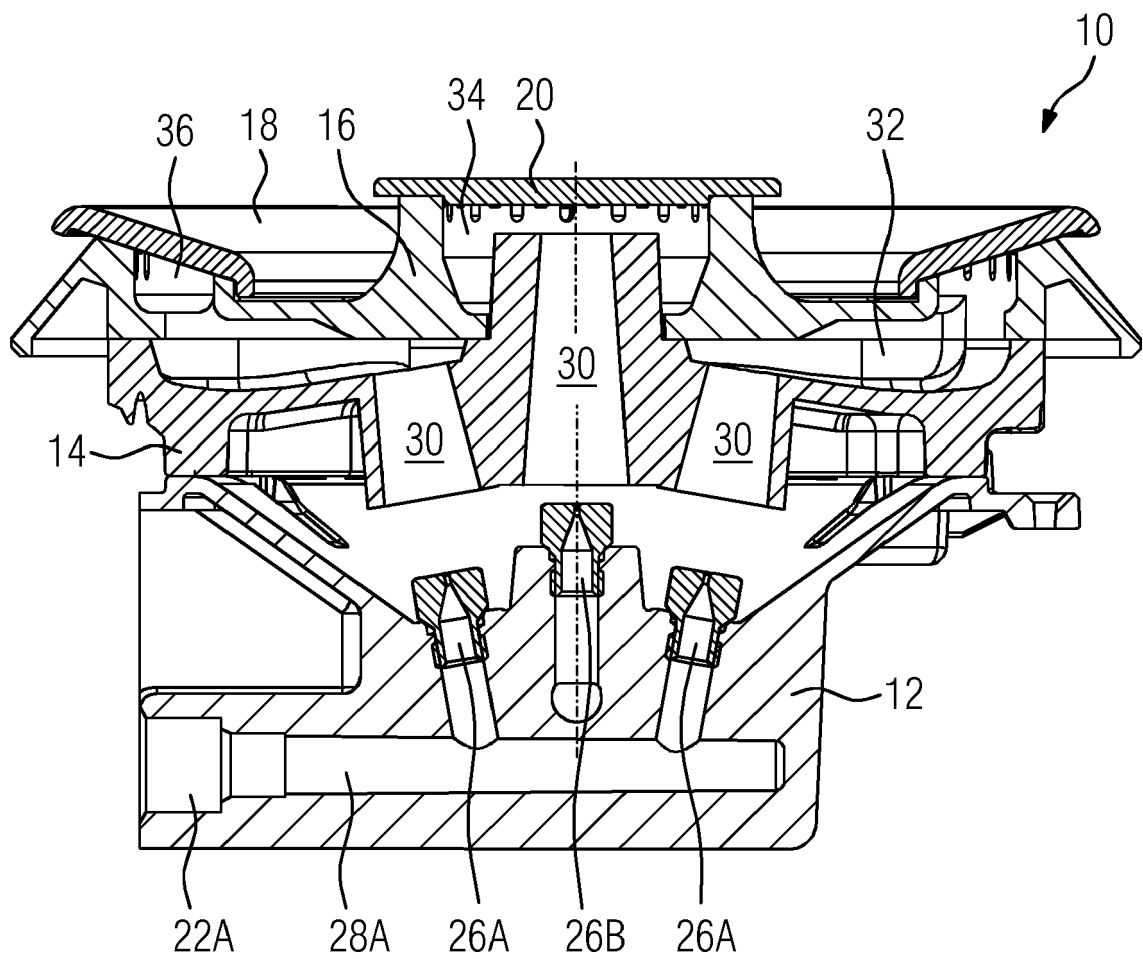


FIG 5

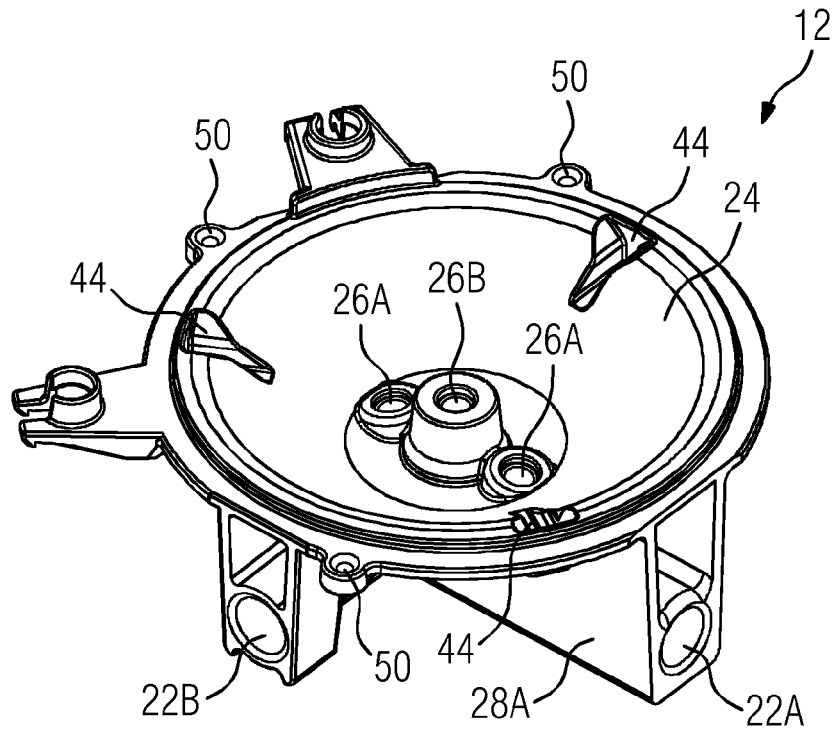
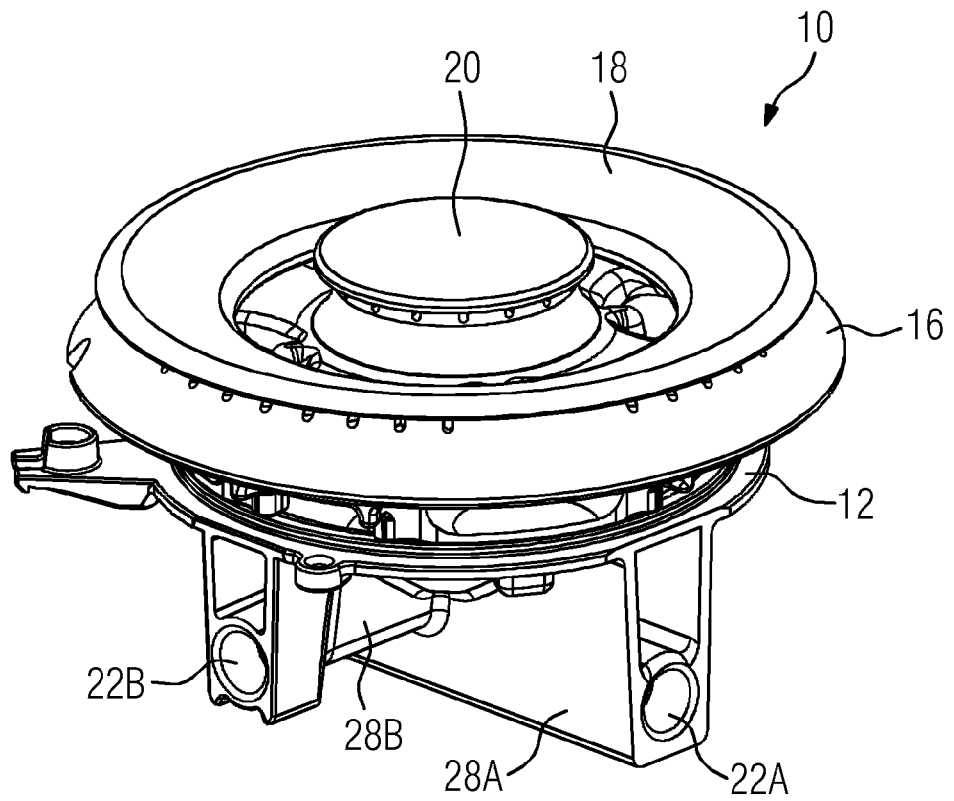


FIG 6





EUROPEAN SEARCH REPORT

Application Number
EP 19 17 7836

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 6 067 978 A (SCHLOSSER ERICH J [US] ET AL) 30 May 2000 (2000-05-30)	1-5, 8-10, 16	INV. F23D14/06 F23D14/64
Y	* column 1, line 7 - line 9; figures 1-7 * * column 5, line 10 - line 64 * * column 7, line 3 - line 8 * * page 7, line 59 - page 8, line 13 *	6	
Y	EP 1 616 132 A1 (SOMI PRESS SOC METALLI INIETTATI SPA [IT]) 18 January 2006 (2006-01-18)	6	
A	* paragraph [0001] - paragraph [0006]; figures 1-2 * * paragraph [0015] - paragraph [0018] *	2	
X	EP 2 246 619 A1 (ELECTROLUX HOME PROD CORP [BE]) 3 November 2010 (2010-11-03)	1-4, 8-10	TECHNICAL FIELDS SEARCHED (IPC) F23D
	* paragraph [0001]; claim 8; figures 1, 2 * * paragraph [0012] - paragraph [0015] *		
X	EP 1 159 565 A1 (ARDEM PISIRICI VE ISITICI CIHA [TR]) 5 December 2001 (2001-12-05)	1-5, 7-10, 15, 16	
	* paragraph [0001] - paragraph [0002]; figures 1-6 * * paragraph [0012] - paragraph [0020] *		
X	WO 2007/068659 A1 (ARCELIK AS [TR]; GOCER MEHMET BARIS [TR]; KARAER EROL [TR]) 21 June 2007 (2007-06-21)	1, 4, 8-10	
Y	* paragraphs [0001], [0002]; figures 1, 2, 10-13 * * paragraph [0024] - paragraph [0031] * * paragraph [0037] - paragraph [0041] *	11-14	
Y	EP 1 531 304 A2 (FAGOR S COOP [ES]) 18 May 2005 (2005-05-18)	11-14	
A	* paragraph [0001]; figures 1, 2 * * paragraphs [0011], [0012] *	1	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 10 December 2019	Examiner Hauck, Gunther
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03.82 (P04C01)



Application Number

EP 19 17 7836

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

EP 19 17 7836

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-6, 8, 9, 16(completely); 10(partially)

Base part for gas burner assembly of a cooling appliance comprising a truncated cone with an open top side and an injector arranged at the central and deepest portion of the shell, wherein the base part includes a pin for fixing or aligning the base part on a bottom of the cooking appliance.

2. claims: 7, 15

Base part for gas burner assembly of a cooling appliance comprising a truncated cone with an open top side and an injector arranged at the central and deepest portion of the shell, wherein the shell of the base part is formed as an integrated part of a work plate of the gas cooking appliance..

3. claims: 11-14(completely); 10(partially)

Base part for gas burner assembly of a cooling appliance comprising a truncated cone with an open top side and an injector arranged at the central and deepest portion of the shell, wherein at least two burner caps are arranged above a burner crown covering at least two chambers of the burner crown.

**ANNEX TO THE EUROPEAN SEARCH REPORT
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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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