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(54) **A cooking device flue system**

(57) The cooking device (F) of present invention comprises one flue system (A) comprising at least one cooking compartment (F1), and a chamber (1) connected to this cooking compartment (F1) and located on the device (F); in this chamber (1), at least one insulation element (4) which is adjacently located at the face (1b) of the chamber (1) close to outer portion of the device (F); and at least one flue pipe (2) extending from the cooking compartment (F1) to the chamber (4). The device (F) of the invention prevents the external damages of the hot air and especially prevents heat-based corrosion on the wall close to the device(F).

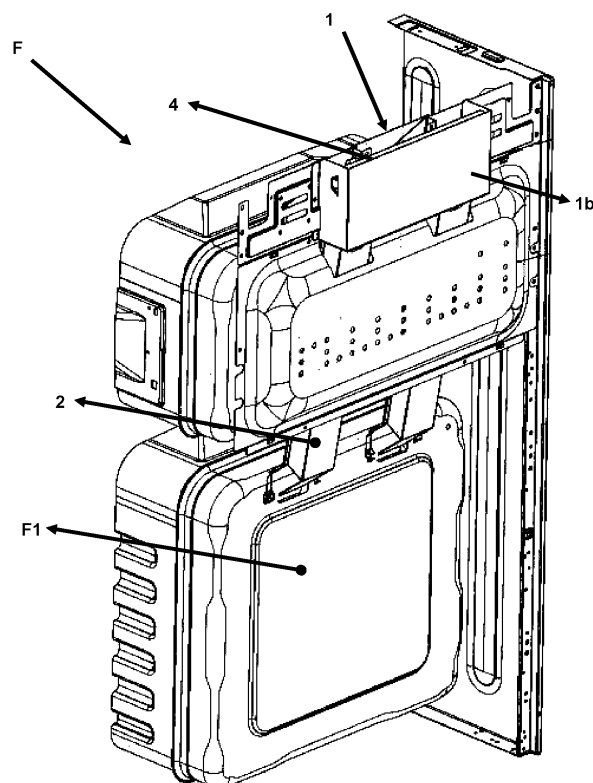


Figure 1

Description

Technical Field

[0001] The present invention relates to flues which are used in cooking devices.

Prior Art

[0002] The known cooking devices of prior art are preferably provided with a flue to eliminate hot air from internal ambiance of the device after cooking. Said flue is directed to air well and thus, hot air is removed from the ambiance of the device.

[0003] Said devices are provided preferably close to a wall where they are used. Therefore, usually the flue, at the back of the device, is provided very close to the wall. In this case, the heat of the hot air in the flue is substantially transferred to the wall. Heat transfer leads to thermal corrosion, may cause deformation of wall structure and flaking of wall layers. Hence, it is important not to transfer aforesaid heat to the wall.

[0004] In the patent document No JP 2007024324 A, which discloses one of the known methods of prior art about the problem, a cold water line is located around the flue. The hot air passing through the flue is cooled with the cold water passing through the line and discharged; thus, the damages of the hot air are avoided. However, the said art causes a large amount of water consumption so it is not useful.

[0005] Document No JP2003185154 A discloses a hot air guard. Said hot air guard, being fastened to the wall, prevents the contact of the hot air with the wall. Although the said protection saves the wall, it gives rise to loss of place and unaesthetic view.

Brief Description of the Invention

[0006] The cooking device of present invention comprises one flue system comprising at least one cooking compartment, and a chamber connected to this cooking compartment and located on the device; in this chamber, at least one insulation element which is adjacently located at the face of the chamber close to outside of the device, and at least one flue pipe stretching from the cooking compartment to the chamber.

[0007] The device of the present invention prevents the effects of the hot air released after cooking and which leads to corrosion on the wall which the device is close to. Moreover, the solution is cost effective and easily assembled.

Objective of the Invention

[0008] The aim of the present invention is to develop a cooking device which reduces the external effects of the hot air released from the device.

[0009] Another aim of the present invention is to de-

velop a cooking device comprising easily assembled and cost effective flue system.

Description of Drawings

[0010] Exemplary embodiments of the cooking device of the present invention and flue system in the device are illustrated in annexed figures wherein;

Figure 1 is the perspective view of the cooking device with an assembled flue system.

Figure 2 is the front view of the components of the flue system in an assembled state.

Figure 3 is section BB of the flue system illustrated in Figure 2.

Figure 4 is the components of the flue system in a disassembled state.

Figure 5 is the pieces of the flue system in an assembled state.

[0011] The parts in the figure are individually enumerated and the corresponding terms of reference numbers are as follows:

Flue system	(A)
Cooking device	(F)
Cooking compartment	(F1)
Chamber	(1)
Outer face	(1b)
Flue pipe	(2)
Front panel	(3)
Insulation element	(4)
Outer casing	(5)
Fixing element	(5a)

Description of the Invention

[0012] The cooking device (F) of present invention, exemplary embodiments of which are illustrated in Figure 1-5, comprises one flue system (A) comprising at least one cooking compartment (F1), and a chamber (1) connected to this cooking compartment (F1) and located on the device (F); in this chamber (1), at least one insulation element (4) which is adjacently located at the face (1 b) of the chamber (1) close to outer portion of the device (F); and at least one flue pipe (2) extending from the cooking compartment (F1) to the chamber (4).

[0013] In the developed flue system (A), hot air created in the cooking compartment (F1) is transferred to the chamber (1) via flue pipe (2). Said chamber (1) ensures discharge of the accumulated air from one single outlet (not shown). The insulation element (4) in the said chamber (1) prevents the contact of the accumulated hot air with the outer face (1 b) and thus it (4) prevents direct transfer of heat of the air to the outside.

[0014] The insulation element (4), which is located at

the face (1b) of the chamber (1) close to outer portion of the device (F), in the chamber (1), prevents the transfer of the heat of the hot air accumulated in the chamber (1) to the outer environment. Insulation element (4) preferably comprises high thermal insulation materials such as rock wool, fiberglass, etc. Thus, insulation element (4) ensures heat protection at both sides and prevents direct heat transfer from one side to another. 5

[0015] In the exemplary embodiment of the invention at Figure 4- 5, chamber (1) comprises at least one front panel (3) provided on the device (F) and at least one outer casing (5) connected to this panel (3). This panel (3) and outer casing (5) are preferably fixed into each other. Therefore, the two-piece structure allows easy assembly of the flue mechanism (A). 10 15

[0016] At least one fixing element (5a) which fixes the insulation element (4) is situated preferably on the chamber (1) in accordance with the location of the insulation element (4). The fixing element (5a) ensures the protection of the insulation efficiency by maintaining the position of the insulation element (4). 20

[0017] The flue system (A) of the invention prevents the external damages which are inflicted by the hot air created by the cooking devices (F). Moreover, the system (A) finds cost effective and easily assembled solutions to the problems of prior art. 25

Claims

1. A cooking device (F) comprising at least one cooking compartment (F1), and a flue system (A) connected to the cooking compartment (F1) **characterized in that** the flue system (A) comprises
 - at least one chamber (1) located on the device (F); comprising at least one front panel (3) and at least one outer casing (5) connected to the panel (3);
 - at least one insulation element (4) which is located at the face (1b) of the chamber (1) close to outer portion of the device (F); and
 - at least one flue pipe (2) extending from the cooking compartment to the chamber (4).
2. A flue system (A) according to Claim 1 **characterized in that** insulation element (4) comprises fiberglass.
3. A flue system (A) according to Claim 1 **characterized in that** insulation element (4) comprises rock wool.
4. A flue system (A) according to Claim 1 **characterized in that** it comprises at least one fixing element (5a) on the chamber (1), fixing the insulation element (4).

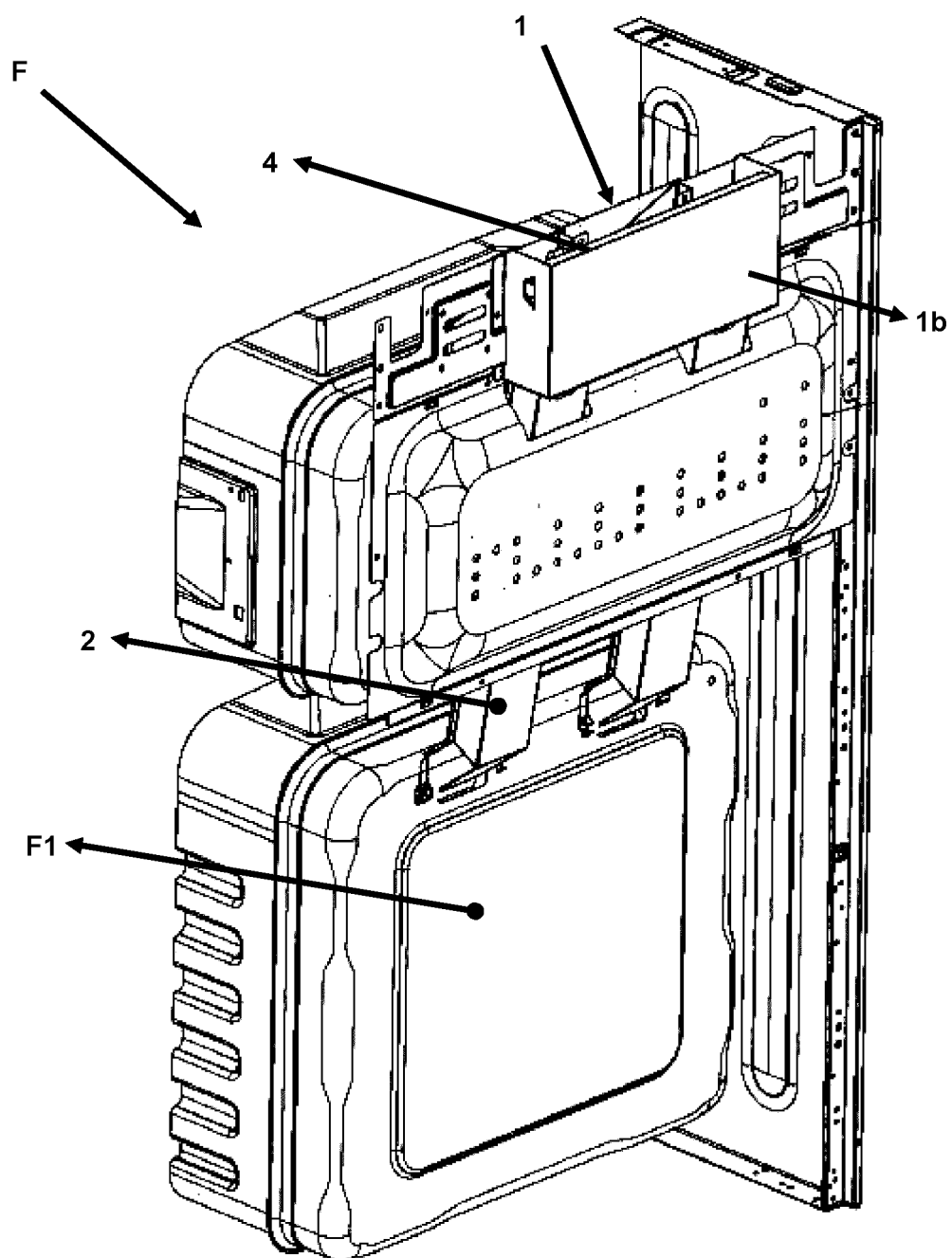


Figure 1

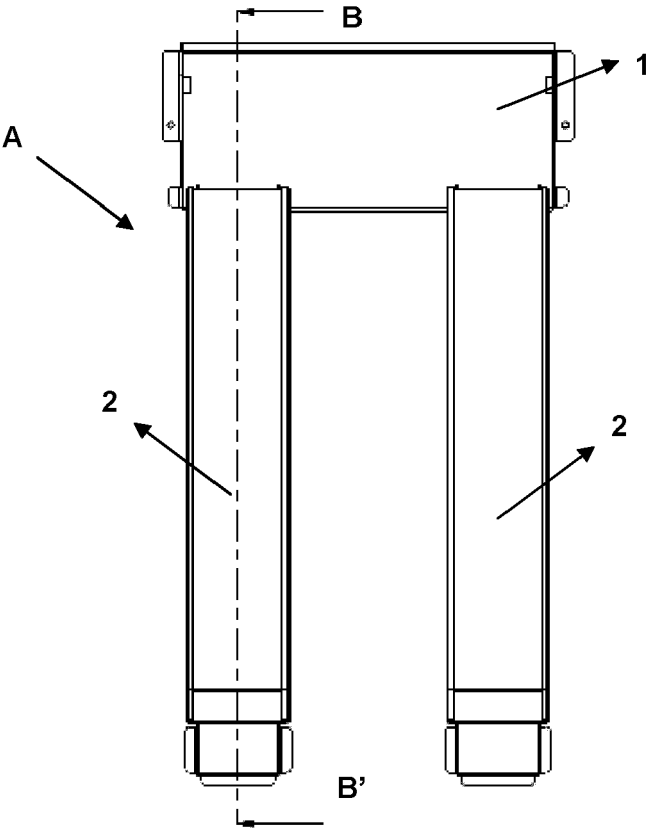


Figure 2

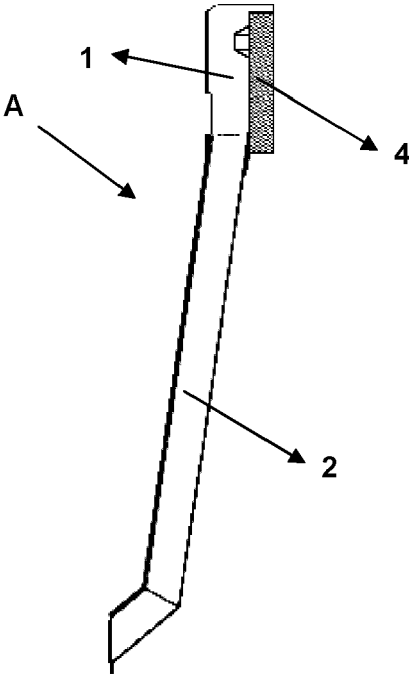


Figure 3

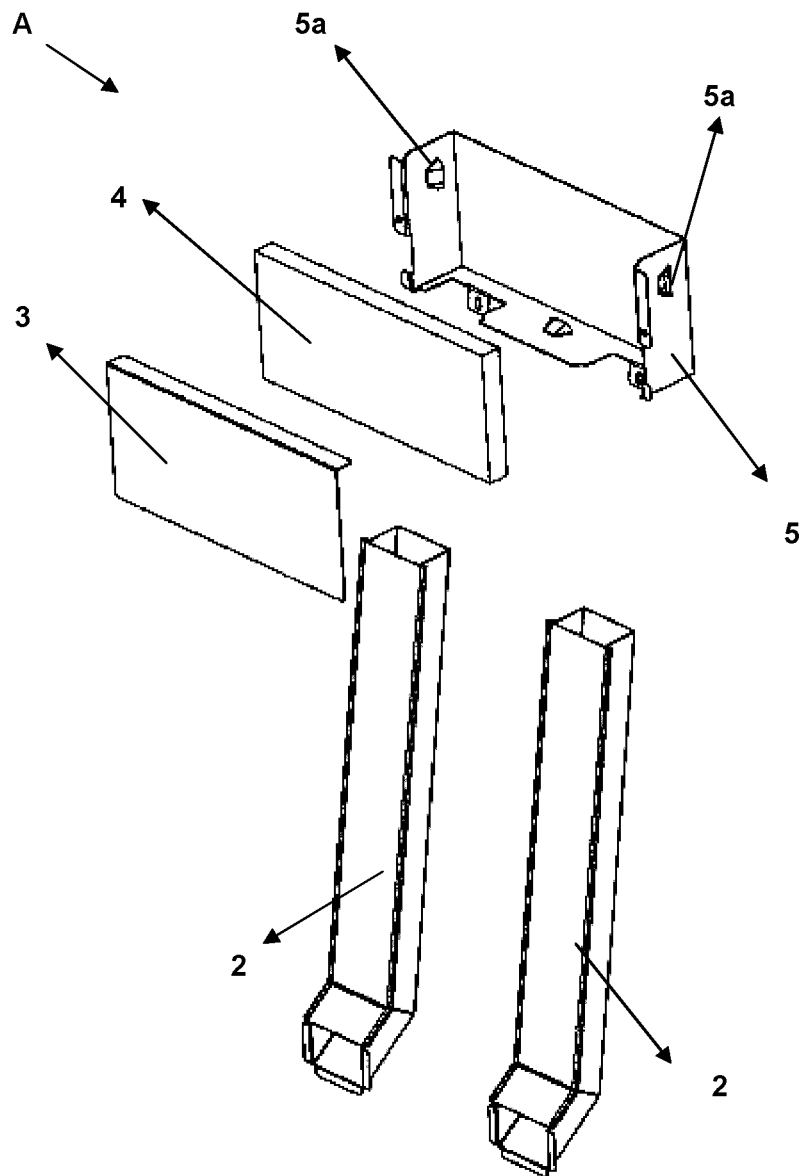


Figure 4

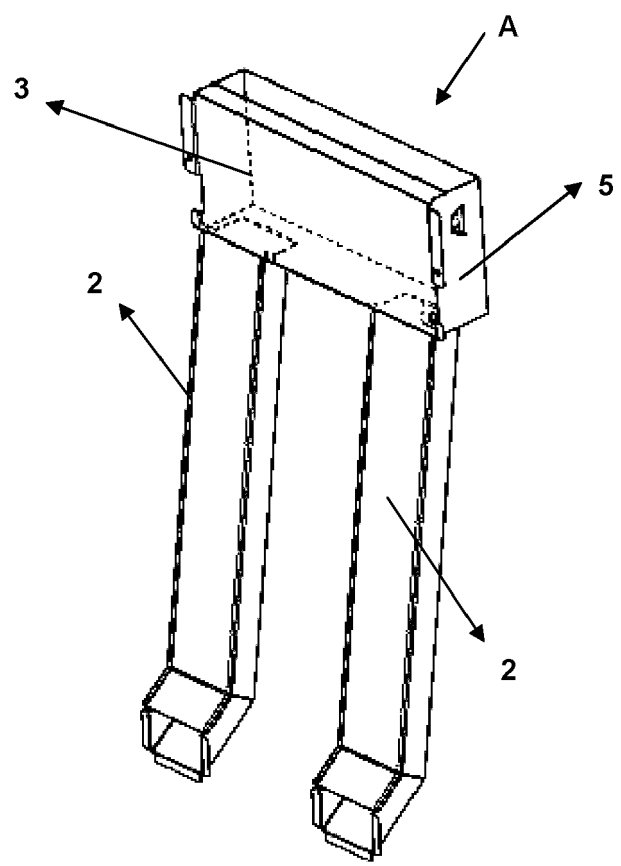


Figure 5



EUROPEAN SEARCH REPORT

Application Number
EP 12 15 5173

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	EP 0 131 775 A1 (BLODGETT G S CO INC [US]) 23 January 1985 (1985-01-23) * figures 1,2 *	1-4	INV. F24C15/20
X	GB 2 035 768 A (RAYTHEON CO) 18 June 1980 (1980-06-18) * figure 1 *	1-4	
			TECHNICAL FIELDS SEARCHED (IPC)
			F24C
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 11 May 2012	Examiner Meyers, Jerry
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			

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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 12 15 5173

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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11-05-2012

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EP 0131775	A1	23-01-1985	CA 1166105 A1 24-04-1984
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REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- JP 2007024324 A [0004]
- JP 2003185154 A [0005]