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(54) **A COOKING DEVICE**

(57) The present invention relates to a cooking device (1) comprising a cooking chamber (2) wherein the foodstuffs to be cooked are placed; a casing (3) in the form of a box with the front side open which has a plurality of walls enclosing the cooking chamber (2); two rack supports (5) having one or more than one guide wire (6) which are oppositely disposed on the walls (4) and arranged at different levels predetermined by the producer and at least one connection wire (7) which enable the guide wires (6) to be fixed to each other and which extends perpendicularly to the guide wires (6); a first carrier member (8) and a second carrier member (9) which are provided on the guide wire (6); a first receiving member group (10) which enables the first carrier member (8) to be placed onto the side wall (4) and a second receiving member group (11) which enables the second carrier member (9) to be placed onto the side wall (4), wherein

- a first receiving region (12) is arranged on the first receiving member group (10) and which enables the first carrier member (8) to be inserted in the direction of entry, and a second receiving region (13) wherein the first carrier member (8) moves after being inserted, and
- a third receiving region (14) is arranged on the second receiving member group (11) and which enables the second carrier member (9) to be inserted so as to be at an angle with respect to the direction of entry of the first carrier member (8), and a fourth receiving region (15) wherein the second carrier member (9) moves after being inserted.

EP 3 795 909 A1

Description

[0001] The present invention relates to a cooking device comprising wire-shaped rack supports which are fixed onto the side walls.

[0002] Today cooking devices are used for preparing foodstuffs by means of processes such as heating, cooking, etc. The cooking devices exhibit structural and design differences depending on the need and can be used in a wide field. The oven is one of the most frequently used devices to prepare foodstuffs. In ovens, the trays wherein the foods to be cooked are placed are supported by various methods inside the casing which surrounds the cooking chamber. For example, the trays are placed onto the rack supports provided on the side walls of the casing. The rack supports are positioned at different cooking levels predetermined by the producer for different types of foods. In the state of the art, on the rack support, guide wires are used, for enabling the user to easily performing loading and unloading. When the rack support is desired to be mounted onto the side wall of the oven by being riveting, the enamel cracks due to the riveting process, adversely affecting the quality perception. The special operations required for fixing the rack support onto the side wall necessitate a large number of components, thus making the production difficult and increasing labor costs. Moreover, due to the errors occurring during the operations, the rack support cannot be safely attached onto the side wall.

[0003] In the state of the art European Patent Document No. EP1840473, an oven is disclosed, comprising rack supports whereon telescopic rails are placed. The rack support is fixed onto the side wall by means of extensions.

[0004] In the state of the art European Patent Document No. EP2843316, a connection member is disclosed, which is fixed to the side wall of the oven and the guide wire. The connection member is also placed onto the upright wire.

[0005] The aim of the present invention is the realization of a cooking device comprising a rack support which is easily and securely attached onto the side wall.

[0006] The cooking device realized in order to attain the aim of the present invention, explicated in the first claim and the respective claims thereof, comprises a cooking chamber wherein the foodstuffs to be cooked are placed; and a casing in the form of a box with the front side open which has a plurality of walls enclosing the cooking chamber. A plurality of rack supports are provided on the side walls so as to support one or more than one tray. The rack support has one or more than one guide wire oppositely at different levels predetermined by the producer. The guide wires positioned parallel to each other are fixed to each other by means of at least one connection wire which is perpendicular to the guide wires. The rack support has a first carrier member and a second carrier member provided on the guide wire. The first carrier member extends towards the front side of the side wall and is placed onto the side wall by means of at least one first receiving member group. The second carrier member extends towards the rear side of the side wall and is placed onto the side wall by means of at least one second receiving member group.

[0007] The rack support of the present invention comprises a first receiving region and a second receiving region provided on the first receiving member group. The first carrier member has preferably an angular structure. The first carrier member is inserted via the first receiving region in the direction of entry and moves in the second receiving region. Thus, the first carrier member is placed onto the first receiving member group. The rack support comprises a third receiving region and a fourth receiving region provided on the second receiving member group. The second carrier member is inserted via the third receiving region so as to be at an angle with respect to the direction of entry of the first carrier member into the first receiving region, and moves in the fourth receiving region. Thus, by placing the second carrier member onto the second receiving member group, the rack support is safely mounted onto the side wall.

[0008] In an embodiment of the present invention, the first receiving member group comprises a guiding member which is positioned at the second receiving region and which enables the first carrier member to move in the second receiving region so as to be at an angle with respect to the direction of entry into the first receiving region. The guiding member is preferably flexible. Thus, the first carrier member and the second carrier member are easily placed onto the first receiving member group and the second receiving member group.

[0009] In another embodiment of the present invention, the first receiving member group comprises at least one fixing member which enables the first carrier member to be fixed onto the first receiving member group. The fixing member is disposed on the second receiving region. Thus, the first carrier member is prevented from detaching from the first receiving member group.

[0010] In another embodiment of the present invention, the first receiving member group comprises at least one claw which extends from the second receiving region towards the first receiving region and which prevents the first carrier member from being detached from the first receiving member group. The claw is provided on the guiding member and/or the lateral surfaces of the second receiving region. Thus, the rack support is securely attached onto the side wall, preventing energy loss.

[0011] In another embodiment of the present invention, the rack support comprises the first receiving region and the second receiving region which are in the form of a window. Thus, the first carrier member is surrounded by the first receiving member group, ensuring a secure connection.

[0012] In another embodiment of the present invention, the rack support comprises the second receiving member group which is obtained by rotating the first receiving member group 90 degrees and which enables the second

carrier member to be placed onto the side wall.

[0013] In another embodiment of the present invention, the rack support comprises the first receiving member group and the second receiving member group which have identical structures.

[0014] By means of the present invention, a cooking device is realized, comprising the rack support which is securely attached onto the side wall by means of the first receiving member group and the second receiving member group.

[0015] The cooking device realized in order to attain the aim of the present invention is illustrated in the attached figures, where:

Figure 1 - is the front perspective view of the cooking device.
Figure 2 - is the front perspective view of the first receiving region.
Figure 3 - is the front perspective view of the second receiving region.
Figure 4 - is the sideways perspective view of the first receiving member group.
Figure 5 - is the top perspective view of the second receiving member group.
Figure 6 - is the front perspective view of the first receiving member group and the second receiving member group placed onto the side wall.

[0016] The elements illustrated in the figures are numbered as follows:

1. Cooking device
2. Cooking chamber
3. Casing
4. Side wall
5. Rack support
6. Guide wire
7. Connection wire
8. First carrier member
9. Second carrier member
10. First receiving member group
11. Second receiving member group
12. First receiving region
13. Second receiving region
14. Third receiving region
15. Fourth receiving region
16. Guiding member
17. Fixing member
18. Claw
19. Lateral surface

[0017] The cooking device (1) comprises a cooking chamber (2) wherein the foodstuffs to be cooked are placed; and a casing (3) in the form of a box with the front side open which has a plurality of walls(4) enclosing the cooking chamber (2). A plurality of rack supports (5) are provided on the side walls (4) so as to support one or more than one tray. The rack support (5) has one or more than one guide wire (6) oppositely at different levels predetermined by the producer. The guide wires (6) positioned parallel to each other are fixed to each other by means of at least one connection wire (7) which is perpendicular to the guide wires (6). The rack support (5) comprises a first carrier member (8) and a second carrier member (9) provided on the guide wire (6). The first carrier member (8) extends towards the front section of the guide wire (6). The second carrier member (9) extends towards the rear section of the guide wire (6). The first carrier member (8) is fixed onto the side wall (4) by means of at least one first receiving member group (10) while the second carrier member (9) is fixed onto the side wall (4) by means of at least one second receiving member group (11).

[0018] The rack support (5) of the present invention comprises a first receiving region (12) which enables the first carrier member (8) to be inserted into the first receiving member group (10) in the direction of entry. After being inserted, the first carrier member (8) moves in a second receiving region (13). The second carrier member (9) is inserted through a third receiving region (14) provided on the second receiving member group (12) so as to be at an angle with respect to the direction of entry of the first carrier member (8). The second receiving member group (11) comprises a fourth receiving region (15) wherein the second carrier member (9) can move after being inserted into the third receiving region (14). During the mounting of the rack support (5) onto the side wall (4), preferably first the second carrier member (9) is placed onto the second receiving member group (11). After the second carrier member (9) is placed onto the side wall (4), the first carrier member (8) is placed onto the side wall (4) by means of the first receiving member group (10).

[0019] In an embodiment of the present invention, the first receiving member group (10) comprises a guiding member (16) which is positioned at the second receiving region (13) and which enables the first carrier member (8) to move in the second receiving region (13) so as to be at an angle with respect to the direction of entry into the first receiving region (12). Thus, the first carrier member (8) and the second carrier member (9) can easily move on the first receiving member group (10) and the second receiving member group (11).

[0020] In another embodiment of the present invention, the first receiving member group (11) comprises at least one fixing member (17) which enables the first carrier member (8) to be fixed onto the first receiving member group (10). Thus, the movement of the first carrier member (8) on the second receiving region (13) is limited, ensuring a connection with the first receiving member group (10). The fixing member (17) is disposed on the second receiving region (13).

[0021] In another embodiment of the present invention, the first receiving member group (10) comprises at least one claw (18) which extends from the second receiving region (13) towards the first receiving region (12). By

means of the claw (18), the first carrier member (8) is prevented from being detached from the first receiving member group (10). The claw (18) is provided on the guiding member (16) and/or the lateral surfaces (19) of the second receiving region (13). By means of the claws (18) provided on the lateral surfaces (19), the rack support (5) is securely attached onto the side wall, preventing energy loss.

[0022] In another embodiment of the present invention, the rack support (5) comprises the first receiving region (12) and the second receiving region (13) which are in the form of a window. Thus, the first carrier member (8) is surrounded by the first receiving member group (10) while the second carrier member (9) is surrounded by the second receiving member group (11).

[0023] In another embodiment of the present invention, the rack support (5) comprises the second receiving member group (11) which is obtained by rotating the first receiving member group (10) 90 degrees and which enables the second carrier member (9) to be placed onto the side wall (4).

[0024] In another embodiment of the present invention, the rack support (5) comprises the first receiving member group (10) and the second receiving member group (11) which have identical structures.

[0025] By means of the present invention, the rack support (5) is fixed onto the side wall by placing the first carrier member (8) onto the first receiving member group (10) and the second carrier member (9) onto the second receiving member group (11).

Claims

1. A cooking device (1) comprising a cooking chamber (2) wherein the foodstuffs to be cooked are placed; a casing (3) in the form of a box with the front side open which has a plurality of walls(4) enclosing the cooking chamber (2); two rack supports (5) having one or more than one guide wire (6) which are oppositely disposed on the walls (4) and arranged at different levels predetermined by the producer and at least one connection wire (7) which enable the guide wires (6) to be fixed to each other and which extends perpendicularly to the guide wires (6); a first carrier member (8) and a second carrier member (9) which are provided on the guide wire (6); a first receiving member group (10) which enables the first carrier member (8) to be placed onto the side wall (4) and a second receiving member group (11) which enables the second carrier member (9) to be placed onto the side wall (4), **characterized by** - a first receiving region (12) which is arranged on the first receiving member group (10) and which enables the first carrier member (8) to be inserted in the direction of entry, and a second receiving region (13) wherein the first carrier member (8) moves after being inserted, and - a third receiving region (14) which is arranged on the second receiving member group (11) and which enables the second carrier member (9) to be inserted so as to be at an angle with respect to the direction of entry of the first carrier member (8), and a fourth receiving region (15) wherein the second carrier member (9) moves after being inserted.

2. A cooking device (1) as in Claim 1, **characterized by** a guiding member (16) which is positioned at the second receiving region (13) and which enables the first carrier member (8) to move in the second receiving region (13) so as to be at an angle with respect to the direction of entry into the first receiving region (12).

3. A cooking device (1) as in any one of the above claims, **characterized by** at least one fixing member (17) which is positioned at the second receiving region (13) and which enables the first carrier member (8) to be fixed onto the first receiving member group (10) by engagement.

4. A cooking device (1) as in any one of the above claims, **characterized by** at least one claw (18) which extends on the guiding member (16) from the second receiving region (13) towards the first receiving region (12) and which prevents the first carrier member (8) from detaching from the first receiving member group (10).

5. A cooking device (1) as in any one of the above claims, **characterized by** the first receiving region (12) and the second receiving region (13) which are in the form of a window.

6. A cooking device (1) as in any one of the above claims, **characterized by** the second receiving member group (11) which is obtained by rotating the first receiving member group (10) 90 degrees and which enables the second carrier member (9) to be placed onto the side wall (4).

7. A cooking device (1) as in any one of the above claims, **characterized by** the first receiving member group (10) and the second receiving member group (11) which have identical structures.

Figure 1

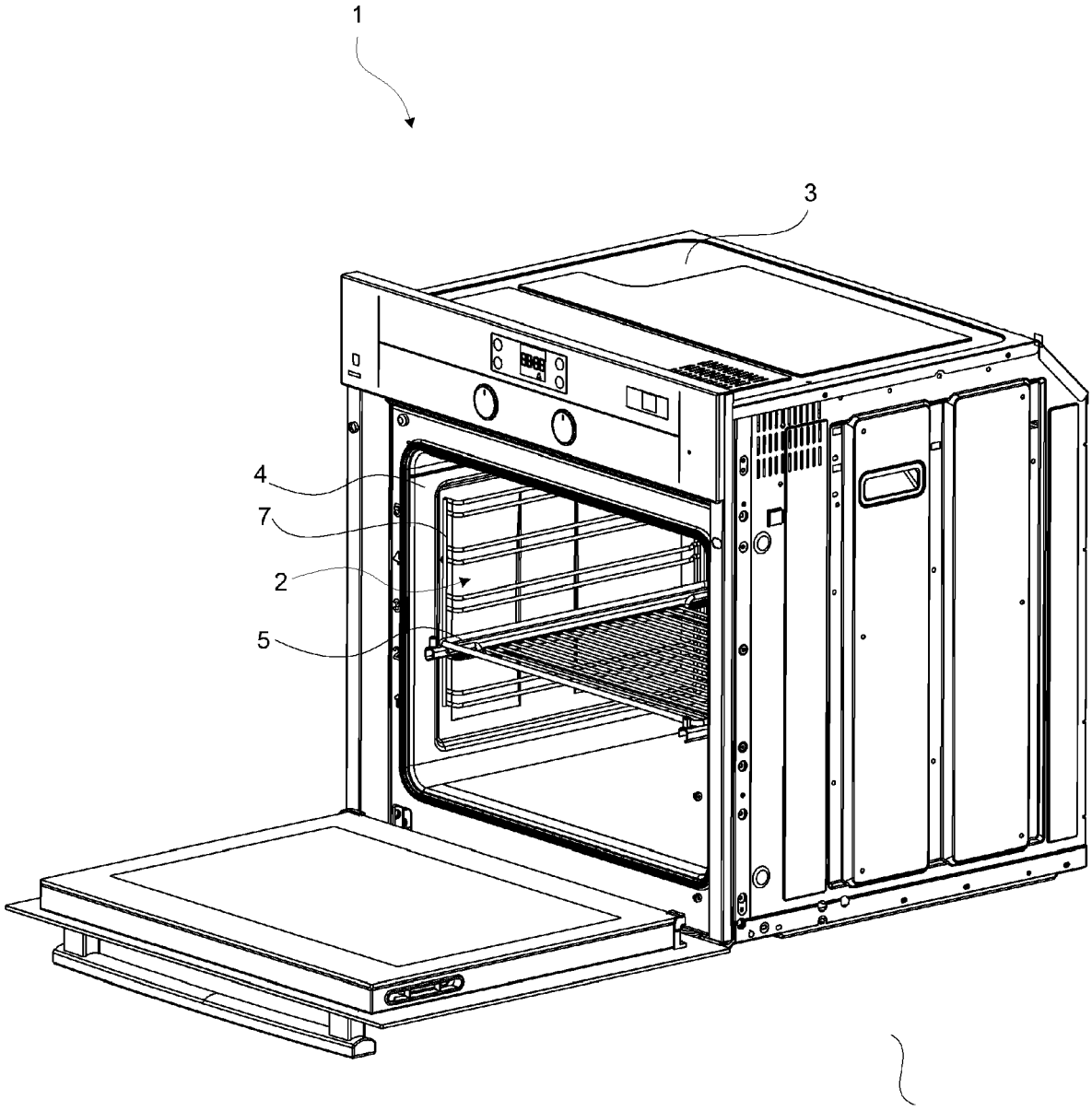


Figure 2

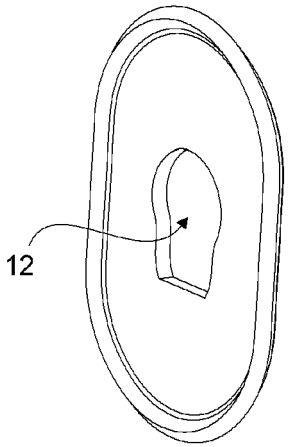


Figure 3

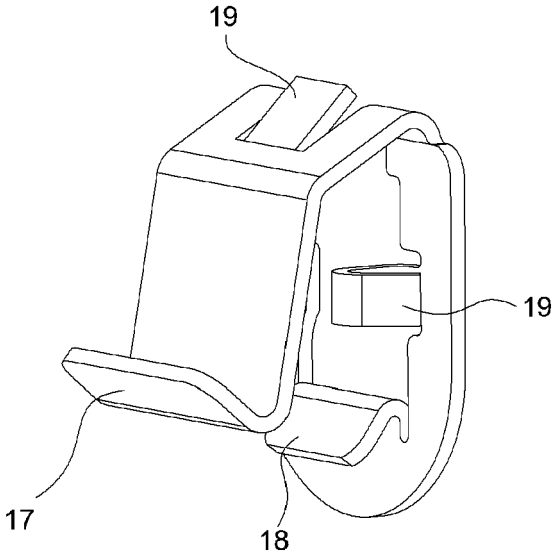


Figure 4

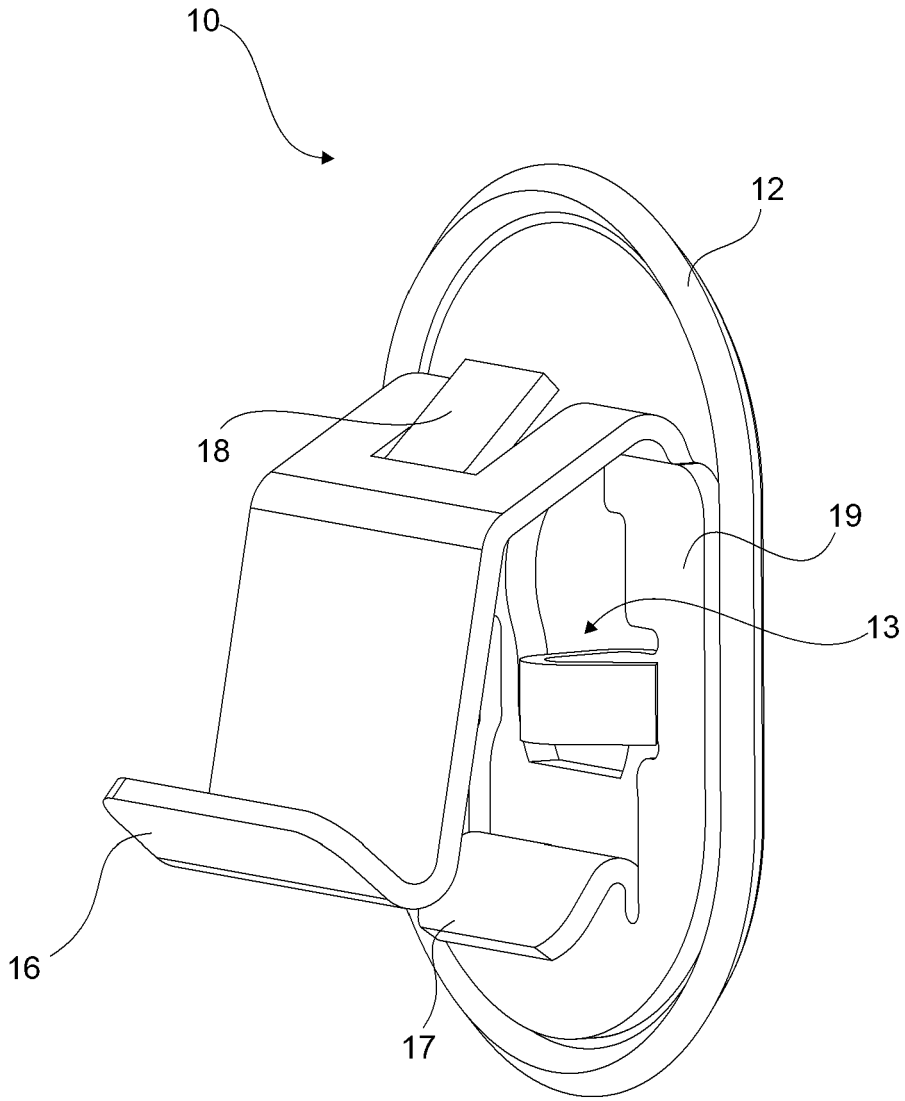


Figure 5

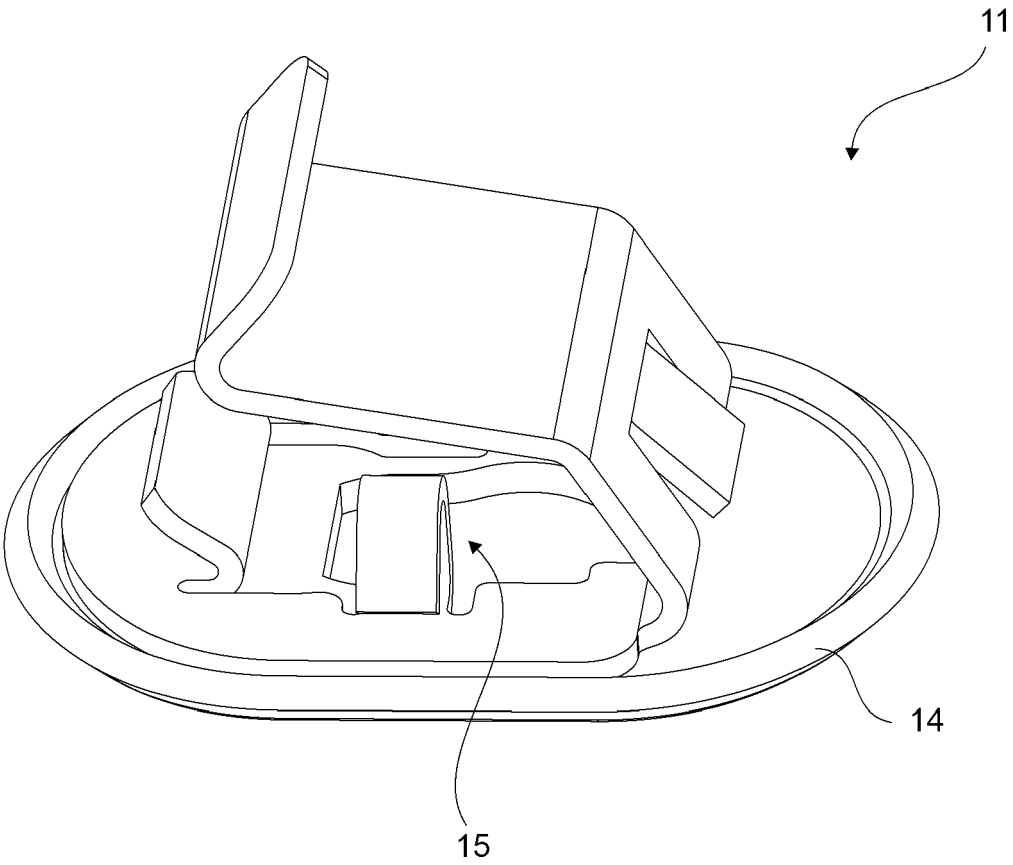
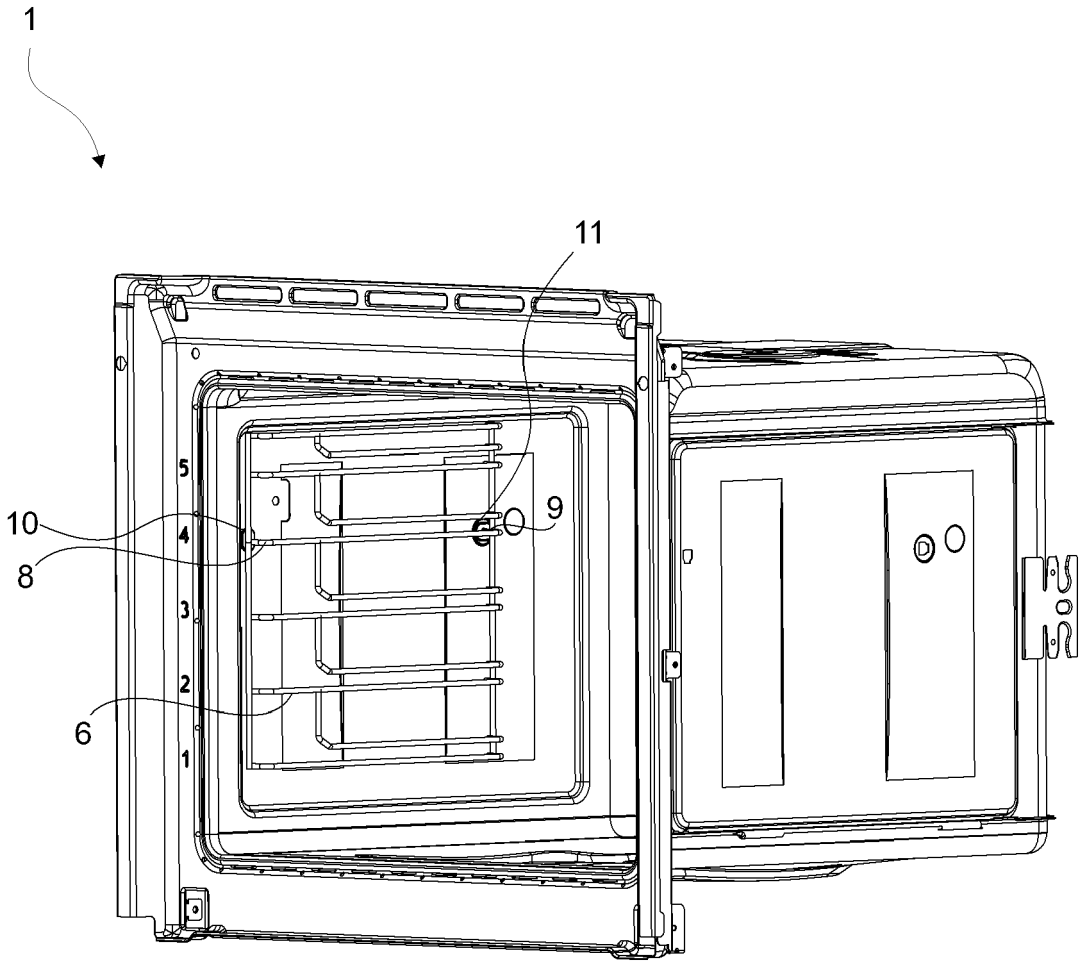


Figure 6



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EUROPEAN SEARCH REPORT

Application Number
EP 20 19 3639

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	26 January 2021	Fest, Gilles

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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