



[12] Utility Model

(10) Application publication No.: CN 210354396 U
(45) Application date: 2020.04.21

[21] Application No.	201920333144.7
[22] Application date	2019 .03 .16
[73] Patentee	Ningbo Yueda Electronic Technology Co., Ltd.
Address	West Ring Road, West Zone, Industrial Park, Guanhaiwei Town, Cixi City, Ningbo, Zhejiang 315300
[72] Inventors	Guo Xin
[51] Int.Cl.	A47J 37/06(2006 .01)

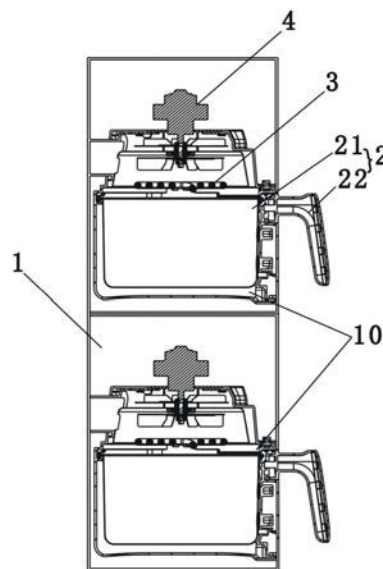
Claim 1 page, Description 3 pages, Drawing 3 pages

[54] Title of Utility Model

Multi-Chamber Food Processor

[57] Abstract

The utility model relates to kitchen cooking appliances, specifically a multi-chamber food processor, comprising a main body, wherein the main body is provided with a plurality of installation chambers, a fryer assembly is installed in each corresponding installation chamber and each installation chamber is provided with a corresponding heating device above the fryer assembly. The main body is further provided with a fan assembly that blows air to the heating devices, and each heating device operates independently. The food processor of the utility model has a plurality of chambers to accommodate a plurality of fryer assemblies, which can achieve simultaneous preparation of different ingredients, meet the needs of multiple family members and enable commercialization of the food processor.



1. A multi-chamber food processor comprising a main body, wherein the main body is provided with a plurality of installation chambers, and a fryer assembly is installed in each corresponding installation chamber.

2. The multi-chamber food processor according to claim 1, characterized in that: each installation chamber is provided with a corresponding heating device above the fryer assembly, the main body is further provided with a fan assembly that blows air to the heating devices, and each heating device operates independently.

3. The multi-chamber food processor according to claim 2, characterized in that: there are a plurality of fan assemblies, and each heating device is provided with a corresponding fan assembly.

4. The multi-chamber food processor according to claim 3, characterized in that: the main body has a vertical structure, and the plurality of the installation chambers on the main body are arranged in a vertical column;

or, the main body has a horizontal structure, and the plurality of the installation chambers on the main body are arranged horizontally in a line; or, the main body has a cylindrical structure, and the plurality of the installation chambers on the main body are arranged along the circumference of the cylinder.

5. The multi-chamber food processor according to claim 2, characterized in that: there is one fan assembly, a corresponding air duct is provided above each heating device, the rear ends of the plurality of the air ducts are connected, and the fan assembly is installed at the connection point of the rear ends of each air duct.

6. The multi-chamber food processor according to claim 5, characterized in that: the fan assembly comprises a motor and circulating fans, there are a plurality of circulating fans, and air inlet of each air duct is provided with a corresponding circulating fan, a transmission device is provided between the motor and the circulating fans, and the plurality of the circulating fans are driven by the motor through the transmission device.

7.The multi-chamber food processor according to claim 6, characterized in that: the transmission device is a gear transmission device or a belt transmission device or a worm gear transmission device.

8. The multi-chamber food processor according to claim 5, characterized in that: the fan assembly comprises a motor and a circulating fan, the main body is provided with a motor chamber for installing the motor, the motor shaft passes through the motor chamber and extends outside the motor chamber, the circulating fan is located outside the motor chamber and installed at the end of the motor shaft inside the motor chamber, the motor is suspended from the top wall of the motor chamber.

9.The multi-chamber food processor according to claim 8, characterized in that: the rear end of the motor is suspended from the top wall of the motor chamber through a shaking device, and the shaking device drives the motor to rotate circumferentially.

10.The multi-chamber food processor according to claim 2, characterized in that: the fryer assembly comprises a fryer and a handle connected to the fryer, and the fryer assembly is horizontally inserted into the installation chamber;

or, the main body comprises a base body and a cover body that can be flipped relative to the base body, the installation chamber is located on the base body, and the heating device is installed on the cover body.

Multi-Chamber Food Processor

Field of the Invention

[0001] The utility model relates to kitchen cooking appliances, specifically a multi-chamber food processor.

Background of the Invention

[0002] The principle of air fryers is that air is turned into "oil" under high-speed air circulation, which quickly heating and crisping food, making delicious food similar to fried food. For foods like meat, seafood, and pre-marinated fries, excellent tasting food can be made without oil. If the food itself does not contain oil, like fresh vegetables and fries, the taste of traditional frying can be achieved by adding a spoonful of oil. Therefore, the food cooked is healthier and increasingly popular with consumers as air fryers require less oil.

[0003] However, in practice, since air fryers can fry and bake different types of foods, some ingredients may leave unique odors in the fryer assembly after cooking, or even remain in the chamber of the air fryer, thereby potentially causing flavor transfer during food cooking. Moreover, current air fryers can only meet the needs of one person. If multiple people want to prepare different foods, they generally need to take turns, unable to achieve simultaneous preparation and enjoyment. In addition, existing air fryers have only one pot, which is inadequate for commercial applications and has many limitations. Therefore, how to further innovate and improve air fryers has become increasingly important.

Summary of the Invention

[0004] The purpose of the utility model is to provide a multi-chamber food processor that has multiple chambers to accommodate a plurality of fryer assemblies, which can achieve simultaneous preparation of different foods, meet the needs of multiple family members and enable commercialization of the food processor.

[0005] To achieve the above purpose, the utility model adopts the following technical solution: a multi-chamber food processor comprising a main body, wherein the main body is provided with a plurality of installation chambers, and a fryer assembly is installed in each corresponding installation chamber.

[0006] Furthermore, each installation chamber is provided with a corresponding heating device above the fryer assembly, the main body is further provided with a fan assembly that blows air to the heating devices, and each heating device operates independently. [0007] Furthermore, there are

a plurality of fan assemblies, and each heating device is provided with a corresponding fan assembly.

[0008] Furthermore, the main body has a vertical structure, and the plurality of the installation chambers on the main body are arranged in a vertical column;

[0009] or, the main body has a horizontal structure, and the plurality of the installation chambers on the main body are arranged horizontally in a line;

[0010] or, the main body has a cylindrical structure, and the plurality of the installation chambers on the main body are arranged along the circumference of the cylinder.

[0011] Furthermore, there is one fan assembly, a corresponding air duct is provided above each heating device, the rear ends of the plurality of the air ducts are connected, and the fan assembly is installed at the connection point of the rear ends of each air duct. [0012] Furthermore, the fan assembly comprises a motor and circulating fans, there are a plurality of circulating fans, and air inlet of each air duct is provided with a corresponding circulating fan, a transmission device is provided between the motor and the circulating fans, and the plurality of the circulating fans are driven by the motor through the transmission device.

[0013] Furthermore, the transmission device is a gear transmission device or a belt transmission device or a worm gear transmission device.

[0014] Furthermore, the fan assembly comprises a motor and a circulating fan, the main body is provided with a motor chamber for installing the motor, the motor shaft passes through the motor chamber and extends outside the motor chamber, the circulating fan is located outside the motor chamber and installed at the end of the motor shaft inside the motor chamber, the motor is suspended from the top wall of the motor chamber.

[0015] Furthermore, the rear end of the motor is suspended from the top wall of the motor chamber through a shaking device, and the shaking device drives the motor to rotate circumferentially.

[0016] Furthermore, the fryer assembly comprises a fryer and a handle connected to the fryer, and the fryer assembly is horizontally inserted into the installation chamber;

[0017] or, the main body comprises a base body and a cover body that can be flipped relative to the base body, the installation chamber is located on the base body, and the heating device is installed on the cover body.

[0018] According to the food processor of the utility model, since the main body is provided with a plurality of installation chambers that can accommodate a plurality of fryer assemblies, simultaneous preparation of foods with different taste can be achieved by the food processor, which meet the needs of family members to enjoy different foods at the same time. Moreover, since each fryer assembly works independently, there will be no problem of flavor transfer during food

preparation. In addition, the food processor of the utility model can prepare various foods simultaneously without mutual influence, so it can be commercialized, significantly improving the efficiency of food preparation.

Brief Description of the Drawings

[0019] The utility model is further described below with reference to the drawings:

[0020] FIG. 1 is a structural schematic diagram of Embodiment 1 of the utility model;

[0021] FIG. 2 is another structural schematic diagram of Embodiment 1;

[0022] FIG. 3 is a structural schematic diagram of Embodiment 2 of the utility model;

[0023] FIG. 4 is a structural schematic diagram of Embodiment 3 of the utility model;

[0024] FIG. 5 is a structural schematic diagram of Embodiment 4 of the utility model.

Detailed Description of the Embodiments

[0025] Embodiment 1:

[0026] As shown in FIG. 1, it is a structural schematic diagram of Embodiment 1 of the utility model. A food processor comprising a main body 1, wherein the main body 1 is provided with a plurality of installation chambers 10, a fryer assembly 2 is installed in each corresponding installation chamber 10 and each installation chamber 10 is provided with corresponding heating device 3 above the fryer assembly 2. The main body 1 is further provided with a fan assembly 4 that blows air to the heating devices 3, and each heating device 3 operates independently.

[0027] In this embodiment, the fryer assembly 2 comprises a fryer 21, a fry basket (not shown in the figure) inside the fryer 21, and a handle 22 connected to the fryer 21. The fryer assembly 2 is horizontally inserted into the installation chamber 10 on the main body 1 to achieve detachability of the fryer assembly 2. Meanwhile, in this embodiment, the main body 1 has a vertical structure, and the plurality of installation chambers 10 on the main body 1 are arranged in a vertical column, wherein there are a plurality of fan assemblies 4, and each heating device 3 is provided with a corresponding fan assembly 4.

[0028] For this embodiment, a plurality of installation chambers is integrated into one main body, so the food processor can simultaneously prepare foods with different tastes during operation, which meet the needs of family members to enjoy different foods at the same time. Moreover, since each fryer assembly and heating device operate independently, there will be no problem of flavor transfer during food preparation. In addition, the food processor of this embodiment can prepare various foods simultaneously without mutual influence, so it can be commercialized, significantly improving the efficiency of food preparation.

[0029] It should be noted that, in this embodiment, the main body can also have a horizontal structure (as shown in FIG. 2), and a plurality of installation chambers on the main body are arranged horizontally in a line. Naturally, the main body can also be cylindrical, and the plurality of the installation chambers on the main body are arranged along the circumference of the cylinder.

[0030] Embodiment 2:

[0031] As shown in FIG. 3, it is a structural schematic diagram of the Embodiment 2 of the utility model. The difference between this embodiment and Embodiment 1 is: in this embodiment, the food processor has a horizontal structure, and there are two fryer assemblies 2. A corresponding air duct 11 is provided above each of the two heating devices 3, and the rear ends of the two corresponding air ducts 11 are connected. There is one fan assembly 4, and the fan assembly is installed at the connection point of the rear ends of the two air ducts 11.

[0032] For this embodiment, in addition to the same beneficial effects as Embodiment 1, since the two fryer assemblies share one fan assembly to blow air to different heating devices for circulation, not only the overall cost is lower, but also the overall weight is reduced significantly. Naturally, for this embodiment, there can also be only one heating device, and the heating device is installed below the fan assembly and located at the connection point of the rear ends of the two air ducts. When there is only one heating device, the two fryer assemblies can cook food simultaneously and complete food preparation at the same time, which further reduces the cost of the entire food processor. In addition, the food processor of this embodiment can also adopt a flip cover structure, for example, the main body includes a base body and a cover body that can be flipped relative to the base body, the installation chamber is located on the base body, and the heating device is installed on the cover body.

[0033] Embodiment 3:

[0034] As shown in FIG. 4, it is a structural schematic diagram of Embodiment 3 of the utility model. The difference between this embodiment and Embodiment 2 is: in this embodiment, the fan assembly comprises a motor 41, the end of the motor shaft 411 is installed with a transmission device 5 (shown by the dotted line in FIG. 4). The transmission device 5 has two output shafts 51, each output shaft 51 is installed with a circulating fan 42, and each circulating fan 42 is located at the air inlet of the air duct and above the heating device 3. When the motor 41 drives the transmission device 5 to operate, the transmission device 5 drives the two output shafts 51 to rotate, thereby making the circulating fans 42 to operate and blowing air to the heating device 3 for circulation.

[0035] For this embodiment, the transmission device is a gear transmission device. Naturally, the transmission device can also be a belt transmission device or a worm gear transmission device.

[0036] The two circulating fans in this embodiment are indirectly driven by the same motor. Compared with Embodiment 2, it can ensure sufficient and stable air blowing circulation to the heating device.

[0037] Embodiment 4:

[0038] As shown in FIG. 5, it is a structural schematic diagram of Embodiment 4 of the utility model. The difference between this embodiment and Embodiment 2 is: in this embodiment, there is one fan assembly, and the fan assembly comprises a motor 41 and a circulating fan 42. The main body 1 is provided with a motor chamber 12 for installing the motor 41, the motor shaft 411 passes through the motor chamber 12 and extends outside the motor chamber 12, and the circulating fan 42 is located outside the motor chamber 12 and installed at the end of the motor shaft 411.

[0039] In this embodiment, the rear end of the motor 41 is installed with a shaking device 6, and the rear end of the shaking device 6 is suspended from the top wall of the motor chamber 12, so that the motor 41 is suspended in the motor chamber 12.

[0040] In this embodiment, when the motor operates, the shaking device drives the motor and the circulating fan to rotate periodically, so that the circulating fan intermittently blows air to different air ducts, which can prevent the foods in the fryer assembly from being overheated, burnt, or over-baked. Naturally, the structure that drives the fan assembly to rotate circumferentially is not limited to the solution of this embodiment.

[0041] Those skilled in the art should understand that the utility model includes but is not limited to the content described in the drawings and the above specific embodiments. Any modifications that do not deviate from the functional and structural principles of the utility model will be included in the scope of the claims.

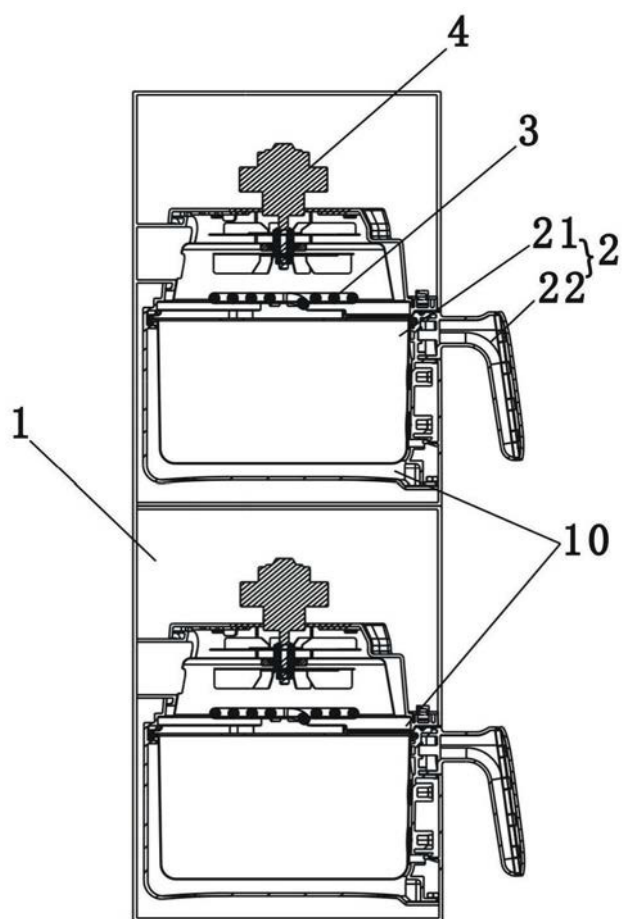


FIG. 1

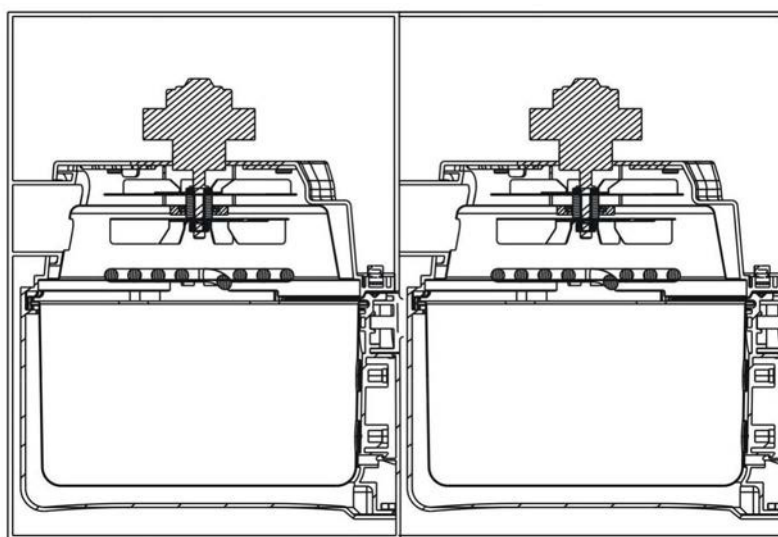


FIG. 2

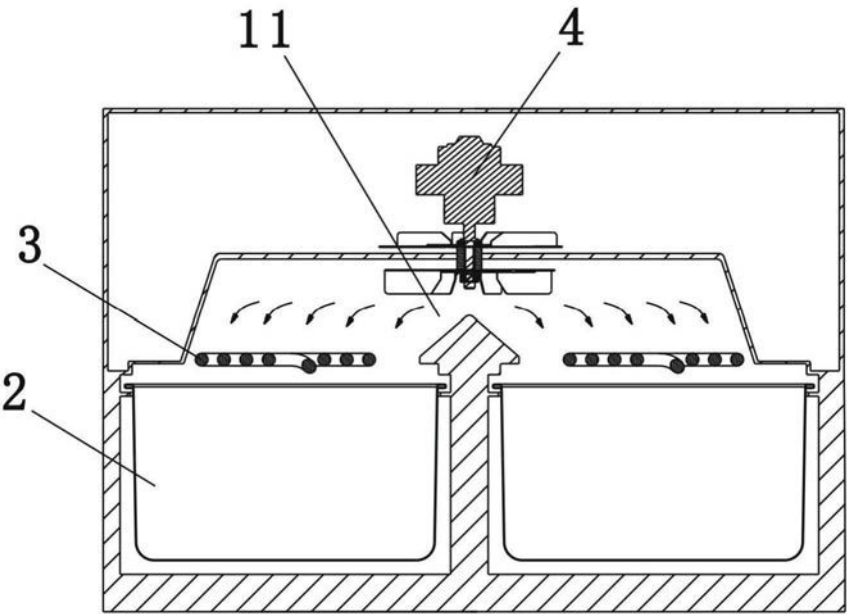


FIG. 3

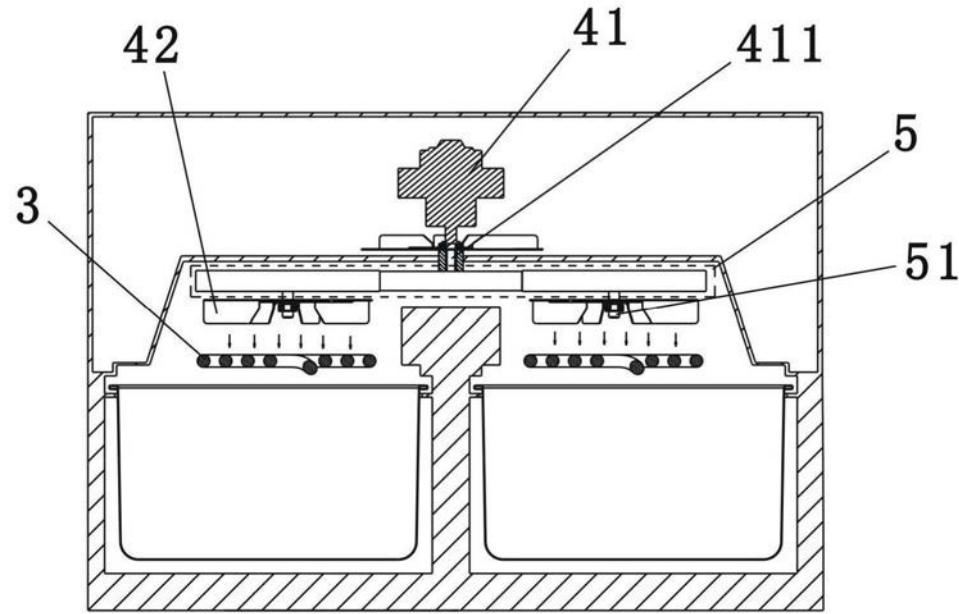


FIG. 4

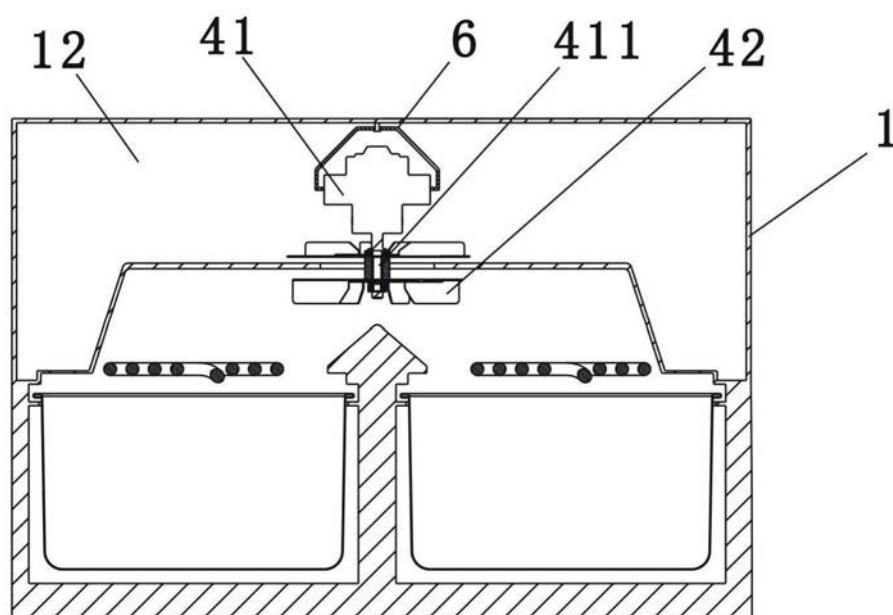


FIG. 5



Legal Advantage

Legal Advantage LLC
Washington DC
10411 Motor City Drive
Suite 750, Bethesda, MD 20817
Phone: 301-450-2161

CERTIFICATION OF TRANSLATION

Original text full file names:

CN110664270A, CN210354396U

Translation full file names:

CN110664270A-EN-Final, CN210354396U-EN-Final

This is to certify that the attached documents in English language with the above title are a true and accurate translation, and has the same meaning as the text of the original documents of the Chinese language to the best of our knowledge and belief. This translation is performed and edited by Chinese to English professional translators (ATA).

Executed this 10th day of September 2025.

Hal Pieroway
Translation Department

Legal Advantage LLC uses all available measures to ensure the accuracy of each translation but shall not be held liable for damages due to error or negligence in translation or transcription.