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(54) **Microwave oven comprising a pivotable radiant heater**

Mikrowellenofen versehen mit einem schwenkbarem Heizstrahler

Four à micro-ondes avec dispositif de chauffage rayonnant pivotant

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Description

BACKGROUND OF THE INVENTION

1. Field of Invention

[0001] The present invention relates to a microwave oven, and more particularly, to a microwave oven capable of uniformly heating an object by means of a plurality of heaters.

2. Description of the Prior Art

[0002] A general microwave oven is to heat an object by irradiating microwaves into a cavity of the microwave oven. However, a latest microwave oven has employed heaters as another heat source in addition to the microwaves in order to heat the object in a variety of fashions.

[0003] Fig. 1 shows a major portion of a conventional microwave oven. Fig. 2a shows a major portion of another conventional microwave oven. Fig. 2b is a sectional view showing the interior of a cavity of the microwave oven shown in Fig. 2a.

[0004] As shown in Fig. 1, a main body 10 of the microwave oven is provided with a cavity 11 with an open front face as a space in which an object is heated by means of microwaves or heat of heaters. Further, a door 15 for opening and closing the cavity 11 is hingedly installed at a front plate 13 defining the front face of the main body 10.

[0005] A side of the cavity 11 in the main body 10 is provided with an electronic equipment installation chamber (not shown) in which parts for generating microwaves such as a magnetron and a high voltage transformer are installed. A control panel 17 is installed on a portion corresponding to the front of the electronic equipment installation chamber. The control panel 17 functions to receive a variety of signals for operating the microwave oven and to display a variety of information during the operation of the microwave oven.

[0006] In order to heat the object put into the cavity 11, a fixed heater 21 is installed in the cavity 11. The fixed heater 21 is mounted, for example, on a ceiling of the cavity 11 to heat a surface of the object, thereby complementing disadvantages in a microwave-heating fashion.

[0007] In addition, the conventional microwave oven shown in Figs. 2a and 2b is provided with a pivotable heater 23, which is upward and downward pivotably installed at a rear portion of the cavity 11. That is, the pivotable heater 23, which is vertically installed adjacent to a rear surface of the cavity 11, may upward and downward pivot on its lower end through a predetermined angle according to food as an object to be cooked so that the distance between the pivotable heater 23 and the object decreases.

[0008] Therefore, radiant or convective heat from the pivotable heater 23 may be more effectively transmitted to the object to be heated in the cavity 11. In the meantime, the other constitutional elements except for the pivotable heater 23 of the microwave oven shown in Figs. 2a and 2b are the same as the microwave oven shown in Fig. 1. Thus, like reference numerals are given to designate like other elements.

[0009] However, the conventional microwave ovens have the following problems.

[0010] As described above, the conventional microwave ovens heat the object (food) by means of the fixed heater 21 installed on the ceiling of the cavity 11 or the pivotable heater 23 installed to pivot through a predetermined angle on the lower end thereof at the rear portion of the cavity 11.

[0011] However, since the object to be cooked is seated on a lower surface of the cavity 11, a lower surface of the object cannot be heated by the fixed or pivotable heater 21 or 23. Therefore, there is a disadvantage in that the object should be inconveniently turned over in order to heat the lower surface of the object seated in the cavity 11 by using the heater 21 or 23.

[0012] In addition, the pivotable heater 23 should be pivoted upward and downward by hand or by a driving motor. In the case that the heater is pivoted by hand, there is inconvenience in that the pivotable heater 23 should be pivoted by hand whenever cooking is made using the pivotable heater 23. Furthermore, when the pivotable heater 23 is pivoted to be in a vertical state after cooking the object, a user may get burned by remaining heat caused from the pivotable heater 23.

[0013] US-A-4596914 discloses a microwave oven with a motor driven electric heater. The motor is adapted to rotate the heater freely between a vertical position opposing a convection fan in the heating chamber and a horizontal position directly above a tray. A control device is provided to control the rotation of the motor depending on inputs on a control panel by a user and signals from a switch detecting the respective positions of the heater.

[0014] EP-A-1367861 discloses a microwave oven with a rotatable cooking tray and two heaters rotatably held one end thereof on the side wall of the cooking cavity. An upper heater is installed at the upper end portion inside the cooking cavity and a middle heater is installed at the middle portion between the upper heater and the cooking tray so that the two heaters respectively heat the upper and lower surfaces of food laid in a position between them. A grilling food support as a separate element is provided and this is removably placed on the cooking tray such that its top grill is positioned between the upper and middle heaters.

[0015] FR-A-1545143 discloses a microwave oven with upper and lower heaters respectively fixed on bottom and top portions of the microwave cavity and a grill detachably mounted in an intermediate position.

SUMMARY OF THE INVENTION

[0016] Accordingly, the present invention is conceived

to solve the aforementioned problems in the prior art. An objective of the present invention is to provide a microwave oven configured to uniformly heat upper and lower surfaces of an object by means of heat from heaters that is additionally improved in its operability.

[0017] An aspect of the present invention is to provide a microwave oven which makes it possible to uniformly heat an object by automatically pivoting one of heaters toward a lower side of the object when the object is heated using the heaters.

[0018] According to the present invention for achieving the objectives, there is provided a microwave oven as defined in claim 1. This microwave oven comprises a main body including a cavity with an open front face serving as a space in which an object is heated; a fixed heater fixed on a ceiling of the cavity to irradiate heat; a pivotable heater installed within the cavity to pivot toward a vertical position adjacent to a rear surface of the cavity and a position adjacent to a lower surface of the cavity; and a grill which is detachably mounted in an intermediate inner portion of the cavity between the fixed and pivotable heaters when the pivotable heater is pivoted downward and on which the object is seated.

[0019] The pivotable heater may be pivotably installed on lower ends of both sides thereof which are supported at rear portions of both side surfaces of the cavity.

[0020] The microwave oven further comprises a driving means for pivoting the pivotable heater.

[0021] The microwave oven further comprises a switching means for generating an actuating signal for pivoting the pivotable heater upward and downward so that the driving means pivots the pivotable heater.

[0022] The switching means may comprise a micro-switch installed on a side surface of the cavity to come into contact with the grill when the grill is mounted. The micro-switch may be installed at a position on a side surface of the cavity so that the micro-switch is pushed by any one of both side surfaces of the grill when the grill is mounted.

[0023] According to the present invention, the microwave oven uniformly heats upper and lower surfaces of the object seated on the grill by using the fixed and pivotable heaters. Thus, it is possible to expect an advantage in that the entire object can be uniformly heated.

[0024] In addition, during the process of mounting the grill into the cavity, a side surface of the grill pushes the micro-switch, whereby the actuating signal is generated. Accordingly, the pivotable heater pivots upward and downward. Thus, there is an advantage in that cumbersomeness of the manual operation for pivoting the pivotable heater can be eliminated, resulting in simplified operation of the microwave oven.

BRIEF DESCRIPTION OF THE DRAWINGS

[0025] The above and other objectives, features and advantages of the present invention will become apparent from the following description of a preferred embodiment given in conjunction with the accompanying drawings, in which:

Figs. 1 and 2a are perspective views showing major portions of conventional microwave ovens;
Fig. 2b is a sectional side view showing the interior of a cavity of the microwave oven shown in Fig. 2a;
Fig. 3 is a perspective view of a preferred embodiment of a microwave oven according to the present invention; and
Figs. 4a to 4c are views showing the operation of the embodiment shown in Fig. 3.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0026] Hereinafter, the present invention will be described in detail in connection with an embodiment shown in the accompanying drawings.

[0027] Fig. 3 shows a major portion of a preferred embodiment of a microwave oven according to the present invention. As shown in the figure, a main body 30 of the microwave oven is provided with a cavity 31 which has an open front face, in order to heat an object. In addition, a door 35 for opening and closing the cavity 31 is hingedly installed on a side surface of a front plate 33 defining a front face of the main body 30.

[0028] In addition, a side of the cavity 31 in the main body 30 is provided with an electronic equipment installation chamber (not shown) in which parts for generating microwaves such as a magnetron, a high voltage transformer, and a high voltage capacitor are installed. A control panel 37, which functions to receive a variety of signals for operating the microwave oven and to display a variety of information during the operation of the microwave oven, is installed on a portion of the front plate 33 corresponding to the front of the electronic equipment installation chamber.

[0029] A plurality of heaters for heating the object put into the cavity 31 are installed in the cavity 31. The heaters including a fixed heater 41 and a pivotable heater 43 heat a surface of the object, and thus, function to complement disadvantages of a microwave-heating fashion.

[0030] The fixed heater 41 is fixed on a ceiling of the cavity 31 and irradiates heat downward. In the pivotable heater 43, both side ends thereof are pivotably supported at rear portions of both side surfaces of the cavity 31. Thus, the pivotable heater 43 is installed to pivot upward and downward on both side ends thereof.

[0031] In addition, since the pivotable heater 43 is formed in a zigzag shape, it can irradiate heat to a predetermined area. Further, the pivotable heater 43 is installed to pivot by means of a driving motor (not shown). Thus, due to forward and rearward rotation of the driving motor, it is possible for the pivotable heater 43 to pivot between its substantially vertical and horizontal positions on both the side ends thereof.

[0032] A grill 45 on which the object, i.e., food to be

heated, is put is installed within the cavity 31. It is preferred that the grill 45, on which the object to be cooked using the fixed and pivotable heaters 41 and 43 is seated, be horizontally installed. The grill 45 is detachably mounted to be positioned between a lower portion of the fixed heater 41 and an upper portion of the pivotable heater 43 in a state where the pivotable heater 43 pivots downward on its lower end.

[0033] That is, when the object seated on the grill 45 is heated, the heaters should operate at upper and lower portions of the object in order to uniformly heat the upper and lower portions of the object. To uniformly heat the food, while the pivotable heater 43 pivots downward on its lower end and heats the lower portion of the food, the fixed heater 41 installed on the ceiling of the cavity 31 heats the upper portion of the food.

[0034] To uniformly heat the object on the grill 45 as described above, although the pivoting of the pivotable heater 43 may be manually performed, it is preferred that the pivotable heater 43 be pivoted toward a lower surface of the cavity 31 by using the driving motor. That is, the pivotable heater 43 may be installed so that it can be pivoted between a position adjacent to the rear surface of the cavity and a position adjacent to the lower surface of the cavity by the motor of which the rotation direction and the number of revolutions can be controlled. In addition, the pivotable heater 43 may be supported to be held at any positions between the two positions. The transmission of rotational force between such a motor and the end of the pivotable heater 43 may be implemented using known mechanisms.

[0035] A tray 47 may be installed on the lower surface of the cavity 31. The tray 47 functions to collect oil and fat generated when the object seated on the grill 45 is heated by the heaters 41 and 43. In addition, it is preferred that the tray 47 be detachably installed to cast away the oil and fat collected during the heating.

[0036] In the meantime, a plurality of guides 49 for guiding and supporting the grill 45 are installed on both the side surfaces of the cavity 31. Two pairs of guides 49 are installed to be flush with each other on the respective side surfaces of the cavity 31. That is, the grill 45 enters and leaves the cavity 31 in a fore and aft direction while both sides of a lower surface thereof are guided by the guides 49, and is supported by the guides 49 when the grill 45 has been installed in the cavity 31.

[0037] To pivot the pivotable heater 43, a switching device for transmitting electric signals to the driving motor for operating the pivotable heater 43 is required. That is, it is preferred that the switching device, which may shift the pivotable heater 43 from the vertical position to the horizontal position by user's operation of the switching device or by the mounting of the grill 45, be installed at a portion of the microwave oven. If the user directly operates such a switching device by hand, the switching device may be installed at any position.

[0038] To change the position of the pivotable heater 43, in the embodiment shown in Figs. 4a to 4c, at least one micro-switch 51 is installed on a side surface of the cavity 31. The micro-switch 51 is installed at a front portion of the side surface of the cavity 31 corresponding to a side surface of the grill 45 which enters and leaves the cavity 31 in the fore and aft direction along the guides 49. If the micro-switch 51 is installed just in front of the guides 49, the grill 45 inserted along the guides 49 may push the micro-switch 51.

[0039] Therefore, to heat the object simultaneously using the fixed and pivotable heaters 41 and 43, when the user inserts the grill 45 into the cavity 31 while the grill 45 is supported by the guides 49, the side surface of the grill 45 comes into contact with the micro-switch 51. When the micro-switch 51 is pushed accordingly and then generates a contact signal, the signal of the micro-switch 51 is transmitted to the motor for driving the pivotable heater 43, for example, through the control panel 37. Then, the pivotable heater 43 pivots forward and is shifted to the position adjacent to the lower surface of the cavity 31.

[0040] That is, it can be understood that the micro-switch 51 is the switching device for pivoting and shifting the pivotable heater 43 to any positions between the vertical position adjacent to the rear surface of the cavity 31 and the horizontal position adjacent to the lower surface of the cavity 31.

[0041] Hereinafter, the operation of the preferred embodiment of the microwave oven according to the present invention constructed as above will be described in detail with reference to Figs. 4a to 4c.

[0042] Figs. 4a to 4c show the operation of the preferred embodiment of the microwave oven according to the present invention. To cook food using the heaters in the microwave oven, the tray 47 is first installed on the lower surface of the cavity 31 of the microwave oven for collecting the oil and fat generated during cooking, as shown in Fig. 4a.

[0043] Then, the grill 45 on which the object is seated is installed in the cavity 31. Here, as shown in Figs. 4b and 4c, the grill 45 slides along upper portions of the guides 49 formed on both the side surfaces of the cavity 31 and moves toward the rear portion of the cavity 31. During the insertion of the grill 45, a front end of the left side surface of the grill 45 pushes the micro-switch 51 installed on the left side surface of the cavity 31.

[0044] Therefore, the micro-switch 51, which has been pushed by the grill 45, generates the actuating signal for pivoting the pivotable heater 43 downward on its lower end. Then, the actuating signal causes the pivotable heater 43 to pivot downward. It is preferred that the signal be transmitted from the micro-switch to the motor for driving the pivotable heater, for example, via the control panel 37 installed in front of the microwave oven.

[0045] In addition, in a case where the pivotable heater 43 is pivoted by means of an additional switching device, the pivotable heater 43 should be pivoted and shifted to the horizontal position shown in Fig. 4b by actuating the additional switching device before the grill 45 is inserted. It will be apparent that the pivotable heater 43 should be

pivoted downward before the grill 45 is inserted even in a case where the pivotable heater 43 is operated by hand.

[0046] In such a state, the object to be heated is seated on the grill 45, that is, the object is positioned between the fixed and pivotable heaters 41 and 43. In addition, when the object is seated on the grill 45, the user closes the cavity 31 by pivoting the door 35 of the microwave oven and then inputs operating signals into the microwave oven by manipulating the control panel 37.

[0047] When the operating signals are input through the control panel 37, electric power is supplied to the microwave oven by means of the operating signals, causing the heaters 41 and 43 to heat the object. Heat generated from the heaters 41 and 43 cooks the object seated on the grill 45.

[0048] When the object is heated, the pivotable heater 43 positioned below the grill 45 can intensively heat the lower portion of the object, while the fixed heater 41 positioned above the object can intensively heat the upper portion of the object. With the use of the heaters 41 and 43 of the present invention as described above, the entire upper and lower portions of the object can be uniformly heated.

[0049] That is, the object is heated in the state where it is seated between the fixed and pivotable heaters 41 and 43. Therefore, with radiant or convective heat transfer, the upper and upper side surfaces of the object are heated by the fixed heater 41, while the lower and lower side surfaces of the object are heated by the pivotable heater 43. Accordingly, the entire object on the grill 45 can be heated uniformly using the two heaters without turning over the object.

[0050] In a case where according to an object to be cooked, the object is cooked by means of microwaves without using the heaters 41 and 43 or the object is heated with the pivotable heater 43 without pivoting thereof it will be apparent that the microwave oven should be operated after removal of the grill 45.

[0051] When the object is completely heated through the above process, the grill 45 should be taken out from the cavity 31. To remove the grill 45 from the cavity 31, the grill 45 is pulled toward the front of the cavity 31 along the guides 49. Due to the removal of the grill, the micro-switch 51 is no longer pushed by the left side surface of the grill 45.

[0052] When the micro-switch 51 and the grill 45 are separated from each other, the micro-switch 51 generates an actuating signal for pivoting the pivotable heater 43 upward on its lower end. Then, the pivotable heater 43 is pivoted by means of the actuating signal from the micro-switch 51 and shifted to the substantially vertical position adjacent to the rear surface of the cavity 31.

[0053] According to the present invention described above, it can be understood that the fundamental technical spirit of the present invention is to heat an object by a pair of heaters installed in the cavity of the microwave oven and positioned above and below the grill on which the object is seated. In addition, the pivotable heater which can pivot toward a position below the grill is constructed to be operated, for example, as the grill pushes the micro-switch during the process of mounting the grill 45.

[0054] As described above, in the microwave oven according to the present invention, the fixed and pivotable heaters are installed on the ceiling of the cavity and on any one of both the side surfaces and the rear surface of the cavity, respectively. As the object is put on the grill horizontally installed between the fixed and pivotable heaters and is then heated by the heaters, the lower surface as well as the upper surface of the object can be uniformly heated. Due to such a heating fashion, there is an advantage in that the entire upper and lower portions of the object can be uniformly heated using heat generated from the heaters without turning over the object.

[0055] In addition, according to the embodiment of the present invention in which the micro-switch for use in driving the pivotable heater is installed corresponding to the installation position of the grill, one side of the grill pushes the micro-switch installed on the cavity during the process of mounting the grill, thereby generating the actuating signal for pivoting the pivotable heater. Thus, it is possible to reduce cumbersomeness, such as a manual operation for pivoting the pivotable heater or actuation of an additional switch for operating the pivotable heater. In addition, there is an advantage in that a burn which may occur during the manual pivoting process of the pivotable heater can be prevented.

[0056] Although the pivotable heater is installed at the rear portions of both the side surfaces of the cavity in the illustrated embodiment, the present invention is not limited thereto. For example, the pivotable heater may be installed on one side surface of the cavity, or two pivotable heaters may be installed on both the side surfaces of the cavity.

[0057] Furthermore, although a single micro-switch is installed on the left side surface of the cavity in the illustrated embodiment, the installation position of the micro-switch and the number of micro-switches are not limited thereto.

Claims

1. A microwave oven, comprising:

a main body (30) including a cavity (31) with an open front face serving as a space in which an object is to be heated;
a fixed heater (41) fixed on a ceiling of the cavity (31) to irradiate heat;
a pivotable heater (43) installed within the cavity (31) so as to be able to pivot between a vertical position adjacent to a rear or side surface of the cavity (31) and a position adjacent to a lower surface of the cavity (31);
a driving means for pivoting the pivotable heater

(43);
a grill (45) on which the object is to be seated, said grill (45) being detachably mounted in an intermediate inner portion of the cavity (31) between the fixed and pivotable heaters (41,43) when the pivotable heater (43) is pivoted downward; and
a switching means (51) for generating an actuating signal for the driving means to pivot the pivotable heater (43) between the downward and upward positions when the grill (45) is mounted/removed from the cavity (31).

2. The microwave oven as claimed in claim 1, wherein the pivotable heater (43) is pivotably installed on lower ends of both sides thereof which are supported at rear portions of both side surfaces of the cavity (31).

3. The microwave oven as claimed in claim 1 or 2, wherein, when the grill (45) is inserted into the cavity (31), the grill (45) is guided and supported by a plurality of guides (49) installed on both side surfaces of the cavity (31), and the switching means (51) is installed on a front portion of a side surface of the cavity (31) to be pushed by the grill (45) mounted on the guides (49).

4. The microwave oven as claimed in claim 1, 2 or 3, wherein the switching means comprises a micro-switch (51) installed on a side surface of the cavity (31) to come into contact with the grill (45) when the grill is mounted.

5. The microwave oven as claimed in claim 4, wherein the micro-switch (51) is installed at a position on the side surface of the cavity (31) so that the micro-switch (51) is pushed by any one of both side surfaces of the grill (45) when the grill is mounted

6. The microwave oven as claimed in any one of claims 1 to 5, further comprising a tray (47) installed on the lower surface of the cavity (31) to collect oil and fat generated from the object seated on the grill (45).

7. The microwave oven as claimed in any one of claims 1 to 6, wherein the pivotable heater (43) is supported at any one position between the vertical position and the position adjacent to the lower surface of the cavity (31).

Patentansprüche

1. Mikrowellenofen mit:

einem Hauptkörper (30) mit einem Hohlraum (31) mit einer offenen Vorderseite, der als Raum dient, in dem ein Gegenstand zu erwärmen ist,
einem feststehenden Heizelement (41), das an einer Decke des Hohlraums (31) befestigt ist, um Wärme abzustrahlen,
einem dreh-/schwenkbaren Heizelement (43), das in dem Hohlraum (31) so angeordnet ist, dass es zwischen einer Vertikalposition nahe einer rückwärtigen oder einer seitlichen Oberfläche des Hohlraums (31) und einer Position nahe einer unteren Oberfläche des Hohlraums (31) drehen/schwenken kann,
einem Antriebsmittel zum Drehen/Schwenken des dreh-/schwenkbaren Heizelements (43),
einem Rost (45), auf den der Gegenstand zu legen ist, wobei der Rost (45) abnehmbar in einem inneren Zwischenabschnitt des Hohlraums (31) zwischen dem feststehenden und dem dreh-/schwenkbaren Heizelement (41,43) angebracht ist, wenn das dreh-/schwenkbare Heizelement (43) nach unten geschwenkt ist, und
einem Schaltmittel (51) zum Erzeugen eines Betätigungssignals für das Antriebsmittel, um das dreh-/schwenkbare Heizelement (43) zwischen der unteren und der oberen Position zu drehen/schwenken, wenn der Rost (45) in den Hohlraum (31) eingebaut wird/aus diesem entfernt wird.

2. Mikrowellenofen nach Anspruch 1, wobei das dreh-/schwenkbare Heizelement (43) dreh-/schwenkbar an unteren Enden von dessen beiden Seiten installiert ist, die an hinteren Abschnitten der beiden Seitenflächen des Hohlraums (31) gehaltert sind.

3. Mikrowellenofen nach Anspruch 1 oder 2, wobei, wenn der Rost (45) in den Hohlraum (31) eingesetzt wird, der Rost (45) von mehreren Führungen (49) geführt und gehaltert wird, die an beiden Seitenflächen des Hohlraums (31) angebracht sind, und das Schaltmittel (51) an einem vorderen Abschnitt einer Seitenfläche des Hohlraums (31) installiert ist, um von dem auf den Führungen (49) angebrachten Rost (45) gedrückt zu werden.

4. Mikrowellenofen nach Anspruch 1, 2 oder 3, wobei das Schaltmittel einen Mikroschalter (51) umfasst, der an einer Seitenfläche des Hohlraums (31) installiert ist, um in Kontakt mit dem Rost (45) zu kommen, wenn der Rost angebracht wird.

5. Mikrowellenofen nach Anspruch 4, wobei der Mikroschalter (51) an einer Position an der Seitenfläche des Hohlraums (31) so installiert ist, dass der Mikroschalter (51) durch irgendeine der beiden Seitenflächen des Rosts (45) gedrückt wird, wenn der Rost angebracht wird.

6. Mikrowellenofen nach einem der Ansprüche 1 bis 5, ferner mit einer Schale (47), die an der unteren Ober-

fläche des Hohlraums (31) installiert ist, um Öl und Fett zu sammeln, das von dem auf dem Rost (45) positionierten Gegenstand stammt.

7. Mikrowellenofen nach einem der Ansprüche 1 bis 6, wobei das dreh-/schwenkbare Heizelement (43) an einer beliebigen Position zwischen der Vertikalposition und der Position nahe der unteren Oberfläche des Hohlraums (31) gehaltert ist.

Revendications

1. Four à micro-ondes, comprenant :

un corps principal (30) comportant une cavité (31) avec une face avant ouverte servant d'espace dans lequel un objet doit être chauffé ;
un dispositif de chauffage fixe (41) fixé sur un plafond de la cavité (31) pour rayonner de la chaleur;
un dispositif de chauffage pivotant (43) installé à l'intérieur de la cavité (31) de façon à pouvoir pivoter entre une position verticale adjacente à une surface arrière ou latérale de la cavité (31) et une position adjacente à une surface inférieure de la cavité (31) ;
un moyen d'entraînement permettant de faire pivoter le dispositif de chauffage pivotant (43);
une grille (45) sur laquelle est placé l'objet, ladite grille (45) étant montée de manière amovible dans une partie intérieure intermédiaire de la cavité (31) entre les dispositifs de chauffage fixe et pivotant (41, 43) lorsque le dispositif de chauffage pivotant (43) est pivoté vers le bas ; et
un moyen de commutation (51) permettant de générer un signal d'actionnement destiné au moyen d'entraînement pour faire pivoter le dispositif de chauffage pivotant (43) entre les positions basse et haute lorsque la grille (45) est montée / retirée de la cavité (31).

2. Four à micro-ondes tel que revendiqué dans la revendication 1, dans lequel le dispositif de chauffage pivotant (43) est installé de manière pivotante sur des extrémités inférieures de ses deux côtés qui sont supportées en des parties arrière des deux surfaces latérales de la cavité (31).

3. Four à micro-ondes tel que revendiqué dans la revendication 1 ou 2, dans lequel, lorsque la grille (45) est insérée dans la cavité (31), la grille (45) est guidée et supportée par une pluralité de guides (49) installés sur les deux surfaces latérales de la cavité (31), et le moyen de commutation (51) est installé sur une partie avant d'une surface latérale de la cavité (31) pour être poussé par la grille (45) montée sur les guides (49).

4. Four à micro-ondes tel que revendiqué dans la revendication 1, 2 ou 3, dans lequel le moyen de commutation comprend un microrupteur (51) installé sur une surface latérale de la cavité (31) pour entrer en contact avec la grille (45) lorsque la grille est montée.

5. Four à micro-ondes tel que revendiqué dans la revendication 4, dans lequel le microrupteur (51) est installé à une position sur la surface latérale de la cavité (31) de sorte que le microrupteur (51) est poussé par l'une quelconque des deux surfaces latérales de la grille (45) lorsque la grille est montée.

6. Four à micro-ondes tel que revendiqué dans l'une quelconque des revendications 1 à 5, comprenant en outre une plaque (47) installée sur la surface inférieure de la cavité (31) pour recueillir l'huile et la graisse produites par l'objet placé sur la grille (45) .

7. Four à micro-ondes tel que revendiqué dans l'une quelconque des revendications 1 à 6, dans lequel le dispositif de chauffage pivotant (43) est supporté à n'importe quelle position entre la position verticale et la position adjacente à la surface inférieure de la cavité (31).

FIG. 1

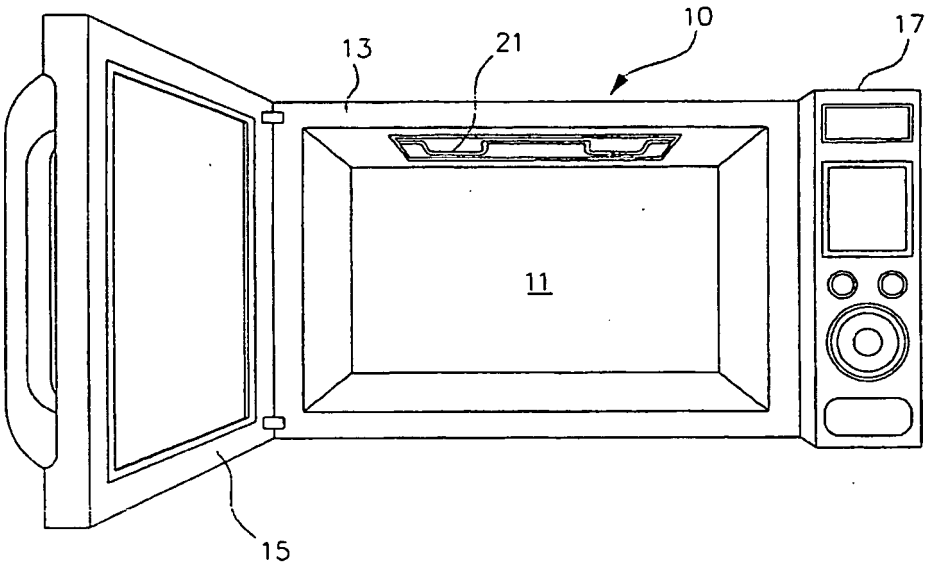


FIG. 2a

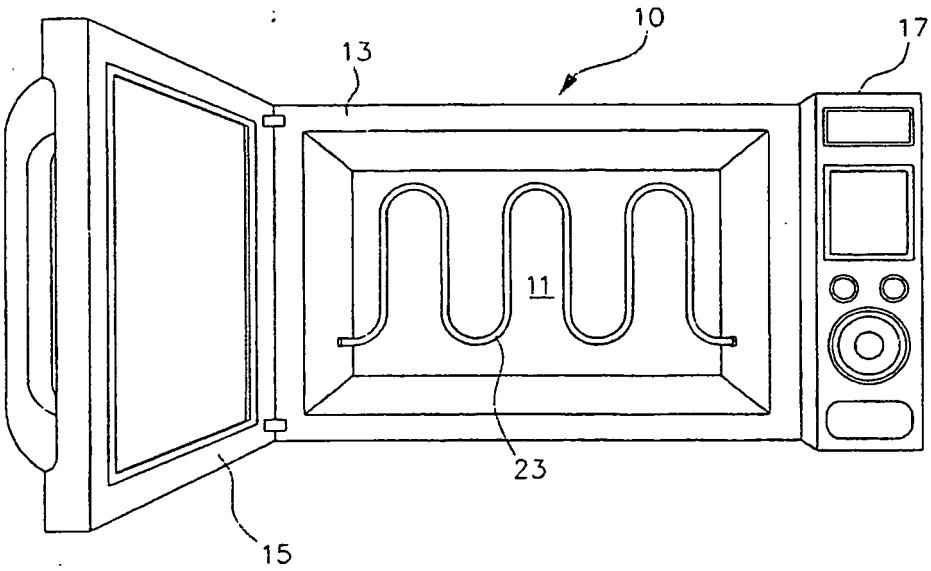


FIG. 2b

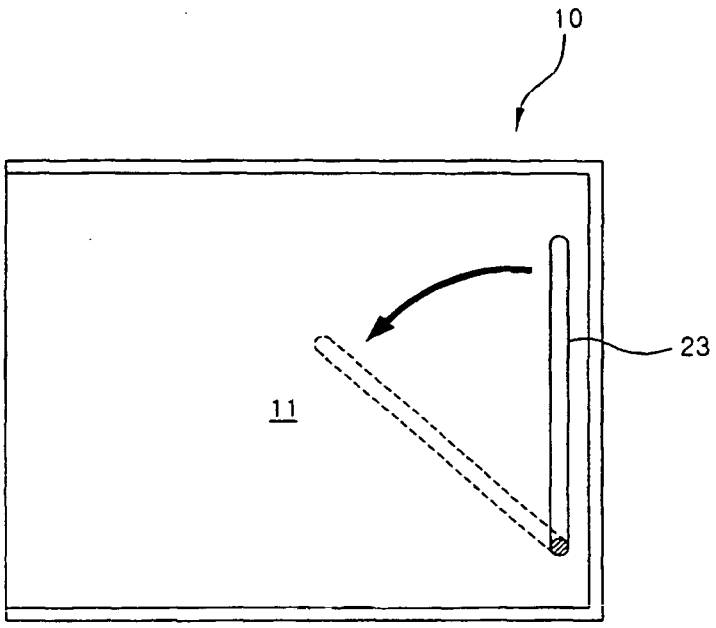


FIG. 3

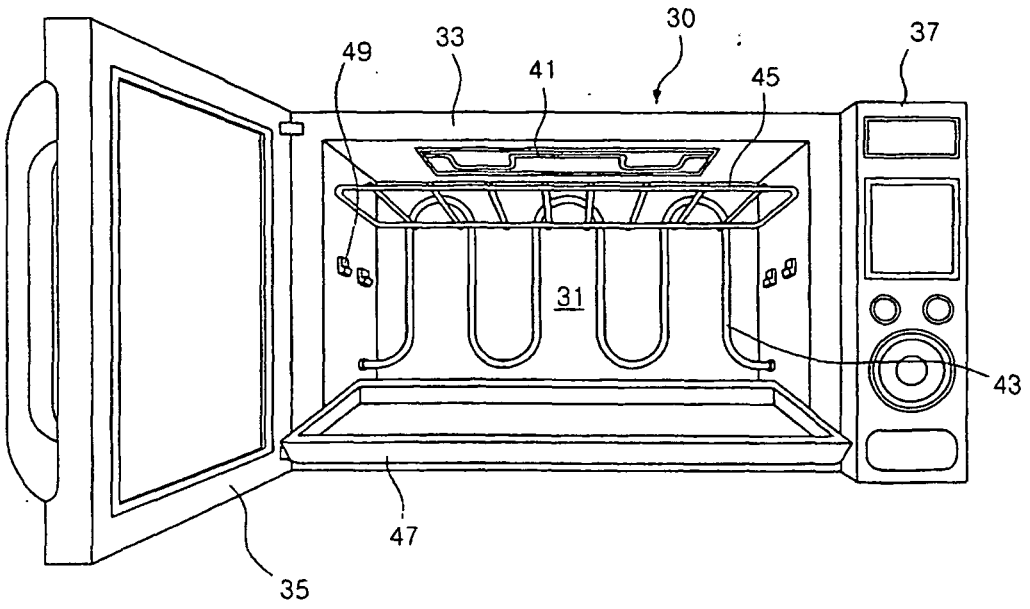


FIG. 4a

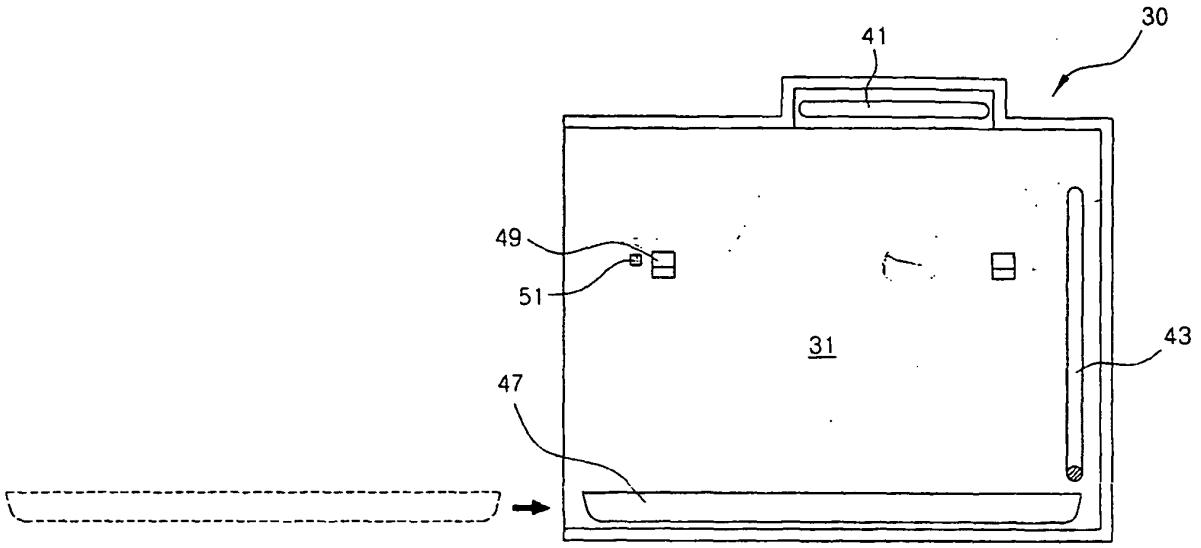


FIG. 4b

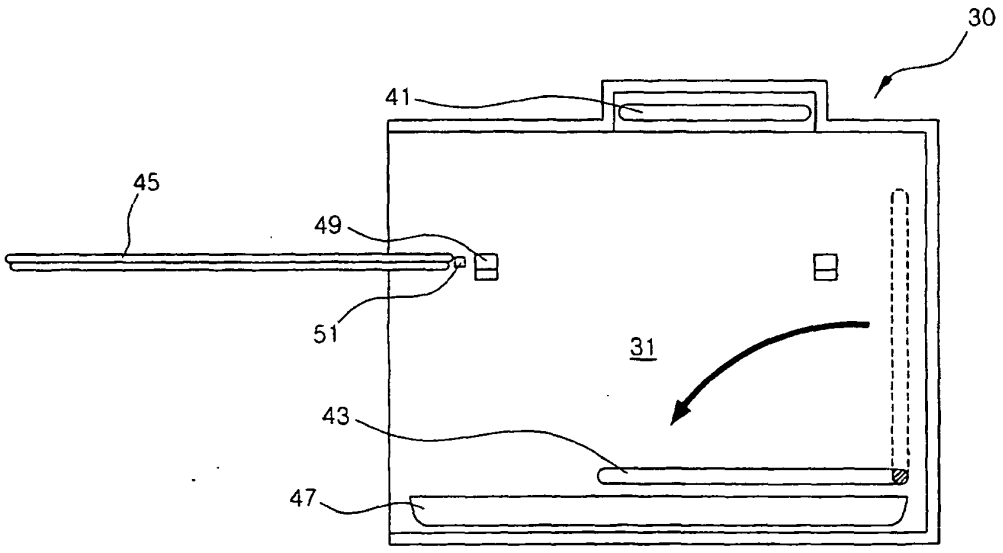
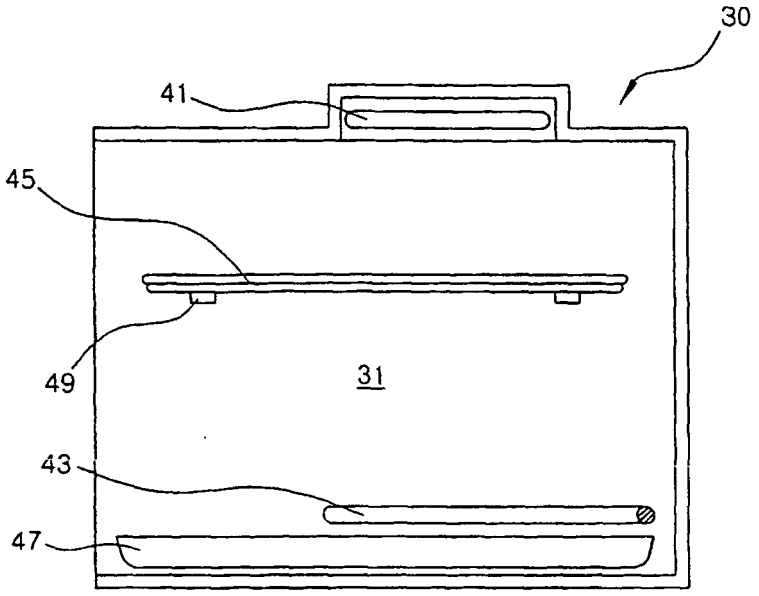


FIG. 4c



REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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