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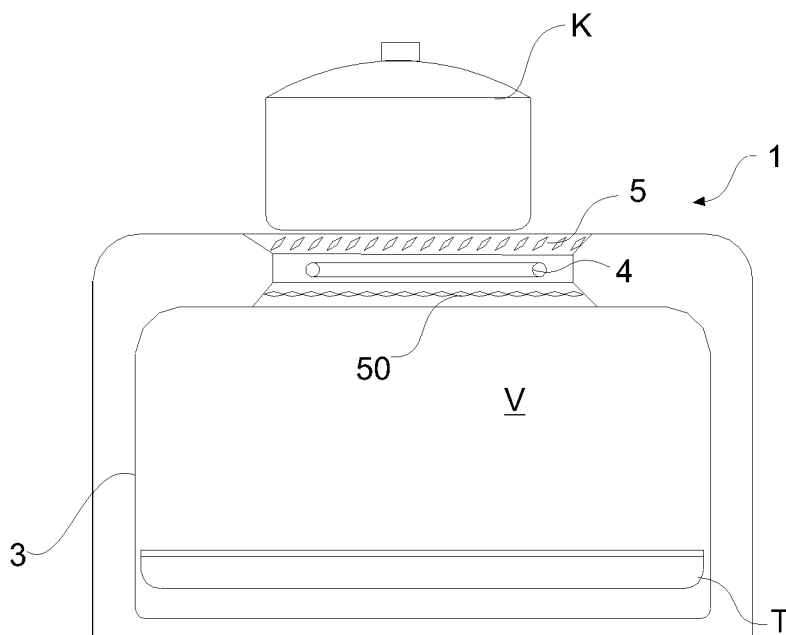
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(57) Abstract: In the oven (1) of the present invention, the screen (5, 50) having a segmented configuration allows cooking to be carried out on the cooktop (7) or in the cooking cavity (V) by only one heater (4) at different temperatures.

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Description

AN OVEN

[0001] The present invention relates to an oven wherein the upper part can also be used as a cooker.

[0002] In ovens, generally two heaters are provided, one at the ceiling of the cooking cavity and the other at the base. Various solutions are developed for using at least one of these heaters outside of the cooking cavity, thereby attributing a cooker function to the oven as well hence enriching the utilization alternatives.

[0003] In some state of the art ovens, the heat is directed towards the surface to be used as the cooker by moving the reflectors/insulators that direct the heat of the heater towards inside the cooking cavity.

[0004] In the Great Britain patent no. GB181063 a heater that covers the whole upper surface of the oven and covers that are situated above and below the heater are observed. When the upper surface of the heater has to be opened, the upper cover is slid to the side.

[0005] In the Great Britain document no. GB20639, a heater disposed at the upper part of the cooking space is used in cooking the foodstuff contained in cooking utensils. When a cooking utensil is not placed at the upper part, the heater is covered above with insulating blocks.

[0006] However, in these implementations, when food is desired to be cooked both inside and at the top, it is possible to reduce the heat delivered to the cooktop without reducing the heat delivered to the cooking cavity. In this case, the food at the top can be burned and the food inside can be cooked late. The opposite, that is, not being able to direct heat to the cooktop without reducing the heat delivered to the cooking chamber is also valid.

[0007] A provision for solving this problem is explained in the Japanese patent no. JP3001016. Here, the bow shaped reflectors are rotated around the rod shaped heater so as to be positioned above or below. Since the reflectors can be moved independently, lesser heat can reach the upper part by opening the top of some of the heaters.

[0008] In the Great Britain patent no. GB263365, an oven having a dual use facility is explained. When the insulation blocks above the heater slide to the sides, the heat generated from the upper part of the heater can be utilized. Insulation blocks can be superposed in two rows at the upper part. Consequently, a lesser or greater amount of

heat is provided to reach the upper part.

[0009] The object of the present invention is to design an oven wherein the amount of heat directed from the heater to the cooktop and/or the cooking cavity is controlled.

[0010] The oven designed to fulfill the objective of the present invention is explicated in the attached claims.

[0011] In the oven of the present invention, the screen, utilized as a reflector and/or an insulator, comprises fins that are arranged side by side, without gaps in between and can be rotated around a horizontal axis. The screen resembles a Venetian blind at this position. When the fins are turned, an opening is formed therebetween through which the heat emanating from the heater can pass. The area of this opening can be changed depending on the angle of the fins. Accordingly, the amount of heat emanating from the heater to the cooktop and/or the cooking cavity can be controlled.

[0012] In another embodiment of the present invention, more than one side-by-side screens are used and the angle of fins of each screen can be changed independently from the others. Consequently, it is possible to transmit different amounts of heat to different regions on the cooktop.

[0013] In another embodiment of the present invention, all the fins of a screen can be turned together. Accordingly, it is possible to control all the fins by one movement mechanism.

[0014] The screen can be changed from one position to the other manually or automatically.

[0015] The oven designed to fulfill the objective of the present invention is illustrated in the attached figures, where:

[0016] Figure 1 – is the schematic view of an oven.

[0017] Figure 2 – is the schematic view of the oven when the upper screen is partially open.

[0018] Figure 3 – is the schematic view of the oven when the upper screen is entirely open.

[0019] The elements illustrated in the figures are numbered as follows:

1. Oven
2. Body
3. Chassis
4. Heater
5. , 50. Screen
6. , 60. Fin
7. Cooktop
8. Movement mechanism
9. Drive mechanism

[0020] The oven (1) comprises

- a body (2)
- a chassis (3) that encircles the cooking cavity (V), disposed within this body (2), wherein food items to be cooked are placed,
- a cooktop (7) arranged on the body (2), extending to the outside, whereon containers (K) containing the food to be cooked are placed and
- at least one heater (4) disposed between the cooktop (7) and the chassis (3).
The heater (4) is preferably of the infrared type.

[0021] The oven (1) of the present invention furthermore comprises at least one screen (5) situated between the heater (4) and the cooktop (7). The screen (5) comprises more than one fin (6) arranged side by side, without gaps such that an undivided shield is formed, rotatable for changing the angle thereof and a movement mechanism (8) that changes the angle of the fins (6). The movement mechanism (8), for example, can be a worm gear, a chain-gear means etc. to which all the fins (6) are connected. When the fins (6) are horizontal, the heat emanating from the heater (4) is not allowed to pass to the cooktop (7). However, when the fins (6) are turned to a position making an angle with regards to the horizontal, an opening is left between them wherein the heat/radiation can pass; in other words, the screen (5) is opened. By changing the angle of the fin (6), the projection area of the opening on the horizontal plane, thus the amount of heat passing through the opening can be changed. When the fins (6) are positioned by making a 90° angle with regards to the horizontal, the opening has the largest area

[0022] In another embodiment of the present invention, the oven (1) furthermore comprises a second screen (50) situated between the heater (4) and the chassis (3). This screen (50), like the upper screen (5), comprises more than one fin (60) arranged side by side, without gaps such that an undivided shield is formed, rotatable for changing the angle thereof. Since each screen (5, 50) can be controlled independently from the other, the heat amount delivered into the cooking cavity (V) or the cooktop (7) can be determined separately.

[0023] In this embodiment, while the user cooks by placing a tray (T) into the cooking cavity (V), all the fins (60) of the lower screen (50) are positioned with regards to the horizontal by an angle different from zero. Thus the heat emanating from the heater (4) is delivered to the cooking cavity (V). In the meantime, if cooking will not be carried out at the cooktop (7), all the fins (6) of the upper screen (5) are horizontally positioned, that is the screen (5) is closed. In this position, the heat emanating from the heater (4) is prevented from reaching the cooktop (7) by the screen (5). When the user

places a container (K) such as a pot, coffeepot etc. on the cooktop (7), the fins (6) of the upper screen (5) are brought to the angular position and the cooktop (7) is heated. Opening of the upper screen (5) is not dependent on the lower screen (50) being open or closed.

[0024] In another embodiment of the present invention, more than one side-by-side screens (5 or 50) are provided and the angle of the fins (6 or 60) in each screen (5 or 50) can be changed independently from the others. Consequently, different amounts of heat can be delivered to different regions on the cooktop (7) or in the cooking cavity (V), providing an inhomogeneous cooking. In this embodiment, furthermore, when an inhomogeneous cooking is desired on the cooktop (7) or in the cooking cavity (V), different amounts of heat can be directed to different regions.

[0025] In another embodiment of the present invention, all the fins (6 or 60) in each screen (5 or 50) can be turned together. Thus all the fins (6 or 60) can be controlled by a movement mechanism (8). The movement mechanism (8) turning the fins (6 or 60) of the screen (5, 50) can be controlled by the user. Alternatively, the oven (1) comprises a drive mechanism (9) that provides the required force for the movement mechanism (8). The oven (1) can be totally controlled automatically by means of the drive mechanism (9). The drive mechanism (9) can be actuated by the user pressing on buttons or by sensors detecting the presence of the container/tray.

[0026] In the oven (1) of the present invention, the screen (5, 50), having a segmented configuration, allows cooking to be carried out on the cooktop (7) or in the cooking cavity (V) by only one heater (4) at different temperatures.

Claims

- [0001] An oven (1) used in cooking foodstuffs, comprising - a body (2) - a chassis (3) that encircles the cooking cavity (V) disposed within this body (2) wherein food items to be cooked are placed, - a cooktop (7) arranged on the body (2), extending to the outside, whereon containers (K) containing food to be cooked are placed, and - at least one heater (7) disposed between the cooktop (7) and the chassis (3), **and characterized by** a screen (5) having more than one fin (6) arranged side by side, without gaps between the heater (4) and the cooktop (7), such that an undivided shield is formed, rotatable for changing the angle thereof and a movement mechanism (8) that changes the angle of the fins (6), and when the fins (6) are horizontal not allowing the heat emanating from the heater (4) to pass to the cooktop (7), when the fins (6) are positioned with regards to the horizontal by an angle different from zero, an opening is left between them wherein the heat/radiation can pass, the area of the opening, thus the amount of heat passing through the opening can be changed by changing the angle of the fin (6).
- [0002] An oven (1) as in Claim 1, characterized by furthermore a second screen (50) situated between the heater (4) and the chassis (3) comprising more than one fin (60) arranged side by side, without gaps such that an undivided shield is formed, that is rotatable for changing the angle thereof.
- [0003] An oven (1) as in Claim 1 or 2, **characterized by** more than one screen (5, 50) arranged side by side and the angle of the fins (6 or 60) in each one can be changed independently from those of the other.
- [0004] An oven (1) as in Claim 1, **characterized by** a screen (5, 50), wherein all the fins (6 or 60) of one can be turned together.
- [0005] An oven (1) as in any one of the above claims, **characterized by** a drive mechanism (9) that provides the force required to actuate the movement mechanism (8).
- [0006] An oven (1) as in Claim 5, **characterized by** a drive mechanism (9) that is actuated by buttons pressed on by the user.
- [0007] An oven (1) as in Claim 5, **characterized by** a drive mechanism (9) that is actuated by a sensor that detects the presence of a container/tray.

[Fig.]

Figure 1

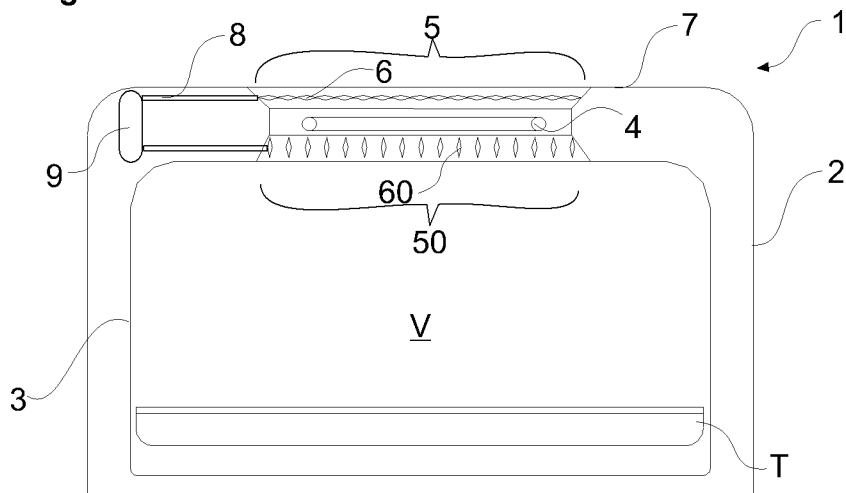
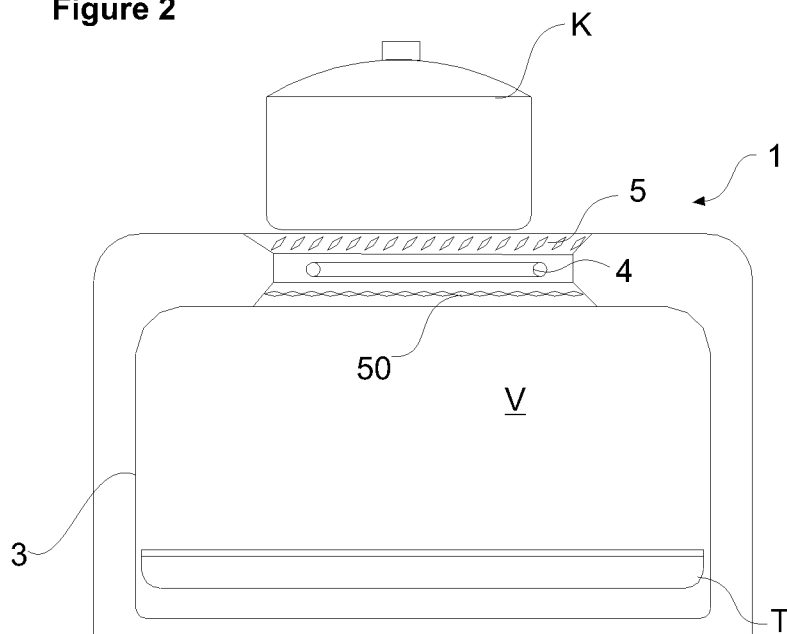


Figure 2



[Fig.]
Figure 3

