

COOKING DEVICE FOR FOOD VENDING MACHINE

1. Field of the Invention

The present invention relates to device for treating food materials, especially for cooking food materials.

5 2. Description of the Prior Arts

A common type of vending machine is beverage vending machine. The advantages of the beverage vending machine are that a site for setting up the beverage vending machine is not constrained and a space occupied by the vending machine is small. Thus, for beverage suppliers, selling products
10 through vending machines is very economic because operating costs are low but profits are high. On the other hand, when consumers feel thirsty, they can buy beverages from the beverage vending machines immediately and conveniently. However, when the consumers are hungry and want to get foods immediately and conveniently, except for eating bread or instant noodles, they
15 can only buy frozen foods in convenience stores and heat the frozen foods with a microwave oven. Bread and instant noodle do not provide adequate nutrition; furthermore, frozen foods sold by the convenience stores are pre-cooked and reheated to a suitable temperate before serving, and thus not only the tastes and flavors of the frozen foods are changed, but also nutrition of the frozen foods is
20 lost.

The main objective of the present invention is to provide a cooking device for a food vending machine that can cook food materials in the food vending machine, so the food vending machine can provide fresh and cooked-on-the-spot food.

To achieve the aforesaid purpose, the cooking device can cook food materials provided by a food vending machine and comprises:

a chamber extending in a straight line and having:

an entrance and an exit located on two ends of the chamber;

5 a preparing space located between the entrance and the exit and communicating with the entrance and the exit;

an entrance cover selectively closing the entrance; and

an exit cover selectively closing the exit;

a heating component mounted in the preparing space of the chamber
10 and extending in a lengthwise direction of the chamber; and

a moving mechanism mounted in the preparing space of the chamber and extending in the lengthwise direction of the chamber, the moving mechanism capable of transiting the food materials from the entrance to the exit of the chamber.

15 The cooking device of the present invention may be equipped in a food vending machine and cook the raw food materials provided by the food vending machine and then package the cooked food, so that the food vending machine is capable of providing fresh and cooked-on-the-spot food. With the straight chamber and the entrance and the exit arranged on two ends of the
20 chamber, the straight chamber has a better efficiency of utilizing space in the food vending machine compared to that of another shape (e.g. a circle), so that the food materials may be heated during delivery from the entrance to the exit. In other words, the food materials are moved through the whole space in the chamber, and the space in the chamber is fully utilized without any unused

space. Therefore, the straight chamber suits for the food vending machine which has a limited space inside. In addition, through controlling the durations of the food materials staying in the chamber by the moving mechanism, the cooking device may suit for different food materials and cooking methods, so the food vending machine can provide various meals. Besides, the moving mechanism can move multiple containers containing the food materials, so that the food materials in the multiple containers may be heated at the same time, which reduces waiting time of consumers.

In the foregoing cooking device which is configured to be equipped in a food vending machine, the moving mechanism is a conveyor belt and the conveyor belt comprises:

two chains being parallel and separate from each other, and each of the two chains arranged in a loop; and

a plurality of connecting rods, each one of the connecting rods connecting the two chains.

In the foregoing cooking device which is configured to be equipped in a food vending machine, the moving mechanism further comprises:

a plurality of spiral components sleeved on the connecting rods.

The foregoing cooking device, which is configured to be equipped in a food vending machine, further comprises:

a driving mechanism comprising:

a first driving rod mounted through a side wall of the chamber, one end of the first driving rod located in the chamber and another end of the first driving rod located out of the chamber;

a first driving wheel element securely mounted at the end of the first driving rod that is located in the chamber; and

a first driving belt arranged in a loop, one end of the first driving belt sleeved on the first driving wheel element, and another end of the first driving belt connected to the moving mechanism.

In the foregoing cooking device which is configured to be equipped in a food vending machine, the driving mechanism further comprises:

a joint gear securely mounted on the end of the first driving rod that is located out of the chamber and said joint gear detachably connected to a power source of the food vending machine.

The foregoing cooking device, which is configured to be equipped in a food vending machine, further comprises:

an elevating mechanism mounted in the preparing space and adjacent to the exit, the elevating mechanism being capable of elevating the food materials from the moving mechanism to the exit.

In the foregoing cooking device which is configured to be equipped in a food vending machine, the elevating mechanism comprises:

at least one guiding track extending in a height direction of the chamber;

a second driving rod mounted through a side wall of the chamber and adjacent to the exit, one end of the second driving rod located in the chamber and another end of the second driving rod located out of the chamber;

a second driving wheel element securely mounted on the end of the second driving rod that is located in the chamber;

a second driving belt arranged in a loop and sleeved on the second driving wheel element; and

an elevating board connected to the second driving belt and capable of moving along the at least one guiding track.

5 In the foregoing cooking device which is configured to be equipped in a food vending machine, the elevating mechanism further comprises:

a joint gear securely mounted on the end of the second driving rod that is located out of the chamber, the joint gear of the elevating mechanism being detachably connected to the power source of the food vending machine.

10 The foregoing cooking device, which is configured to be equipped in a food vending machine, further comprises:

a sensor for detecting a location of the food materials and comprising:

a tilting component, one end of the tilting component tiltably mounted adjacent to the exit, and the tilting component capable of tilting along
15 the lengthwise direction of the chamber when abutted by the food materials;

wherein the elevating board comprises:

a cavity, the tilting component accommodated in the cavity, wherein when the tilting component is abutted by the food materials and thus tilts, the exit cover is opened and the elevating board elevates the food
20 materials.

The foregoing cooking device, which is configured to be equipped in a food vending machine, further comprises:

a sensor for detecting a location of the food materials, the sensor mounted in the preparing space and adjacent to the exit and configured to

detect a location of the food materials and selectively activate the exit cover to open.

In the foregoing cooking device which is configured to be equipped in a food vending machine, the sensor comprises:

5 a tilting component; one end of the tilting component tiltably mounted adjacent to the exit, and the tilting component capable of tilting along the lengthwise direction of the chamber when abutted by the food materials; the tilting component comprising:

 a block located at another end of the tilting component opposite
10 the exit.

In the foregoing cooking device which is configured to be equipped in a food vending machine, the exit cover is pivotably mounted on the chamber and comprises:

 a joint gear, the joint gear of the entrance cover detachably
15 connected to the power source of the food vending machine.

In the drawings

Fig. 1 is a schematic view of a food vending machine and a food-preparing device.

Fig. 2 is a schematic view of a cooking device in accordance with the
20 present invention equipped on the food-preparing device.

Fig. 3 is a schematic view of the cooking device.

Fig. 4 is a side view of the cooking device.

Fig. 5 is a side view of the cooking device shown with an entrance cover being opened.

Fig. 6 is another side view of the cooking device.

Fig. 7 is a side view of the cooking device, shown with an exit cover being opened.

Fig. 8 is another side view of a moving mechanism and a driving
5 mechanism of the cooking device.

Fig. 9 is a schematic view of an elevating mechanism of the cooking device.

Figs. 10 to 12 are operational schematic views.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

10 With reference to Figs. 1 to 3 and Fig. 10, a cooking device according to the present invention for a food vending machine is provided. The cooking device is equipped in a food-preparing device A of the food vending machine and cooks food materials provided by the food vending machine. The food materials provided by the food vending machine are raw, but the meals are
15 cooked by the cooking device of the present invention. In this embodiment, the food materials are rationed in a container B by the same amount, and thereby the food-preparing device A provides the same amount of food materials along with the container B. The cooking device comprises a straight chamber 10, a heating component 20, a moving mechanism 30, a driving
20 mechanism 40, and an elevating mechanism 50.

Then please refer to Fig. 3 and Fig. 10. The chamber 10 extends in a straight line and forms an entrance 101, an exit 102, and a preparing space 103. The entrance 101 and the exit 102 are located on two ends of an upper surface of the chamber 10, and the preparing space 103 is located between the entrance

101 and the exit 102 and communicates with the entrance 101 and the exit 102. Therefore, the preparing space 103 may contain water, soup, or fired oil for steaming, braising, or firing the food materials when the food materials pass through the preparing space 103. Alternatively, the preparing space 103 may
5 not contain water, soup, or fired oil, and thus the food materials can be roasted when passing through the preparing space 103. In another embodiment, if the chamber 10 is for roasting, the entrance 101 and the exit 102 may be arranged at end surfaces of the chamber 10 respectively.

The please also refer to Figs. 4 and 5. The chamber 10 comprises an
10 entrance cover 11 and an exit cover 12. The entrance cover 11 selectively closes the entrance 101 and the exit cover 12 selectively closes the exit 102 since the entrance cover 11 and the exit cover 12 also are mounted on the two ends of the upper surface of the chamber 10. In this embodiment, the chamber 10 further comprises a hydraulic cylinder 13. The hydraulic cylinder 13 is
15 connected to the entrance cover 11 and drives the entrance cover 11 to move in a lengthwise direction of the chamber 10.

The please also refer to Figs. 6 and 7. The exit cover 12 is pivotably mounted on the chamber 10 and tilts about a lengthwise side of the chamber 10. In other words, a pivoting shaft of the exit cover 12 is on the lengthwise side of
20 the chamber 10. In this embodiment, the exit cover 12 comprises a joint gear which is a first joint gear 120. The first joint gear 120 is mounted on an end of the pivoting shaft of the exit cover 12 and on the end surface of the chamber 10. Therefore, the first joint gear 120 is detachably connected to a power source (not shown in the drawings) of the food vending machine for driving the exit

cover 12 to pivot.

The please refer to Figs. 4 and 9. The heating component 20 is mounted in the preparing space 103 of the chamber 10 and extends in the lengthwise direction of the chamber 10. In this embodiment, the heating component 20 may be, but not limited to, an electric heating element. The heating component 20 may be a microwave generator or a gas stove.

The please refer to Figs. 3, 8, and 9. The moving mechanism 30 is mounted in the preparing space 103 of the chamber 10 and extends in the lengthwise direction of the chamber 10, and thereby the food materials put into the preparing space 103 may be transited from the entrance 101 to the exit 102. The moving mechanism 30 may be a conveyor belt. The conveyor belt comprises two chains 31, a plurality of connecting rods 32, and a plurality of spiral components 33. The two chains 31 are parallel and separate from each other and are arranged in a loop. The connecting rods 32 connect the two chains 31. Each one of the spiral components 33 is sleeved on a respective one of the connecting rods 32 for increasing frictions of the conveyor belt, so that the containers B containing the food materials are capable of being moved on the conveyor belt. Each one of the spiral components 33 may be a spiral rod or a sleeve with at least one spiral protrusion.

The please refer to Figs. 6 and 8. The driving mechanism 40 is connected to the power of the food vending machine so that the moving mechanism 30 can be driven. The driving mechanism 40 comprises a first driving rod 41, a first driving wheel element 42, a first driving belt 43, and a joint gear.

The first driving rod 41 is mounted through a side surface of the chamber 10, and, in this embodiment, the first driving rod 41 is adjacent to the upper surface of the chamber 10. In other words, one end of the first driving rod 41 is located in the chamber 10, and another end of the first driving rod 41 is located out of the chamber 10. The first driving wheel element 42 is securely mounted on one end of the first driving rod 41, and said end of the first driving rod 41 is the end that is located in the chamber 10. The first driving belt 43 is disposed in the chamber 10 and arranged in a loop. One end of the first driving belt 43 is sleeved on the first driving wheel element 42 in the chamber 10, and another end of the first driving belt 43 is connected to the moving mechanism 30. In this embodiment, the first driving wheel element 42 is a sprocket and the first driving belt 43 is a chain, and the first driving wheel element 42 engages the first driving belt 43. The joint gear of the driving mechanism 40 is a second joint gear 44 securely mounted on one end of the first driving rod 41, and said end of the first driving rod 41 is the end that is located out of the chamber 10. Thus, the second joint gear 44 is detachably connected to the power source of the food vending machine, so that the moving mechanism 30 can be driven by the driving mechanism 40.

Then please refer to Figs. 9 and 10. The elevating mechanism 50 is mounted in the preparing space 103 and is adjacent to the exit 102. The elevating mechanism 50 comprises at least one guiding track 51, an elevating board 52, a second driving rod 53, a second driving wheel element 54, a second driving belt 55, and a joint gear.

The at least one guiding track 51 extends in a height direction of the

chamber 10. In this embodiment, a number of the at least one guiding track 51 is two. The two guiding tracks 51 are parallel and separate from each other, and are arranged in the preparing space 103 and adjacent to one of the end surfaces of the chamber 10. In this embodiment, each one of the guiding tracks 51 is a
5 rod.

The elevating board 52 is capable of moving along the at least one guiding track 51. In other words, the elevating board 52 can be moved in the height direction of the chamber 10. The elevating board 52 comprises a connecting part 521 and two arms 522. Two ends of the connecting part 521 are
10 connected to the two guiding tracks 51 respectively, and, in this embodiment, the two ends of the connecting part 521 are sleeved on the two guiding tracks 51. The connecting part 521 forms a cavity 5210.

The two arms 522 are parallel and separate from each other. One end of each arm 522 is securely mounted on one of the ends of the connecting part
15 521 and two arms 522 extend in the lengthwise direction of the chamber 10. Another ends of the two arms 522 are disposed on two sides of the moving mechanism 30 respectively. In other words, a distance between the two arms 522 is larger than a width of the moving mechanism 30. However, the distance between the two arms 522 is smaller than a width of the container B, which
20 ensures that the arms can elevate the container B during operation.

When the elevating board 52 moves to a lower end of its stroke, said another ends of the two arms 522 are on two sides of the moving mechanism 30 but lower than an upper surface of the conveyor belt of the moving mechanism 30. When the elevating board 52 moves to the upper end of the

stroke, the two arms 522 are adjacent to the exit 102 of the chamber 10.

The second driving rod 53 is mounted through one side surface of the chamber 10 and adjacent to the exit 102. In this embodiment, said side surface mounted through by the second driving rod 53 is one of the end surfaces of the chamber 10. One end of the second driving rod 53 is located in the chamber 10, and another end of the second driving rod 53 is located out of the chamber 10. The second driving wheel element 54 is securely mounted on one of the ends of the second driving rod 53, and said end is located in the chamber 10. The second driving belt 55 is disposed in the chamber 10 and is arranged in a loop. One end of the second driving belt 55 is sleeved on the second driving wheel element 54, which is located in the chamber 10. Another end of the second driving belt 55 is connected to the elevating board 52 and thereby the elevating board 52 is driven to move up and down. In this embodiment, the second driving wheel element 54 is a sprocket and the second driving belt 55 is a chain, and the second driving wheel element 54 engages the second driving belt 55.

The joint gear of the elevating mechanism 50 is a third joint gear 56 securely mounted on the other end of second driving rod 53, and said the other end is located out of the chamber 10. Therefore, the third joint gear 56 is detachably connected to the power source of the food vending machine, so that the elevating board 52 of the elevating mechanism 50 is driven.

The cooking device of the present invention further comprises a sensor for detecting a location of the food materials. In this embodiment, the sensor comprises a tilting component 61. The tilting component 61 changes a tilting angle in the lengthwise direction of the chamber 10 when abutted by the food

materials. Precisely, one end of the tilting component 61 is tiltably mounted adjacent to the exit 102, and another end of the tilting component 61 comprises a block 610. In this embodiment, the tilting component 61 is accommodated in the cavity 5210 of the elevating board 52.

5 When the present invention is in use, the food vending machine provides food materials contained in the container B. Meanwhile, as shown in Figs. 4, 5, and 10, the entrance cover 11 of the chamber 10 is driven by the hydraulic cylinder 13 to move horizontally, which causes the entrance 101 to be opened and the container B can move into the preparing space 103 through the
10 entrance 101 and on the moving mechanism 30. Then, as shown in Figs. 10 and 11, the power source of the food vending machine drives the moving mechanism 30 via the driving mechanism 40, the container B is driven by the moving mechanism 30 and moves from the entrance 101 to the exit 102 of the chamber 10, and the heating component 20 keeps heating the container B
15 during the movement. Thus, when the container B moves adjacent to the exit 102, the food materials in the container B are fully cooked.

 In the cooking device of the present invention, with the moving mechanism 30 driving the container B at different speeds, a heated duration of the food materials may be controlled. Thus, the cooking device suits for
20 variable food materials and variable cooking methods, e.g. microwaving, pan-frying, braising, steaming, firing, and roasting.

 For example, for braising, the chamber 10 should contain water or soup, and a liquid level of the water or the soup is higher than a half of the chamber 10, and higher than the heating component 20 and moving mechanism 30. After

the heating component 20 heats the water or the soup, the food materials immersed in the water or the soup are braised when moved by the moving mechanism 30. In this embodiment, the heating component 20 may extend on a bottom surface of the chamber 10.

5 For steaming, the chamber 10 should contain water, but a liquid level of the water may be higher than the heating component 20 but not higher than the moving mechanism 30. After the water is heated by the heating component 20 and becomes steams, the food materials moved by the moving mechanism 30 may be immersed in the steams and heated. In this embodiment, the heating
10 component 20 may also extend on the bottom surface of the chamber 10.

 For firing, the chamber 10 should contain firing oil, and a liquid level of the firing oil is higher than the half of the chamber 10, and higher than the heating component 20 and moving mechanism 30. After the heating component 20 heats the firing oil, the food materials immersed in the firing oil are fried
15 while being moved by the moving mechanism 30. In this embodiment, the heating component 20 may extend on the bottom surface of the chamber 10.

 For roasting, the chamber 10 should not contain water, soup, or oil, but the heating component 20 heats the food materials directly through heat radiation. In this embodiment, the heating component 20 may not only extend
20 on the bottom surface of the chamber 10, but also extend on two side surfaces of the chamber 10 (not shown in the drawings).

 In addition, when multiple consumers purchase food from the food vending machine, the multiple containers B may be put into the cooking device of the present invention one by one, so food materials in the multiple containers

B are heated at the same time and thereby waiting time of the consumers is reduced.

As shown in Figs. 6, 7, 11, and 12, when the sensor detects that one of the containers B is moved under the exit 102, the elevating mechanism 50 and the exit cover 12 are activated, and the moving mechanism 30 stops to move the containers B temporally. In this embodiment, when the container B is moved to a position near the exit 102 and pushes the tilting component 61 and a tilting angle of the tilting component 61 is changed to greater than a predetermined angle, the elevating mechanism 50 and the exit cover 12 are activated to operate. When the container B is moved under the exit 102, the container B is also located over the elevating board 52 of the elevating mechanism 50. Therefore, after the exit cover 12 is opened and the elevating board 52 lifts the container B, the container B can be moved out of the exit 102.

After that, the container B may be picked up by a clamp or a robotic arm of the food vending machine, and then the cooked food materials are packaged or further processed. In another embodiment, the cooking device may not comprise the elevating mechanism 50, but the container B is picked up by a clamp or a robotic arm of the food vending machine extending into the chamber 10 instead when the container B is moved under the exit 102. After the container B is picked up, the exit cover 12 closes again, the elevating board 52 moves to the lower end of the stroke, and then the moving mechanism 30 moves the remaining containers B.

As shown in Figs. 2, 3, 6, and 9, to be clean and hygienic, the cooking device of the present invention is detachable from the food vending machine.

Precisely, the chamber 10 comprises pulleys so as to be detached easily. Besides, with the first joint gear 120 of the exit cover 12, the second joint gear 44 of the driving mechanism 40, and the third joint gear 56 of the elevating mechanism 50 being detachably connected to the power source of the food vending machine, the cooking device is driven by the external power, which makes the cooking device light in weight and easy to move.

On the other hand, as shown in Figs. 6, 9, and 10, each component in the chamber 10 is made of food-grade stainless steel, so the components in the chamber 10 may not be rusted and become filthy. Besides, with the first driving rod 41 of the driving mechanism 40 is mounted through the chamber 10 and near the upper surface of the chamber 10 and the second driving rod 53 of the elevating mechanism 50 is mounted through the exit 102 of the chamber 10 (i.e. near an upper edge of the end surface), the water, the soup, or the firing oil in the chamber 10 may not be leaked from a position where the first driving rod 41 or the second driving rod 53 is mounted.

Consequently, the cooking device of the present invention may be equipped in a food vending machine and cook the raw food materials provided by the food vending machine and then pack the cooked food, so that the food vending machine is capable of providing fresh and cooked-on-the-spot food. With the chamber 10 extending in a straight line and the entrance 101 and the exit 102 arranged on two ends of the chamber 10, the straight chamber 10 has a better efficiency of utilizing space in the food vending machine compared to that of another shape (e.g. a circle), so that the food materials may be heated during movement from the entrance 101 to the exit 102. In other words, the

food materials are moved through the whole space in the chamber 10, so there is no wasted space in the chamber 10. Therefore, the chamber 10 extending in a straight line suits for the food vending machine which has limited space therein. In addition, by controlling the durations of the food materials staying in the chamber 10 by the moving mechanism 30, the cooking device may suit for various food materials and cooking methods, so the food vending machine can provide various foods or meals. Besides, the moving mechanism 30 can move multiple containers B containing the food materials, so that the food materials in the multiple containers B may be heated at the same time, which reduces waiting time of consumers.

The foregoing description is only preferred embodiments of the present invention and is not configured to restrict the present invention. Anyone skilled in the same technical field of the present invention with normal technical ability can use the disclosed above to make changes or modifications to equivalent embodiment without departing from the technical field of the present invention. Any simple modifications, equivalent changes and modifications based on the substantial technical feature of the present invention without deviate from the technical solution of the present invention are still fall within the scope of the technical solution of the present invention.

CLAIMS:

1. A cooking device configured to be equipped in a food vending machine for cooking food materials provided by the food vending machine and
5 characterized in that the cooking device comprises:

a chamber extending in a straight line and having:

an entrance and an exit located on two ends of the chamber;

a preparing space located between the entrance and the exit and communicating with the entrance and the exit;

10 an entrance cover selectively closing the entrance; and

an exit cover selectively closing the exit;

a heating component mounted in the preparing space of the chamber and extending in a lengthwise direction of the chamber; and

a moving mechanism mounted in the preparing space of the chamber
15 and extending in the lengthwise direction of the chamber, the moving mechanism capable of transiting the food materials from the entrance to the exit of the chamber.

2. The cooking device configured to be equipped in a food vending machine as claimed in claim 1 characterized in that the moving mechanism is a
20 conveyor belt and the conveyor belt comprises:

two chains being parallel and separate from each other, and each of the two chains arranged in a loop; and

a plurality of connecting rods, each one of the connecting rods
25 connecting the two chains.

3. The cooking device configured to be equipped in a food vending machine as claimed in claim 2 characterized in that the moving mechanism further comprises:

5 a plurality of spiral components sleeved on the connecting rods.

4. The cooking device configured to be equipped in a food vending machine as claimed in any one of claims 1 to 3 characterized in that the cooking device further comprises:

10 a driving mechanism comprising:

a first driving rod mounted through a side wall of the chamber, one end of the first driving rod located in the chamber and another end of the first driving rod located out of the chamber;

a first driving wheel element securely mounted at the end of
15 the first driving rod that is located in the chamber; and

a first driving belt arranged in a loop, one end of the first driving belt sleeved on the first driving wheel element, and another end of the first driving belt connected to the moving mechanism.

20 5. The cooking device configured to be equipped in a food vending machine as claimed in claim 4 characterized in that the driving mechanism further comprises:

a joint gear securely mounted on the end of the first driving rod that is located out of the chamber and said joint gear detachably connected to a power
25 source of the food vending machine.

6. The cooking device configured to be equipped in a food vending machine as claimed in any one of claims 1 to 3 characterized in that the cooking device further comprises:

5 an elevating mechanism mounted in the preparing space and adjacent to the exit, the elevating mechanism being capable of elevating the food materials from the moving mechanism to the exit.

7. The cooking device configured to be equipped in a food vending machine as claimed in claim 6 characterized in that the elevating mechanism comprises:

 at least one guiding track extending in a height direction of the chamber;

 a second driving rod mounted through a side wall of the chamber and adjacent to the exit, one end of the second driving rod located in the chamber and another end of the second driving rod located out of the chamber;

 a second driving wheel element securely mounted on the end of the second driving rod that is located in the chamber;

 a second driving belt arranged in a loop and sleeved on the second driving wheel element; and

 an elevating board connected to the second driving belt and capable of moving along the at least one guiding track.

8. The cooking device configured to be equipped in a food vending machine as claimed in claim 7 characterized in that the elevating mechanism

further comprises:

a joint gear securely mounted on the end of the second driving rod that is located out of the chamber, the joint gear of the elevating mechanism being detachably connected to the power source of the food vending machine.

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9. The cooking device configured to be equipped in a food vending machine as claimed in claim 7 characterized in that the cooking device further comprises:

a sensor for detecting a location of the food materials and comprising:

10 a tilting component, one end of the tilting component tiltably mounted adjacent to the exit, and the tilting component capable of tilting along the lengthwise direction of the chamber when abutted by the food materials;

wherein the elevating board comprises:

a cavity, the tilting component accommodated in the cavity,
15 wherein when the tilting component is abutted by the food materials and thus tilts, the exit cover is opened and the elevating board elevates the food materials.

10. The cooking device configured to be equipped in a food vending
20 machine as claimed in any one of claims 1 to 3 characterized in that the cooking device further comprises:

a sensor for detecting a location of the food materials, the sensor mounted in the preparing space and adjacent to the exit and configured to detect the location of the food materials and selectively activate the exit cover
25 to open.

11. The cooking device configured to be equipped in a food vending machine as claimed in claim 10 characterized in that the sensor comprises:

5 a tilting component; one end of the tilting component tiltably mounted adjacent to the exit, and the tilting component capable of tilting along the lengthwise direction of the chamber when abutted by the food materials; the tilting component comprising:

a block located at another end of the tilting component opposite the exit.

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12. The cooking device configured to be equipped in a food vending machine as claimed in any one of claims 1 to 3, wherein the exit cover is pivotably mounted on the chamber and comprises:

15 a joint gear, the joint gear of the entrance cover detachably connected to the power source of the food vending machine.