A hot sandwich dispenser

This dispenser comprises a metal cabinet (1) innerly forming a refrigerated chamber (2) with two vertical carousels (3, 4) on whose platforms (5, 6) sandwiches (bo, bi) are stored, upon each activation of the dispenser one of these sandwiches being pushed into an electric grill (11) wherein it is then warmed up before thereupon being finally pushed onto a receiver tray (15) being accessible from the outside, the dispenser being in a position to offer sandwiches (bo, bi) with different ingredients and of different sizes and/or types, the cabinet (1) for such a purpose comprising for each of its carousels (3, 4) a respective sensing device (21) that upon the starting of said carousels causes these latter to stop at a predetermined position to thereupon and once the user has acted on the dispenser cause the pertinent one to be again started in one or another direction depending on the selected sandwich (bo or bi), till in a given section of the carousel detecting a sandwich (bo or bi) on one of the platforms (5 or 6), and to thereupon cause the carousel (3 or 4) to be stopped again so as to thus have said sandwich shifted over up to the grill (11).
Description

OBJECT OF THE INVENTION

[0001] As stated in its enunciation, the present invention relates to a hot sandwich dispenser.

FIELD OF THE INVENTION

[0002] This dispenser is of the type that by means of the introduction of some coins proceeds to dispense hot sandwiches, said dispenser for such a purpose consisting of a metal cabinet whose inside forms a refrigerated chamber wherein two vertical, longitudinal carousels are installed whose platforms are each fit to store a respective sandwich being properly wrapped up, said sandwiches being pushed up to an electric grill through an opening of a door closing said refrigerated chamber and supporting the aforementioned grill wherefrom once having been warmed up or toasted the corresponding sandwich is dispensed to the user having activated the dispenser, said dispensation taking place through an opening being provided in another door being superimposed on the former one.

BACKGROUND OF THE INVENTION

[0003] The known dispensers of the aforementioned type are prepared to dispense in each one of them only one type of sandwiches with the same ingredients, and hence they don’t give any other options to a frequent user and thus have little attraction for this latter, this being due not only to the fact that the sandwich being delivered by the dispenser might not be to the user’s liking, but also to the fact that even if it were he or she could grow tired of it because of its being always the same.

SUMMARY OF THE INVENTION

[0004] This drawback or problem and others possibly deriving from it are now being obviated with the dispenser being the object of the invention, this latter being in a position to offer not only sandwiches with different ingredients but also of different size and/or type, the cabinet of the present dispenser for such a purpose comprising for each of its two carousels a respective sensing device that upon the activation of the programmable electronic box governing the dispenser and the starting of the aforementioned carousels causes these latter to stop at a predetermined position to thereupon and once the user has acted on the dispenser cause the pertinent one to be again started in one or another direction depending on the selected sandwich since one and the same carousel can comprise one section of its platforms with one type of sandwich and the other section with another type, till in the corresponding section detecting a sandwich on one of the platforms, and to thereupon cause the carousel to be stopped again so as to thus have said sandwich shifted over up to the grill and thus submitted to the pertinent processing steps before being finally dispensed.

[0005] The sensing device is made up of a first sensor for stopping the carousel at the predetermined position, a second sensor being adapted to count as from that position the platforms of said carousel corresponding to the selected section so as to make sure that this latter will not be surpassed, and a third sensor being fit to sense in said section the sandwich on a platform.

[0006] In the case of the first sensor the pertinent platform of the carousel comprises the fixed attachment of an element being fit to be sensed by said sensor, such as a magnet, for example, in order to thus cause the electronic box to carry out the corresponding action and to thus have the carousel stopped at the predetermined position.

[0007] The second sensor is on its side fit to count the platforms of one or the other section through respective tabs being provided on them and sensed by said sensor, their number corresponding to each section being programmed in the electronic box.

[0008] Once having selected the sandwich by means of the pushbuttons being provided for such a purpose on the dispenser the carousels are operated as per a mutually independent operation, in such a way that not only one section of the platforms of one of them can comprise sandwiches being different from those of the other section, but also the sandwiches of one carousel can be different from those of the other one, one of the carousels as well possibly having a smaller number of platforms of bigger dimensions, so that the size of its sandwiches will also be bigger than that of those of the other carousel.

[0009] These and other characterising features will be best made apparent by the following detailed description whose understanding will be made easier by the accompanying sheet of drawings showing a practical embodiment being cited only by way of example not limiting the scope of the present invention.

DESCRIPTION OF THE DRAWINGS

[0010] In the drawings:

Fig. 1 is a diagrammed front elevation of the upper and inner part of the dispenser;
Fig. 2 also diagrammatically shows a plan-view of said upper and inner part of the dispenser; and
Fig. 3 also diagrammatically illustrates a front elevation of said dispenser.

DETAILED DESCRIPTION

[0011] According to the drawings the hot sandwich dispenser being illustrated in them consists of a metal cabinet (1) innerly forming the refrigerated chamber (2) wherein two longitudinal carousels (3, 4) are installed in a transversal and vertical arrangement and have a turning motion around respective pairs of end rolls (3’, 4’).
being driven by respective motors (not shown).

Each of the carousels (3, 4) has a respective series of platforms (5, 6), in one section of each carousel sandwiches being arranged which are different from those of the other section, the dispenser hence comprising four different types of sandwiches, all of them being conveniently wrapped up, the sandwiches of carousel (3) being of a bigger size, the platforms (5) of this latter being for such a purpose of larger dimensions and in a smaller number as compared with those of carousel (4).

The sandwiches (bo or bi) being comprised on the platforms (5) are thus formed by small French loaves with sausages and/or other foodstuffs whereas the sandwiches (bi) of platforms (6) are formed by ham and cheese sandwiches and the like.

In both series of platforms (5, 6) these latter have a tubular make-up being fit to envelop the sandwiches and thus prevent them from falling off irrespective of the positioning of said platforms, said make-up being not quite closed in order to thus allow the passage through their inside of the shovels (7a, 8a) of two pusher devices (7, 8) being conveniently made up and installed in the upper front part of the refrigerated chamber (2) by means of adequate supports, each of said pusher devices being longitudinally arranged in front of one of the carousels (3, 4).

Between both carousels and also in the upper part of the refrigerated chamber (2) a fixed central platform (9) is installed onto which a sandwich (bo or bi) of one of the platforms (5 or 6) of the aforementioned carousels will be shifted in order to thus allow a third pusher device (10) being installed behind said central platform to shift it up to the electric grill (11) being installed at the upper front part of a door (12) closing the chamber (2), said sandwich for such a purpose passing through an opening (13) being provided in said door and closed with an articulated flap (13).

Once having been warmed up or toasted the sandwich (bo or bi) is pushed by a lateral pusher device (14) being similar to those having been cited above and installed at the front surface of the door (12), towards a receiver tray (15) being provided and installed at the inner surface of a second door (16) finally closing the cabinet (1) and forming an adequate framework and thus allowing to arrange between itself and the door (12) the grill (11), the receiver tray (15) and in the lower part of said framework the electronic box (17), this latter being provided with the corresponding printed circuits, chips, controls, etc. and thus being in a position to control the operation of the dispenser.

The front surface of this second door (16) forms the front surface of the dispenser, this latter surface together with the large lighted portion advertising the product being dispensed having the slot (19) for the coins that will cause the dispenser to operate after having pressed one of the four sandwich selection pushbuttons (20), and of course the opening (18) through which the sandwich can be collected from the receiver tray (15).

Once having arranged the dispenser at the site being provided for its use the electronic box is activated and the carousels (3, 4) are started till being stopped at a position being predetermined by the detection of the respective magnets (25) being fixedly attached to the corresponding platforms of said carousels which is carried out by two sensors (22), one for each carousel, forming part of respective sensing devices (21) being installed in the chamber (2), the pertinent carousel being started again when the user proceeds to introduce the corresponding coins into the dispenser and to select the sandwich being to his or her liking.

The motion of the pertinent carousel (3 or 4) will start again towards that section of this latter where the selected sandwich is to be found, the platforms (5 or 6) each having a lateral tab (27), said lateral tabs when passing in front of another sensor (23) forming part of the device (21) being sensed and counted by this latter as per the number of platforms storing sandwiches like the selected one, said number being stored in the electronic box (17), the carousel being stopped when the last sensor (24) also forming part of the device (21) detects a sandwich on one of the platforms, the corresponding pusher device (7 or 8) then shifting said sandwich onto the platform (9) for it to be submitted to the pertinent processing steps having been described above before being finally dispensed.

Claims

1. A hot sandwich dispenser comprising a metal cabinet (1) whose inside forms a refrigerated chamber (2) with two vertical, longitudinal carousels (3, 4) on each of whose platforms (5, 6) a respective sandwich (bo, bi) is stored, upon each activation of the dispenser one of these sandwiches being pushed into an electric grill (11) wherein it is then warmed up before thereupon being made available for collection by being finally pushed onto a receiver tray (15) being accessible from the outside of the cabinet (1) through an opening (18) being provided in it, characterised in that the cabinet (1) for each carousel comprises a respective sensing device (21) that upon the activation of the programmable electronic box (17) governing the dispenser and the starting of the carousels (3, 4) causes these latter to stop at a predetermined position to thereupon and once the user has acted on the dispenser by selecting a sandwich (bo or bi) cause the pertinent one of said carousels to be again started in one or another direction depending on the selected sandwich, till within a given section of the carousel detecting a sandwich (bo or bi) on one of the platforms (5, 6), and to thereupon cause the carousel (3 or 4) to be stopped again so as to thus have said sandwich shifted over up to the grill (11) and thus submitted to the pertinent processing steps before being finally dispensed.
2. A hot sandwich dispenser as per claim 1, characterised in that the sensing device (21) comprises a first sensor (22) for stopping the carousel (3 or 4) at the predetermined position, a second sensor (23) being adapted to count the platforms (5 or 6) corresponding to the selected section so as to make sure that this latter will not be surpassed, and a third sensor (24) being fit to sense in said section the sandwich (bo or bi) on a platform (5 or 6).

3. A hot sandwich dispenser as per claim 2, characterised in that the pertinent platform (5 or 6) of each carousel (3 or 4) comprises the fixed attachment of an element (25) being fit to be sensed by the first sensor (22) in order to thus cause the electronic box (17) governing the dispenser to carry out the corresponding action and to thus have the carousel (3 or 4) stopped at the predetermined position.

4. A hot sandwich dispenser as per claim 2, characterised in that each of the platforms (5, 6) of each carousel has a respective tab (27), said tabs being fit to be sensed by the second sensor (23), the electronic box (17) through this latter counting the number of platforms (5, 6) corresponding to each section of the carousel and being programmed in said box.

5. A hot sandwich dispenser as per claim 1, characterised in that the carousels (3 or 4) are each operated as per a mutually independent operation when the user acts on the dispenser and thus selects the sandwich (bo or bi), in such a way that only that carousel (3 or 4) comprising said sandwich is made to operate.

6. A hot sandwich dispenser as per claim 1, characterised in that one (3) of the carousels (3, 4) has a smaller number of platforms of larger dimensions as compared with the other one (4) in order to thus be in a position to store sandwiches (bo) of a bigger size.