The invention is about a baking mold system (0) for the making of a bread-type preparation (37) comprising at least two parts, one concave, the other one convex, the convex part (2) being inserted into the concave part (1) following a longitudinal axis, a space made between the two parts determining the shape of the bread-type preparation (37). The concave and convex parts are made out of plastic material and comprise at least one air vent arranged through the convex part (2) in order to have the space made by both parts and the utilization space of the mold system communicate. The invention is also about a machine using the mold system (0) and the use of the mold system (0).
Published:

— with international search report (Art. 21(3))

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))
Plastic cooking mold system and fabrication device for a bread-type preparation using the mold system

This hereby invention belongs to the field of bakery trade, especially the molds and bread-type preparations baked with these molds.

It is known from prior art molds to make bread-type preparations made of metal materials such as steel or aluminum, or made of ceramic.

Now, these types of molds have many drawbacks. These molds require the use of an anti-adhesive coating on all surfaces directly on contact with the bread-type preparation, in order for the dough not to stick on these surfaces and so that the bread-type preparation can easily be removed from the mold. So, the molds have to undertake a costly coating treatment, and the consequences of said treatment for one's health are not quite known.

After a certain amount of use, the treatment-created coating on the surfaces deteriorates or disintegrates itself. Thus, the treatment must be realized often. Furthermore, deterioration or disintegration of the coating produces a products mix that could be toxic, coming from the coating mixed with the bread-type preparation during the baking. Besides, these surface treatments oblige one to own at least two sets of identical molds, in order not to lose production rate speed; which can in turn induces mold stocking issues.

Furthermore, materials for the anti-adhesive coating are costly and do not make the mold fabrication easy.

This hereby invention as for a goal to respond to these drawbacks by presenting a light mold, easy to use and quickly made, that does not need the use of many sets of identical molds because it does not need any specific treatment.

That goal is reached by a baking mold system for the making of a bread-type preparation, said mold system being comprising at least two parts, one being concave and the other convex, the convex part being meant
to be inserted into the concave part following a longitudinal axis, a space made between both parts determining the thickness of the bread-type preparation,

said mold being characterized in that the concave and convex parts are made of non-toxic plastic withstanding a temperature of 250 °C,

and in that at least one air vent is arranged throughout the convex part in order to let the space arranged between the two parts and the space external to the mold system to communicate and let the gases produced by the dough rise and/or the baking to evacuate.

According to another characteristic, the convex part is centered inside the concave part by the use of a shoulder peripheral to the convex part forming the edge of the open side of the bread-type preparation.

According another characteristic, the air vent or air vents each forms of a groove on the side of the first shoulder, each groove following an axis parallel to the longitudinal axis of the system.

According to another characteristic, the two parts of the mold system respectively have an elliptic section, each with a major axis oriented in a first determined direction and a minor axis below the major axis oriented in a second determined orientation, both parts further having a termination comprising a rounding following the longitudinal plane that includes the first direction.

According to another characteristic, the convex part is hollow in order to allow for a better heat conduction.

According to another characteristic, the concave part comprises at least one element of support located near its termination, allowing a vertical position of the longitudinal axis of the mold system with the concavity of the concave part directed upward when the concave part is positioned on its
element of support on a horizontal surface, the element of support further having protrusions and recesses of complementary dovetail shapes, arranged in such a manner that the element of support can be made jointly liable with at least another element of support.

According to another characteristic, the concave part of the mold system further comprises a first element of an assembling device able to assemble with a second assembling element of the assembling device of the convex part of the mold system allowing for the making jointly liable of the convex part inserted inside the concave part.

According to another characteristic, the assembling device comprises guiding elements in order to guide the insertion of the convex part into the concave part, the first element of the assembling device comprising at least one protrusion meant to be inserted in at least one recess made in the second element of the assembling device and/or at least one recess receiving the insertion of at least one protrusion made on the second element of the assembling device.

According to another characteristic, the mold system comprises an alignment device, a first element of the alignment device assembling at least two concave parts side-to-side, a second element of the alignment device assembling the same number of convex parts side-to-side in such a manner that each convex part can be inserted in each corresponding concave part simultaneously, following their respective longitudinal axis.

According to another characteristic, the alignment device comprises guiding elements guiding the insertion of the convex parts into the concave parts, the guiding device comprising protrusions fixed to the second element of the alignment device, arranged to be inserted in recesses made in the first element of the alignment device.
Another goal is reached by the means of a machine using the mold system for the baking of bread-type preparation according to the invention, characterized in that it comprises at least:

- one station conveying a plurality of concave parts of molds;
- one station conveying a plurality of convex parts of molds;
- one rising chamber;
- one baking chamber;

the station conveying a plurality of concave parts bringing each concave part into the rising chamber after the insertion of a determined amount of a bread-type preparation dough into a plurality of concave parts and the station conveying a plurality of convex parts leading each convex part in insertion into each concave part brought by the station conveying a plurality of concave parts, the baking chamber being located after the insertion of each convex part into each concave part.

According to another characteristic, the baking chamber is held to a temperature ranging between 200 °C and 250 °C, the internal surface of the convex part being held to a temperature lower than on the external surface of the concave part.

According to another characteristic, the machine further comprises a bread-type preparation conveyor located after the baking chamber.

According to another characteristic, the machine further comprises a bread-type preparation freezing and conditioning device after the bread-type preparation conveyor.

Another goal is reached by the means of a use of the mold system, according to the invention, comprising at least two parts, one concave and the other one convex, the convex part meant to be inserted into the concave
part, for the baking of a bread-type preparation characterized in that the use comprises the following steps:

- introduction of dough into the concave part;
- insertion of the convex part into the concave part;
- passing into a rising chamber;
- passing into a baking chamber;
- removal of the bread-type preparation from the mold;
- filling of the bread-type preparation with a cooked recipe;
- closing of the bread-type preparation by the use of an edible lid.

Other particularities and advantages of the hereby invention will appear more clearly through the reading of the following description, made by referencing the attached drawings, in which:

- Figure 1a represents a below view of the concave part of the mold system according to a configuration;
- Figure 1b represents a side view of the concave part of the mold system according to a configuration;
- Figure 1c represents a profile view of the concave part of the mold system according to a configuration;
- Figure 1d represents a perspective view of the concave part of the mold system according to a configuration;
- Figure 2a represents a below view of the convex part of the mold system according to a configuration;
- Figure 2b represents a side view of the convex part of the mold system according to a configuration;
- Figure 2c represents a profile view of the convex part of the mold system according to a configuration;
- Figure 2d represents a perspective view of the convex part of the mold system according to a configuration;
- Figure 3a represents a perspective view of the mold system according to a configuration;
- figure 3b represents an exploded view in perspective of the mold system according to a configuration;
- figure 4 represents in a diagram the machine using the mold system according to the invention;
- figure 5a represents a perspective view of the plate closing the convex part;
- figure 5b represents a perspective view of the system according to a closed configuration closed with the plate closing the convex part.

In reference to figures 1a, 1b, 1c, 1d, 2a, 2b, 2c, 2d, 3a, 3b, 4, 5a, and 5b, the mold system (0) according to the invention is made up of a concave part (1) having a U section according to a longitudinal axis and in which a convex part (2) is inserted according to an axis coaxial to the longitudinal axis of the mold system. Each mold part is of elliptic transverse section. Other forms of transverse sections can also be considered, such as, for instance, a circular, triangular or rectangular section.

The lateral walls of the concave part (1) and the convex part (2) are slightly inclined towards the outer side relative to the vertical to form a widened form or a draft in such a manner that one can remove the bread-type preparation (37) from the mold. In a non-restricting way, the lateral walls of both parts are inclined with an angle of at least 2,35° relative to the longitudinal axis of the mold system (0).

The concave part (1) and the convex part (2) both are symmetrical relative to the longitudinal axis of the mold system (0).

In order to give the bread-type preparation (37) its shape, the internal shape of the concave part (2), according to the plane going through the major axis of the elliptic section, terminates in a rounded shape, and according to the plane going through the minor axis of the elliptic section, terminates in a
streamlined tip. The same applies to the convex part (2) which is to be inserted in the concave part (1). It has an external shape, which relative to the plane going through the major axis of the elliptic section, terminates in a rounded shape and relative to the plane going through the little axis of the elliptic section, terminates in a streamlined tip.

Other termination shapes can be considered, such as, for instance, a flattened termination. When the mold is in a configuration where the termination is flattened, the bread-type preparation (37) could then have a flattened termination allowing for a vertical position of the bread-type preparation, the opening of which being directed upward. In this configuration, the ingredients or cooked recipes, which can prove more or less liquid, introduced inside the bread-type preparation (37) remain inside the preparation (37). Further, the vertical position allow for a good grip of the bread-type preparation (37) when put down.

According to a first configuration represented on figures 2a, 2b, 2c and 2d, the convex part (2) comprises a structure provided with a first shoulder (2030) peripheral to the convex part (2) and forming the edge of the open side of the bread-type preparation (37) and allowing for the centering of the concave part (1) into the convex part (2). The first shoulder (2030) is formed between a first part (204) peripheral to the convex part (2) meant to rest on the edge (103) of the opening of the concave part (1) and a second part (205) having a transverse section noticeably equal to the transverse section of the space formed by the inner walls of the concave part (1) meant to form the edge side of the bread-type preparation. The first part (204) has, for instance, a transverse section noticeably equal to the total transverse section of the concave part (1). The edge (103) of the opening of the concave part (1) is, for instance, flat, relative to a plane perpendicular to the longitudinal axis of the concave part (1), in such a manner that in a stable position, the convex part (2) inserted in the concave part (1) can be put down. A second peripheral shoulder (2031) is formed between the second part (205) and a
third part (206) having a transverse section below the transverse section of the second part (205). The difference between the two transverse sections of the second (205) and third (206) parts makes a space when the first part (204) is laying on the edge (103) of the opening of the concave part (1). The spaced made between the concave part (1) and the convex part (2) defines the thickness of the bread-type preparation (37). This space is closed by the first shoulder (2030).

According to a second configuration which is not represented, the convex part (2) comprises a structure provided with a peripheral shoulder to the convex part (2). This shoulder is formed between a first part peripheral to the convex part (2) meant to rest on the edge of the opening of the concave part (1) and a second part provided with a transverse section below the transverse section of the inside of the concave part (1). The difference between the two transverse sections of the first and second part makes a space when the first peripheral part rests on the edge of the opening of the concave part (1). The space made between the concave part (1) and the convex part (2) defines the thickness of the bread-type preparation (37). This space is closed by the first part (204) peripheral to the convex part (2) meant to rest on the edge (103) of the opening of the concave part (1).

The concave and convex parts (1, 2) are made out of a non-toxic plastic material able to withstand temperatures of at least 250°C or above. For instance, the material is a liquid crystals polymer withstanding temperatures below 280°C such as the "Vectra E440i" from "Ticona". This material allows to avoid using a coating on the internal surface which would allow for the easy removal of the bread-type preparation (37) from the mold after baking. Moreover, that kind of material cools off quicker after use which allows for a quicker and easier handling after use of the mold. Besides, the plastic material allows for a wide freedom regarding the shape of the molds. Each and any mold shape allowing for easy baking and removing from the mold of a bread-type preparation can then be considered. The shape
described for the mold is given as an example, and is not in any restrictive way.

For the gases produced during the rising and/or the baking of the bread-type preparation (307) dough to evacuate, at least one air vent (201) is arranged through the convex part (2) to allow the space made by both the concave and the convex part (1, 2) and the space outside the mold system to communicate. According to the first configuration, the air vent(s) (201) go through the first shoulder (2030). According to the second configuration, the air vent(s) (201) go through the first part peripheral to the convex part (2) meant to lie on the edge of the opening of the concave part (1).

As represented on figures 2a and 2d, the air vent(s) (201) form a hole through the first peripheral part (204). The air vent(s) (201) continue parallel to the longitudinal axis to the system with the shape of a groove (2006) at the edge of the first shoulder (2030). So, each groove has an axis parallel to the longitudinal axis of the system. This configuration of the air vent(s) (201) allows for an easy freeing of the air vent(s) (201) during the removal of the bread-type preparation from the mold after the baking of said preparation. Indeed, during the baking, the dough grows its volume in the space made between the concave and the convex parts (1, 2) of the system and can go into the air vent(s). After the baking, an air vent in the shape of a groove (2006) near the edge of the shoulder (2030) makes the discharge of the dough gone into the air vent easier, without the need to use any tool.

The convex part (2) is hollow to allow for a better heat conduction and so that the heat can circulate inside and that the baking of the bread-type preparation can be realized in the intended way. In a variant, the temperature on the inside of the convex part (2) is slightly lesser to that on the outside of the concave part (1) in order for the bread-type preparation (37) to form a crust on the outside and not on the inside. In a variant, the difference in temperatures between the inside of the convex part (2) and the outside of the
concave part (1) is included in a non-restrictive way in a range going from 80 °C to 110°C, in such a manner that the bread-type preparation (37) is to be crispy on the outer surface that was in contact with the concave part (1) and soft in the inside surface that was in contact with the convex part (2).

The convex part (2) forms a cavity (2005). In order to obtain a difference in temperature between the cavity of the convex part (2) and the outside of the concave part (1), the cavity (2005) of the convex part (2) communicates with the outside space of the system (0) through a hole (2000). The dimensions of said hole (2000) regulate the amount of heat penetrating inside the cavity (2005) of the convex part (2). The bigger the hole (2000), the higher the rise in temperature inside the convex part (2), nearing the external temperature of the concave part (1). According to a configuration, the hole (2000) is pierced through a plate (2005) closing the convex part (2) as explained further down in the description.

In a non-restrictive configuration, the length of the major axis and the length of the minor axis of the convex part (2) in its widest part are respectively equal to 9 cm and 4.5 cm. The length of the major axis and the length of the little axis of the concave part (1) are respectively equal to 9.7 cm and 5.2 cm.

In a non-restrictive way, the thickness of the walls of the concave and convex parts (1, 2) is about a few millimeters. For instance, the thickness is included within a range going from 2 mm and up to 3 mm, preferably 3 mm. The thickness is chosen in such a way that each concave and convex part (1, 2) can withstand the stresses of the baking of the bread-type preparation (37), such as the rise of the dough before baking and the baking of the dough, and to allow for a good conduction of heat on the two surfaces of the concave and convex parts (1, 2).
The concave part (1) has at least one element of support (101) located at the level of its termination allowing for a vertical position of the longitudinal axis of the mold system (0) with the concavity of the concave part (1) directed upward when the concave part (1) is putted on its element of support (101) on a horizontal surface. The element of support (101) further has protrusions (1011) and recesses (1012) of complementary shapes, for instance, shaped like dovetails arranged in such a way that the element of support (101) can be made jointly liable to at least one other element of support (101). The element of support (101) is, for instance, made out of the same material as the concave part (1).

The concave part (1) of the mold system (0) further has a first element (2021) to an assembling device able to assemble with a second assembling element (2022) of the assembling device from the convex part (2) of the mold system (0) allowing for making the convex part (2) inserted into the concave part (1) jointly liable. The assembling device is, for instance, made out of the same material as the concave and convex parts (1, 2).

According to a configuration which is not represented, the assembling device has guiding elements (not represented) guiding the insertion of the convex part (2) into the concave part (1). The first element (2021) of the assembling device can comprise at least one protrusion meant to be inserted in at least one recess made in the second element (2022) of the assembling device and/or at least one recess receiving the insertion of at least one protrusion made on the second element (2022) of the assembling device.

In a non-represented configuration, the first element to the assembling device has a slide system allowing the insertion of a plate (2001). When a convex part (2) is inserted in a concave part (1), a plate (2001) is slipped into the slide system, thus making the two parts of the mold system (0) jointly liable. If many concave and convex parts (1, 2) are aligned, the plate (2001) can slip into the slide system of each first element on each convex part (2).
In another configuration, the first element (2021) and the second element (2022) of the assembling device each have holes (2023) opposite each other when a convex part (2) is inserted into a concave part (1). These holes (2023) allow for the use of, for instance, a screw and nut system to make both parts (1, 2) of the mold system (0) jointly liable.

The mold system (0) further comprises an alignment device. A first element (1001) of the alignment device assembles at least two concave parts (1) next to one another. A second element (2001) of the alignment device assembles the same number of convex parts (2) next to one another in such a way that each convex part (2) can be inserted in each matching concave part (1) simultaneously following their respective longitudinal axis.

The first element (1001) of the alignment device is, for instance, a plate on which is fastened at least one concave part (1) through the first element (102) of the assembling device by the means of, for instance, a screw and nut system or a clipping. The first element (102) of the assembling device has at least one recess shaped substantially and identically to the transverse section of the space formed by the inner walls of the concave part (1) meant to form the edge side of the bread-type preparation (37) in such a way that the convex part (2) can be inserted into the concave part (1).

The second element (2001) of the alignment device is, for instance, a plate (2001) comprising recesses (2000) allowing the heat to circulate in the convex parts (2). The recesses (2000) have a surface matching values ranging from 1/3 and 2/3, preferably 1/2, of the surface of the transverse section of the convex part (2). The second element (2001) of the alignment device may dispose of a grabbing device (2002) in order to remove the convex parts (2) from the concave parts (1).
The second element (2001) of the alignment device allow the closing of the cavity of the convex part (2). The recesses (2000) then form the holes, the dimensions of which allow the controlling of the amount of heat penetrating the cavity (2005) of the convex part (2) and thus controlling of the temperature difference between the cavity of the convex part (2) and the outside of the concave part (1).

The alignment device comprises guiding elements guiding the insertion of the convex parts (2) into the concave parts (1). The guiding device comprising protrusions (2003) fixed on the second element (2001) of the alignment device arranged to be inserted into recesses (2004) made in the first element (1001) of the alignment device.

The alignment device is made of, for instance, metal, such as steel.

Another goal is reached by the means of a machine (3) using the mold system (0) for the bread-type preparation (37) according to the invention.

In reference to figure 4, the machine comprises at least one station (31) conveying a plurality of concave mold parts (1), one station (32) conveying a plurality of convex mold parts (2), one rising chamber (33), one baking chamber (34).

On figure 4, one can see represented a plurality of individual mold systems (0). It is understood that each mold system (0) comprises one or many concave parts (1) and one or many convex parts (2).

The station (32) conveying a plurality of convex parts (1) inserts each convex part (2) into each concave part (1) conveyed by the station (31) conveying a plurality of concave parts (1). The station (31) conveying a plurality of concave parts (1) brings each concave part (1) into the rising chamber (33) after the insertion of a determined amount of bread-type
preparation dough (38) into a plurality of concave parts (1) and the insertion of each convex part (2) into each concave part (1). The baking chamber (34) is located after the insertion of each convex part (2) into each concave part (1).

The machine (3) further comprises a bread-type preparation (37) conveyor (35) located after the baking chamber (34).

The machine (3) further comprises a bread-type preparation (37) freezing and conditioning device (36) after the bread-type preparation (37) conveyor (35).

The baking chamber (34) is heated to a temperature ranged between 200 °C and 250 °C. The internal side of the convex part (2) is heated to a lesser temperature than that of the external surface of the concave part (1). This choice in temperatures allows for the baking of a bread-type preparation (37) which external side is a crust and internal side is soft.

In a non-restrictive way, the bread-type preparation (37) is baked from a dough constituted of flour, milk, water, yeast, salt, butter, and possibly carob. The bread-type preparation (37) is preferably a hollow bread.

An other goal is reached by the means of a use of the mold system (0) for the baking of bread-type preparation (37) according to the invention.

In order to obtain 14.5 kg of dough, it is composed, in a non-restrictive way, of:
- 8 kg flour,
- 2 L milk,
- 2 L water,
- 30 g yeast,
- 160 g salt,
- 1200 g butter for a half-brioched bread-type preparation (37),
- possibly, 60 g carob.

The dough is then kneaded for about 15 minutes while being maintained at a temperature of, for instance, 23 °C to 25 °C.

The dough is then divided in dough rolls (38) weighing, for instance, 120 g to 130 g in order to be introduced into the concave parts (1) of the mold system (0) which is maintained at a temperature of about 25 °C. The amount of dough roll inserted into a mold system (0) is determined according to the space made by the concave and convex parts (1, 2) and to rising and baking conditions of the dough. For instance, the amount of dough is also determined so that the bread-type preparation (37) fills up all of the space made by both the concave and convex parts (1, 2).

The convex parts (2) are then inserted into the concave parts (1). The mold system (0) then goes into the rising chamber kept at a temperature of about 25 °C to 35 °C, possibly rising up to 50 °C.

In a non-restrictive way, a container holding a test dough roll is put with the mold system (0) in order to check on the rise of the dough roll in the mold system.

After 30 to 60 minutes, the mold system (0) exits the rising chamber to go through the baking chamber at a temperature of, for instance, 220 °C for 14 to 17 minutes.

The mold system (0) is then put out of the baking chamber. The convex parts (2) are put out of the concave parts (1) in order to put the bread-type preparations (37) out of the molds.
In a non-restrictive way, the bread-type preparation thus produced are brought to a freezer or deep-freezer to then be conditioned, for instance, into plastic bags holding 50 bread-type preparations each and then each bag into a carton. A sheet describing the implementation of the bread-type preparation (37) and its composition can be stuck on the plastic bags.

The cartons can then be put on a pallet holding, for instance, 56 cartons.

In a non-restrictive way, the finished bread-type preparation (37) is a hollow half-brioched bread, height of 180 mm, width of 90 mm, thickness 45 mm and weight of 110 g that can be preserved 3 months as frozen food.

The hollow bread cavity can be filled with a cooked recipe (for instance, hamburger or kebab) of a weight of about 100 g to 160 g elaborated by a product retailer or food industry professionals.

The cooked recipe can, for instance, come in various ways: as fresh or deep-frozen vacuum-packed packages, as deep-frozen blocks, as fresh or deep-frozen vacuum-packed 1 kg bags.

The system allows for a control over the baking of the bread-type preparation in such a way that the recipe used can be half-liquid without the bread-type preparation being weakened by the cooked recipe dampness.

The confection of the bread-type preparation (37) with a cooked recipe can be realized as such:

The deep-frozen bread-type preparations are put out of the freezer to be unfrozen for, for instance, about 45 minutes. The cooked recipes are also put out of a freezer or refrigerator.
The cooked recipes are then introduced into the cavity of each bread-type preparation (37). Each bread-type preparation (37) with its cooked recipe is then bagged into, for instance, a food plastic wrap, and then put into a refrigerator.

Depending on the consumer's choice, the bread-type preparation (37) with its cooked recipe can be served either hot or cold.

When served hot, the retailer grabs the bread-type preparation (37) with its cooked recipe from the fridge, puts it into a micro-wave oven with its wrapping for 40 to 60 seconds. The wrapping is then removed. The bread-type preparation (37) with its cooked recipe can then be served to the consumer, possibly after having been toasted for 140 seconds.

When served cold, the retailer grabs the bread-type preparation (37) with its cooked recipe from the fridge and serves it to the consumer, possibly after toasting it for 140 seconds.

An edible lid can then close the bread-type preparation (37). The lid is made of, for instance, unleavened or white soft bread. In a non-restrictive way, the bread is cut out with the use of a pastry cutter shaped like the opening of the bread-type preparation (37).

The amount of cooked recipes introduced into the bread-type preparation is bigger than the amount of bread-type preparation; which makes it more interesting, in a nutritional kind of way, than a traditional sandwich which has an amount of bread-type preparation bigger than the amount of ingredients put within the bread-type preparation.
It should be obvious to those versed in the arts that the hereby invention allows for realization ways under much more specific ways without going away from the invention's application field such as it is claimed. Therefore, the presented realization ways must be considered as examples, but can be modified within the boundaries defined by the range of the attached claims, and the invention must not by limited to the details given herein-before.
CLAIMS

1 Baking mold system (0) for the making of a bread-type preparation (37),
said mold system (0) comprising at least two parts, one being concave (1),
the other one convex (2), the convex part (2) being meant to be inserted into
the concave part (1) following a longitudinal axis, a space made between
both parts determining the thickness of the bread-type preparation,
said mold being characterized in that the concave and convex parts are
made of a non-toxic plastic material withstanding a temperature of 250 °C,
and in that at least one air vent is arranged throughout the convex part (2) in
order to make the space made by the two parts and the space external to the
mold system (0) to communicate and let the gases produced during the rising
and/or baking to evacuate,

the convex part (2) shaping a cavity (2005), communicating with the outside
of the system (0) through a hole (2000), the dimensions of which regulate the
amount of heat penetrating in the convex part (2) cavity (2005).

2 System according to claim 1, characterized in that the convex part (2) is
centered inside the concave part (1) by a first shoulder (2030) peripheral to
the convex part (2) forming the edge of the opened side of the bread-type
preparation (37).

3 System according to claims 1 and 2, characterized in that the air vent(s)
(201) each form(s) a groove on the edge of the first shoulder (2030), each
groove having an axis parallel to the longitudinal axis of the system.

4 System according to claim 1, characterized in that the two parts of the
mold system (0) respectively have an elliptic section, each with a major axis
oriented in a first determined direction and a minor axis below the big axis
oriented in a second determined orientation, both parts further comprising a
termination comprising a rounding following the longitudinal plane that includes the first direction.

5 System following claims 1 to 4, characterized in that the concave part (1) disposes of at least one element of support (101) located near its termination allowing for an vertical position of the longitudinal axis of the mold system (0) with the concavity of the concave part (1) directed upward when the concave part (1) is positioned on its element of support (101) on a horizontal surface, the element of support (101) further having protrusions and recesses (1011, 1012) of complementary dovetail shapes, arranged in such a manner that the element of support (101) can be made jointly liable with at least another element of support (101).

6 System according to claims 1 to 5, characterized in that the concave part (1) of the mold system (0) further comprises of a first element (102) of an assembling device able to assemble with a second assembling element (202) of the assembling device of the convex part (2) of the mold system (0) allowing for the making jointly liable of the convex part (2) inserted into the concave part (1).

7 System according to claim 6, characterized in that the assembling device comprises guiding elements guiding the insertion of the convex part (2) into the concave part (1), the first element (102) to the assembling device comprising at least one protrusion meant to be inserted into at least one recess made in the second element (202) of the assembling device and/or at least one recess receiving the insertion of at least one protrusion made on the second element (202) of the assembling device.

8 System according to claims 1 to 7, characterized in that the mold system (0) further comprises an alignment device, a first element (1001) of the
alignment device assembling at least two concave parts (1) side-to-side, a second element of the alignment device assembling the same number of convex parts (2) side-to-side in such manner that each convex part (2) can be inserted into each corresponding concave part (1) simultaneously following their respective longitudinal axis.

9 System according to claim 8, characterized in that the alignment device comprises guiding elements guiding the insertion of the convex parts (2) into the concave parts (1), the guiding elements comprising protrusions (2003) fixed to the second element (2001) of the alignment device arranged to be inserted into recesses (2004) made in the first element (1001) of the alignment device.

10 Machine using the mold system (0) for the baking of bread-type preparation (37) according to claims 1 to 9, characterized in that it comprises at least:
- one station (31) conveying a plurality of concave parts (1) of molds;
- one station (32) conveying a plurality of convex parts (2) of molds;
- one rising chamber (33);
- one baking chamber (34);
the station (31) conveying a plurality of concave parts (1) bringing each concave part (1) into the rising chamber (33) after the insertion of a determined amount of bread-type preparation dough (38) into a plurality of concave parts (1) and the station (32) conveying a plurality of convex parts (2) inserting each convex part (2) into each concave part (1) brought by the station (31) conveying a plurality of concave parts (1), the baking chamber (34) being located after the insertion of each convex part (2) into each concave part (1).
11 Machine according to claim 10, characterized in that the baking chamber (34) is held to a temperature ranging between 200 °C and 250 °C, the internal surface of the convex part (2) being held to a temperature lower than on, the external surface of the concave part (1).

12 Machine according to claim 10, characterized in that the machine (3) further comprises a bread-type preparation (37) conveyor (35) located after the baking chamber (34).

13 Machine according to claim 10, characterized in that the machine (3) further comprises a bread-type preparation (37) freezing and conditioning device (36) after the bread-type preparation (37) conveyor (35).

14 Use of a mold system (0) comprising at least two parts, one concave and the other convex (1, 2), the convex part (2) meant to be inserted into the concave part (1), for the baking of a bread preparation (37) characterized in that the use comprises at least the following steps:
- introduction of dough (38) into the concave part (1);
- insertion of the convex part (2) into the concave part (1);
- passing through a rising chamber (33);
- passing through a baking chamber (34);
- removal of the bread-type preparation from the mold (37);
- filling of the bread-type preparation (37) with a cooked recipe;
- closing of the bread-type preparation (37) by the use of an edible lid.
**INTERNATIONAL SEARCH REPORT**

International application No
PCT/EP2011/054869

A. CLASSIFICATION OF SUBJECT MATTER

INV. A21B3/13 A21B5/02

ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A21B A47J A21C F24C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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* Special categories of cited documents:

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Date of the actual completion of the international search
9 September 2011

Date of mailing of the international search report
20/09/2011

Name and mailing address of the ISA/Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016

Adant, Vincent

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