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(71) Applicant: **SOLEN CIKOLATA GIDA SANAYI VE TICARET ANONIM SIRKETI** [TR/TR]; Ortakoy Mahallesi Harbiye Caddesi No:33, Silivri/Istanbul (TR).

(72) Inventor: **COBAN, Erdogan**; Balance Tower Mahmutbey Mahallesi Taşocağı Yolu caddesi No:19/7 Kat: 2-5 Bağcılar/İstanbul (TR).

(74) Agent: **SOYLU PATENT ANONIM SIRKETI**; Eski Buyukdere Cad. Iz Giz Plaza No:9/78 D:9, Maslak, 34396 Istanbul (TR).

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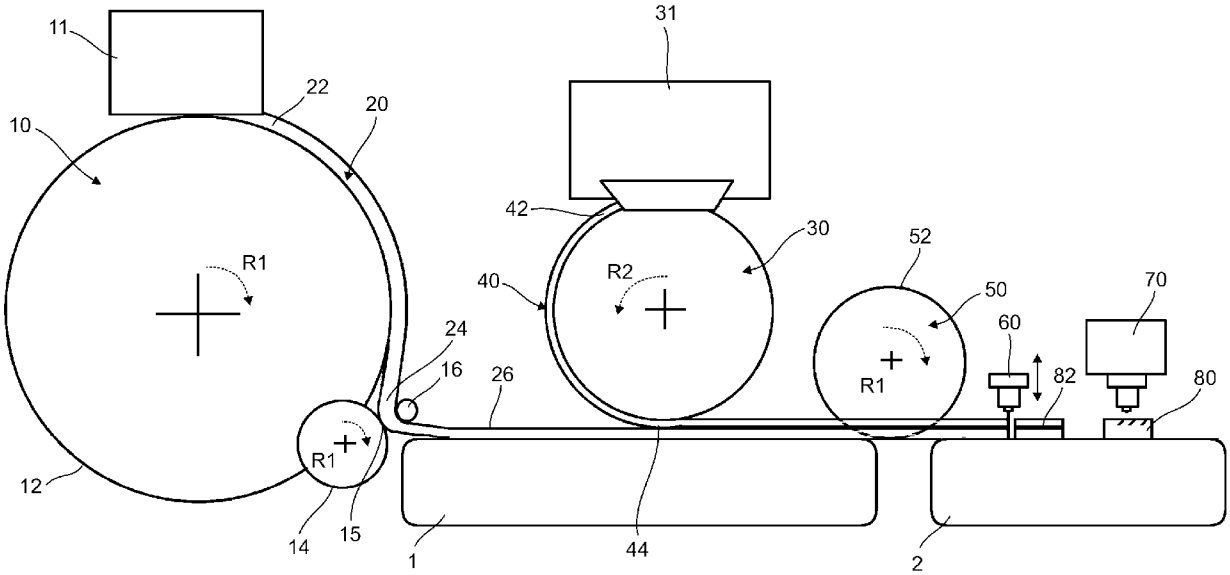

Figure 1

(57) Abstract: Invention is related to a confectionery production method by a food production assembly with a first drum (10) on which a flat edible first layer (20) is wrapped and a second drum (30) at a distance with the first drum (10) on which a flat edible second layer (40) is wrapped. The method further comprising the steps of rotating the first and second drum (10, 30) over a conveyor (1) in such a way that a multilayered intermediate product (82) is obtained by a first layer (20) is continuously provided over the conveyor (1) and a second layer (40) is continuously supplied over the first layer (10) respectively and of cutting the intermediate product (82) on the conveyor (1) in moving direction.

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MULTILAYERED CONFECTIONERY PRODUCTION

TECHNICAL FIELD

Present invention relates to multilayered confectionery production wherein the product is formed by overlapping of edible layers having different textures, and having chocolate or similar edible coverings.

PRIOR ART

Multilayered confectionery are produced as single piece by processing edible ingredients from corresponding openings of an extruder that are next to each other. Forcing high viscosity ingridients, such as caramel, coconut paste from the openings of the extruder is not possible. In order to obtain a hard candy and an fat containing paste or a fluid product to a multilayered confectionery product, a sugar syrup is heated in the heater to form a sweet mass and boiled to obtain a low moisture content viscous ingredient. Typically moisture ratio is around 4-5 percent. The boiled sweet mass, by taking from the cooker, is processed in the ventilation auger. Sweet mass is covered with an fat containing paste strip after it is passed from tempering band. The final product is obtained by cutting the layers placed on top of one another properly in size of a snack product.

WO2011148166 publication explains production method for such a confectionery. According to the document, a first of the components introduced to a support, in molten or substantially-molten form, the second component applied, in non-solid form, to an exposed and non-solidified surface of the first, and allowing or effecting cooling of the first and second components such that they bond to each other as discrete confectionery layers.

BRIEF DESCRIPTION OF THE INVENTION

The object of the invention is to ensure fast production of the multilayered confectionery products.

In order to reach above objective, the invention relates a confectionery production method by a food production assembly with a first drum on which a flat edible first layer is wrapped and a second drum at a distance with the first drum on which a flat edible second layer is wrapped. A preferred application of the invention comprising the steps of rotating the first and second drum over a conveyor in such a way that a multilayered intermediate product is obtained by a

first layer is continuously provided over the conveyor and a second layer is continuously supplied over the first layer respectively and of cutting the intermediate product on the conveyor in moving direction. This facilitate disposing the edible layers of confectionery product, herein namely the first and second layer on top of one another. In order to supply a third layer over the second layer it is possible to add a third drum at a distance to the second drum in the conveyor moving direction so that increasing the number of overlapping layers is possible.

In a preferred application of the invention, the rotating direction of the first drum and second drum is opposite to each other. In this way, first and second layer force exert a force towards each other preventing formation of a gap between the overlapped first layer and second layer in case of, for example, a phase shift occurs from non-synchronisation of drums. Overlapping the first and second layer without having a gap therebetween is then possible. Such a feature ensure the same weight for each product wherein the first layer and the second layer is applied.

A preferred application of the invention comprises the process step of supplying the first layer over the conveyor at a syncronized speed between the first drum and the conveyor. Thus, stretching by pulling the first layer, placed over the conveyor, by the conveyor is prevented.

A preferred application of the invention comprises the process step of setting the radial speed of second drum suitable to the feed rate of first layer. The second layer fed by second drum, therefore fits over the first layer without disrupting the shape form.

In a preferred application of the invention, the rotation direction of second drum is reverse to the movement direction of conveyor. It allows providing the second layer easily over the first layer fed over the conveyor by disposing the first and second drum closer to each other.

A preferred application of the invention further comprises, wrapping the first layer from a starting section to an outer periphery of the first drum by means of a preparation unit provided above the first drum. This allows a compact design to be achieved. The preparation unit, for example, can be set as a kitchen structure. Thereby, the edible ingridients, which form the first layer in the preparation unit, can be mixed with each other and fed in a layer structure to the corresponding part of first drum continiously.

Another preferred application of the invention further comprises, a step of wrapping the second layer from a feeding section to an outer periphery of a second drum by means of a second preparation unit provided above the second drum. Similar to the first feeding unit, the edible products which form the second layer, by being prepared in the second preparation unit, are fed to the second drum.

Another preferred application of the invention further comprises the process step of manuplating the first layer fed from first drum towards the conveyor with a pusher drum

provided between the first drum and the conveyor. Pusher drum assist directing the product being provided from the first drum towards the conveyor. This prevent any internal stress on the first layer due to a direct feeding it from the first drum.

In a preferred application of the invention, the first layer comprises solid particles or grinded coconut paste. Particles of the first layer are hold together with a paste comprising sticky edible products.

In a preferred application of the invention, the second layer comprises an oil phase, in particular caramel or peanut butter harder than the first layer. The second layer more solid comparing with the first layer support the confectionery product structure and prevent any to deflection.

A preferred application of the invention comprises the process step of covering chocolate of the intermediate product. Chocolate cover increases the strength of the compact structure, formed by first layer and second layer together, against the external factors such as moisture, and increase stability of the product.

BRIEF DESCRIPTION OF THE FIGURES

Figure 1, is a schematic side view of a representative application of confectionery product production method of the invention.

DETAILED DESCRIPTION OF THE INVENTION

In the detailed description, the subject matter of the invention is explained with reference to examples without any restriction and for only to express subject matter in more detailed manner.

In Figure 1, a production assembly is schematicaly shown to operate a confectionery product production method. A first drum (10) compliant to food production standards is in cylindrical shape is placed horizantally and centrally pivoted in a rotatable manner. A second drum (20) in a similar structure with the first drum (10) is disposed horizantally and centrally pivoted in a rotatable manner parallel and at a distance to the first drum (10). A conveyor (1) having an entrance part take place between the first drum (10) and second drum (20) is is disposed under the second drum (20) while close to the first drum (10). A pusher drum (14) is located in the beneath the first drum (10) facing towards the conveyor (1). A push surface (15) of pusher drum (14) is aligned as having tangent from an outer periphery (12) of first drum (10). A guiding element (16) is supplied at a distance with pusher drum (14) in a form of a cylindric bar.

A preparation unit (11) is provided in the upper part of the first drum (10). The preparation unit (11) is in kitchen structure and comprises the necessary tools for mixing the edible raw materials. First layer (10) is fed longitudinally on the top to the outer periphery (12) of the first drum (10) as a thin flat strip obtaining as a paste consistency with finely chopped coconut particles and syrup. A first rotation direction (R1) of first drum (10) is towards the conveyor (1). Thus first layer (20) is carried from preparation unit (11) to conveyor (1) by being taken from an starting section (22) at the outer periphery (12) of first conveyor (10) and by following a shorter way than a half tour here. The first layer (20), when gets out from outer periphery (12) of first drum (10), by directing towards the below because of its weight, leans on the push surface (15) which is pusher drum (14) outer periphery placed before. Thus first layer (20) rotates towards the conveyor by being bent from a bending section (24). The rotation direction of pusher drum (14) is the same as first rotation direction (R1). The first layer (20) stays between push surface (15) and guiding element (16) and is bent as taking over the conveyor (1) while the pusher drum (14) rotates in the first rotation direction (R1). After bending, first layer (20) starts to proceed over the conveyor (1) horizontally as planar. The second drum (30) is placed in the upper part of first layer (10). A second preparation unit (31), supplied in the top part of second drum (30), is as kitchen structure and supplies preparing an edible second layer (40). The second layer (40) comprises a caramel which is stretchable but in tough structure.

The second layer (40) wrapped from a feeding section (42) to the outer periphery of the second drum (30) on opposite direction of first layer (20). The second layer (40) is placed over the second drum (30) as about being half tour. The location of second drum (30) over conveyor (1) is a gap distance in which the second layer (40) fits over the first layer (20). The second drum (30) has a reverse rotation direction (R2) different from the first rotation direction (R1). At first rotation direction (R1) and reverse rotation direction (R2) in order the first drum's (10) and second drum's (30) angular velocities are adjusted as to be synchronous to the conveyor (1) proceeding velocity. The second layer (40), by released from the second drum (30) from its below section, disposed over first layer (20) as sticking from a joining section (44). Following to the joining section (44), bilayered two strip structure, as being first layer (20) below and second layer (40) above, is obtained. Cutter discs (50), arraged over conveyor (1) parallel to each other, as rotating in first rotation direction (R1), cut along the first and second layer (20,40), in bar form slices. A knife (60), which makes cutting process in transverse direction, can move in up and down direction, over a parallel auxiliary conveyor (2) subsequent to the conveyor (1), cuts the first and second layer (20,40) sliced longitudinally as a bar structure which is a sequent intermediate product (82). After this process, hot chocolate is sprayed over the intermediate product (82) by means of a depositor (70), covering of the intermediate products (82) with chocolate and confectionery product (80) is therefore obtained.

REFERENCE NUMBERS

1 Conveyor
2 Auxiliary conveyor
10 First drum
11 Preparation unit
12 Outer periphery
14 Pusher drum
15 Pushing surface
16 Guiding element
20 First layer
22 Starting section
24 Bending section
26 Flat section
30 Second drum
31 Second preparation unit
40 Second layer
42 Feeding section
44 Joining section
50 Cutter disc
52 Cutting surface
60 Knife
70 Depositor
80 Confectionery product
82 Intermediate product
R1 First rotation direction
R2 Reverse rotation direction

CLAIMS

1- A confectionery production method by a food production assembly with a first drum (10) on which a flat edible first layer (20) is wrapped and a second drum (30) at a distance with the first drum (10) on which a flat edible second layer (40) is wrapped comprising the steps of rotating the first and second drum (10, 30) over a conveyor (1) in such a way that a multilayered intermediate product (82) is obtained by a first layer (20) is continuously provided over the conveyor (1) and a second layer (40) is continuously supplied over the first layer (10) respectively and of cutting the intermediate product (82) on the conveyor (1) in moving direction.

2- A confectionery production method according to claim 1, wherein the rotation direction of first drum (10) and second drum (30) is opposite to each other.

3- A confectionery production method according to claim 2, further comprising the step of supplying the first layer (20) over the conveyor (1) at a syncronized speed between the first drum (10) and the conveyor (1).

4- A confectionery production method according to claim 3, further comprising the step of setting the radial speed of second drum (30) suitable to the feed rate of first layer (20).

5- A confectionery production method according to claim 4, wherein the rotation direction of second drum (30) is reverse to the movement direction of conveyor (1).

6- A confectionery production method according to any one of the preceeding claims, further comprising the step of wrapping the first layer (20) from a starting section (22) to an outer periphery (12) of the first drum (10) by means of a preparation unit (11) provided above the first drum (10).

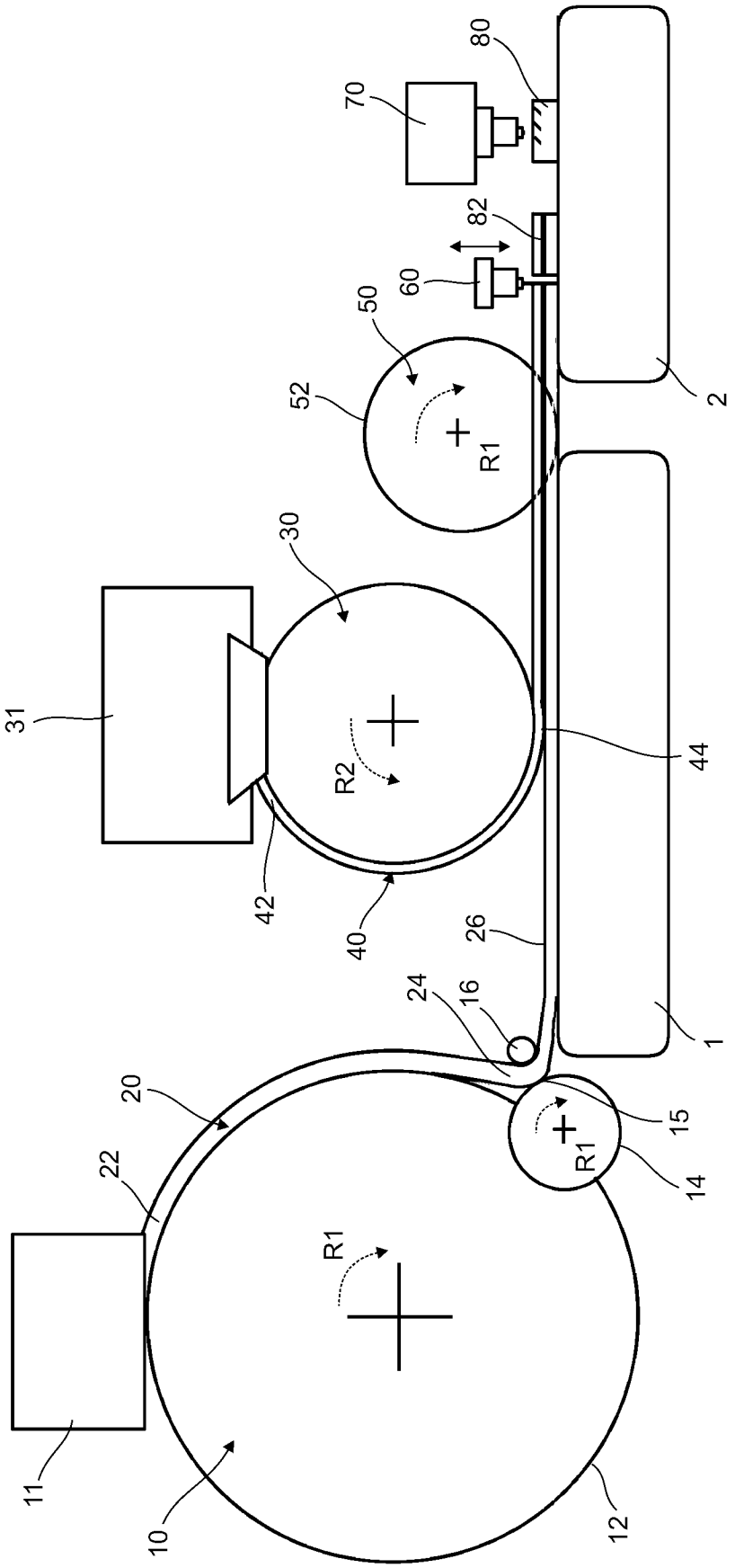
7- A confectionery production method according to claim 6, further comprising the step of wrapping the second layer (40) from a feeding section (42) to an outer periphery of a second drum (30) by means of a second preparation unit (31) provided above the second drum (30).

8- A confectionery production method according to any one of the preceeding claims, further comprising the step of manuplating the first layer (20) fed from first drum (10) towards the conveyor (1) with a pusher drum (14) provided between the first drum (10) and the conveyor (1).

9- A confectionery production method according to any one of the preceeding claims, wherein the first layer (20) comprises solid particles or grinded coconut paste.

10- A confectionery production method according to claim 9, wherein the second layer (40) comprises an oil phase, in particular caramel or peanut butter harder than the first layer (20).

11- A confectionery production method according to any one of the preceeding claims, further comprising the step of covering chocolate of the intermediate product (82).


80
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82
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R1
2
30
31
R2
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42
40
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1
20
15
22
R1
14
R1
11
10
12

Figure 1