US 20210009314A1

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2021/0009314 A1

OHANA (43) Pub. Date: Jan. 14, 2021

(54) **DEVICE APPARATUS SYSTEM AND METHOD FOR SEPARATING COMPONENTS OF A MULTI-COMPONENT FOOD ITEM**

(71) Applicant: **Alon OHANA**, Herzliya (IL)

(72) Inventor: **Alon OHANA**, Herzliya (IL)

(21) Appl. No.: **17/036,361**

(22) Filed: **Sep. 29, 2020**

Related U.S. Application Data

(62) Division of application No. 15/954,666, filed on Apr. 17, 2018, now abandoned.

Publication Classification

(51) **Int. Cl.**
B65D 25/10 (2006.01)
B65D 81/26 (2006.01)

(52) **U.S. Cl.**
CPC ***B65D 25/10*** (2013.01); ***B65D 81/264*** (2013.01); ***B65D 81/266*** (2013.01)

(57) **ABSTRACT**

Disclosed are a device, apparatus and a method for separating components of a multi-component food item, wherein two or more separators connected to each other by a connection strip, partition among three or more parts or components of a food item. One or more of the separators, or dividers, include at least one element to collect, block and/or absorb, food components related fluids, thus preventing their propagation and unwanted inter-component effects caused thereby.

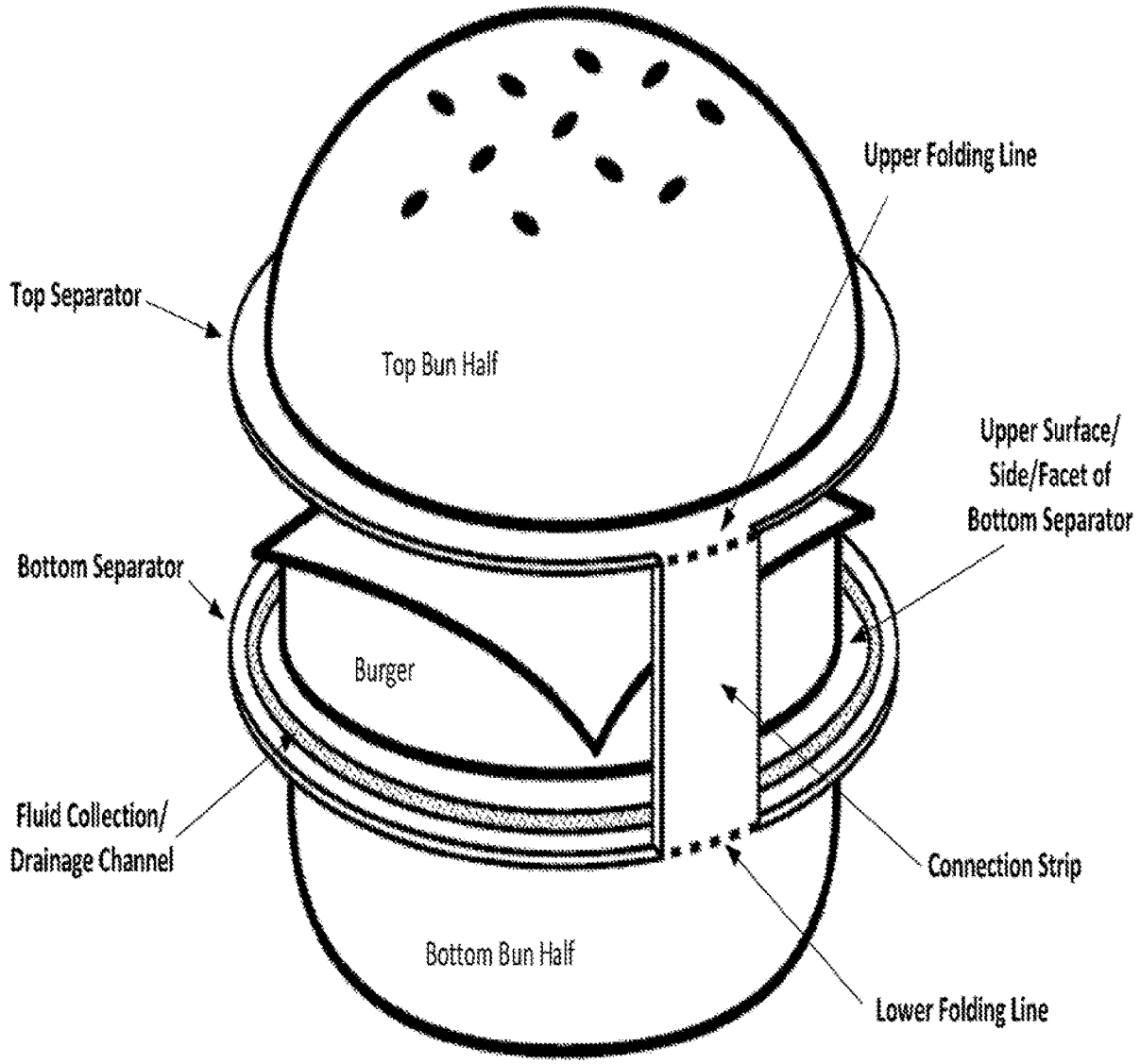


Fig. 1

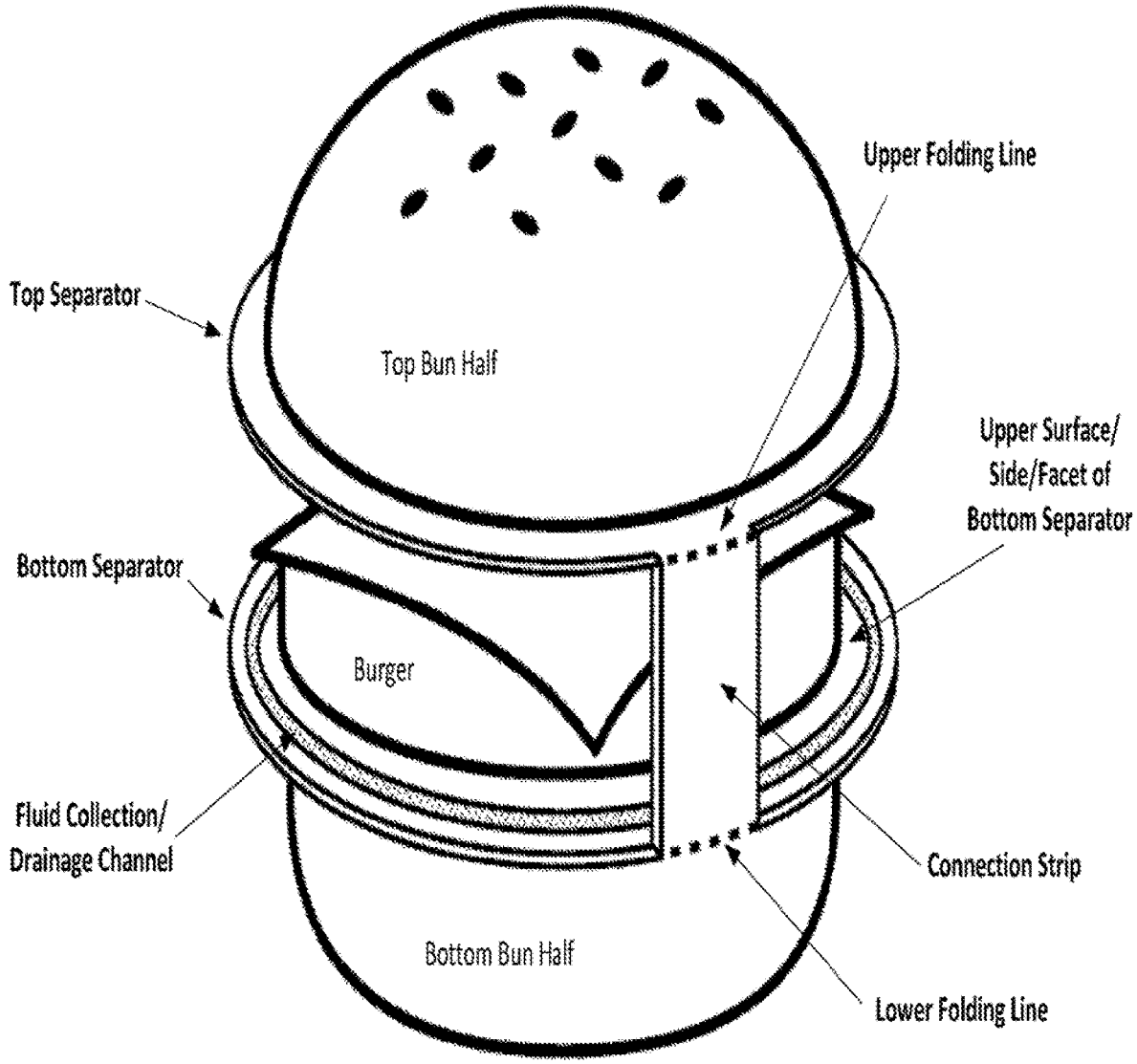

Upper Folding Line
Top Separator
Top Bun Half
Upper Surface/
Side/Facet of
Bottom Separator
Bottom Separator
Burger
Fluid Collection/
Drainage Channel
Connection Strip
Bottom Bun Half
Lower Folding Line

Fig. 2A

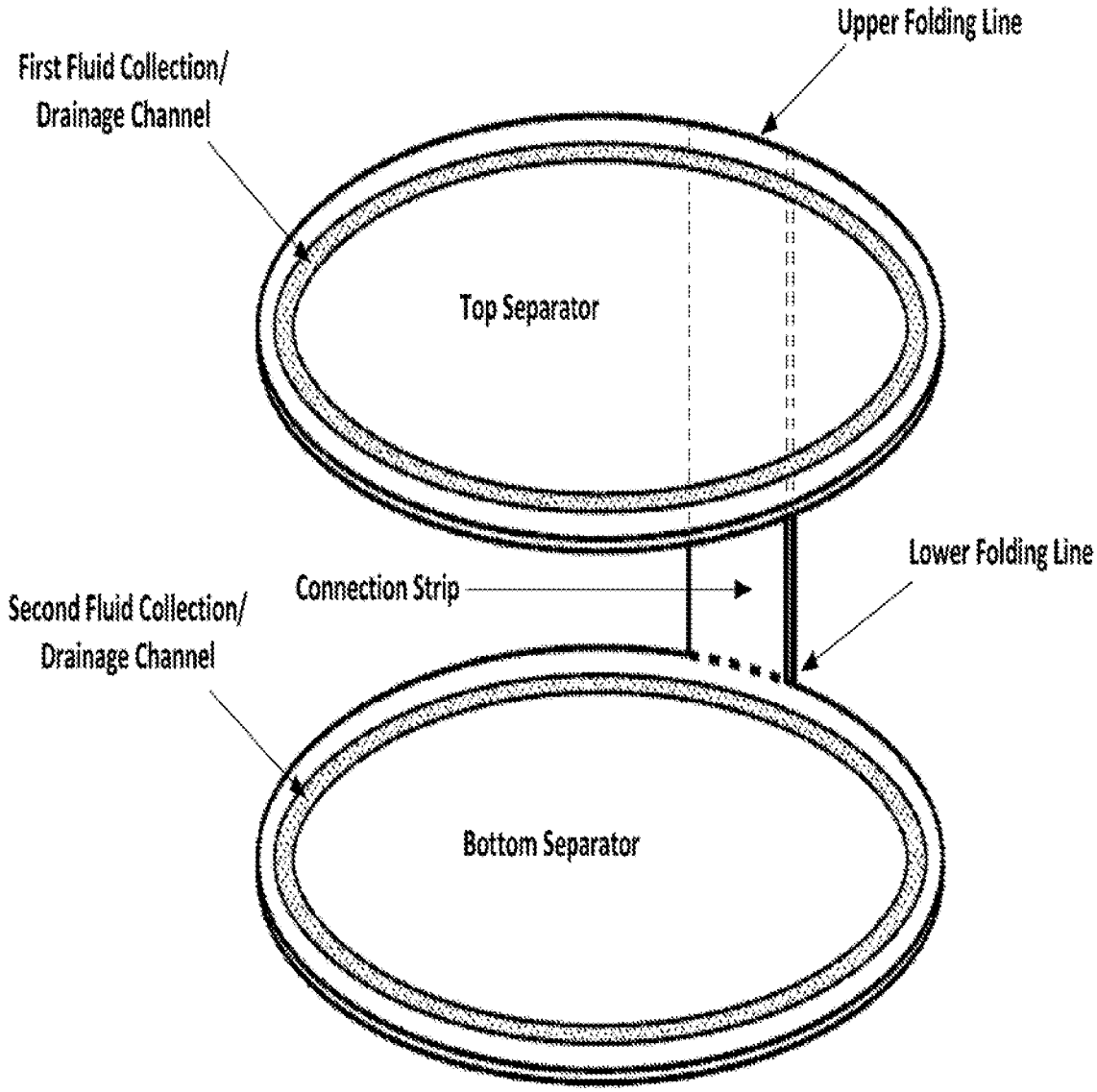

Upper Folding Line
First Fluid Collection/
Drainage Channel
Top Separator
Lower Folding Line
Connection Strip
Second Fluid Collection/
Drainage Channel
Bottom Separator

Fig. 2B

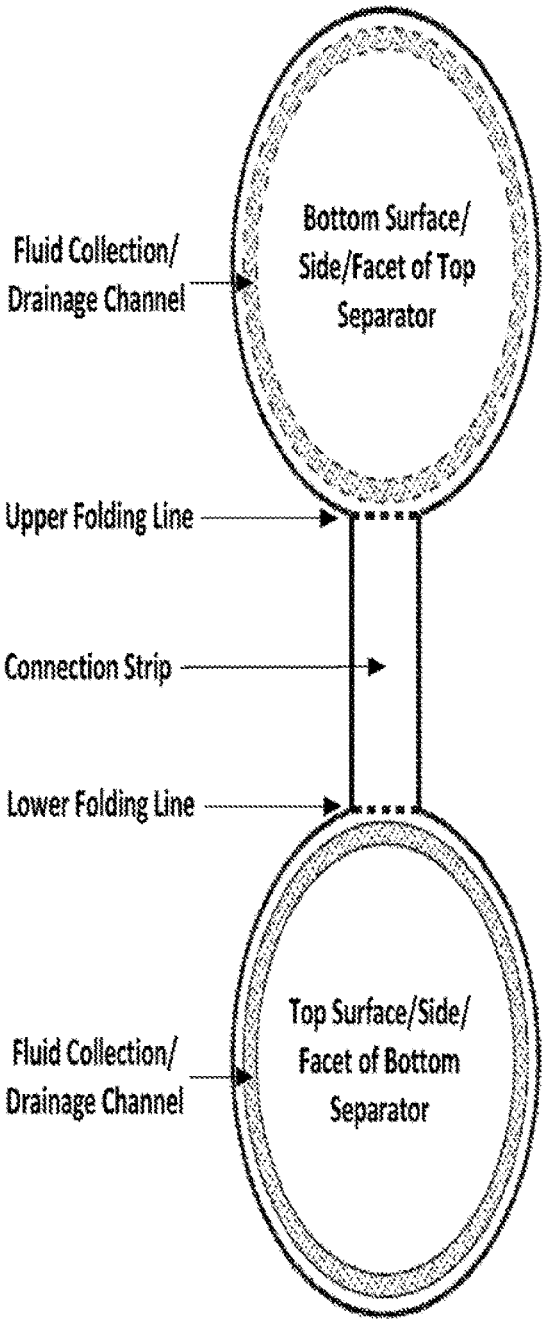

Bottom Surface/
Side/Facet of Top
Separator
Fluid Collection/
Drainage Channel
Upper Folding Line
Connection Strip
Lower Folding Line
Top Surface/Side/
Facet of Bottom
Separator
Fluid Collection/
Drainage Channel

Fig. 2C

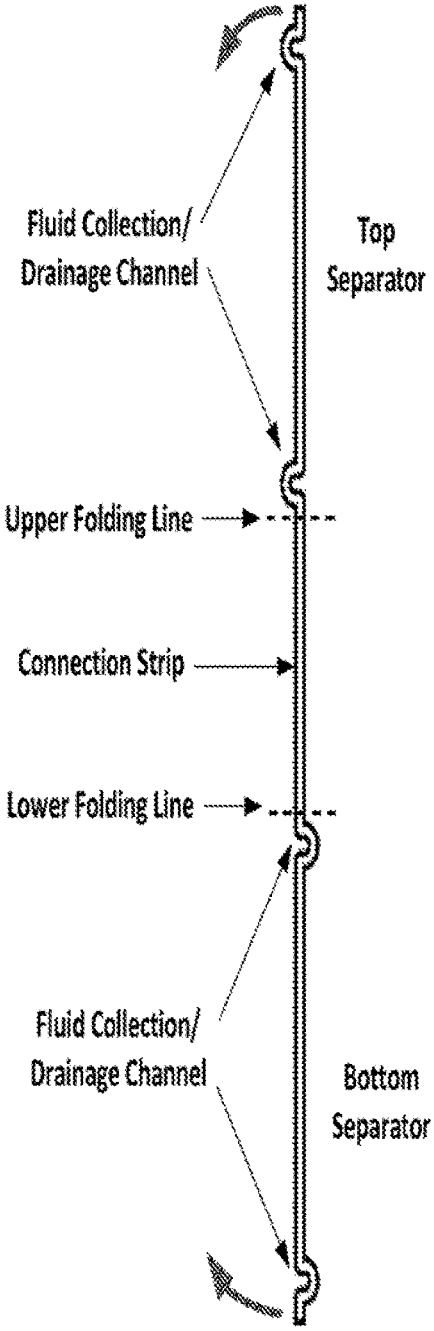

Fluid Collection/
Drainage Channel
Top
Separator
Upper Folding Line
Connection Strip
Lower Folding Line
Fluid Collection/
Drainage Channel
Bottom
Separator

Fig. 2D

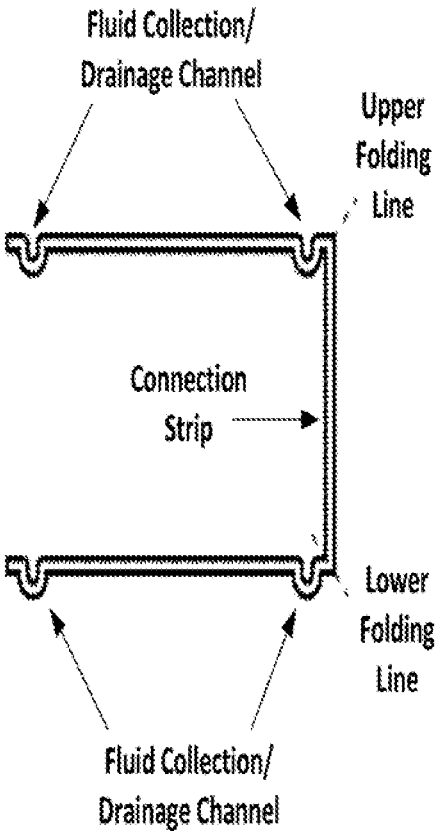

Fluid Collection/
Drainage Channel
Upper
Folding
Line
Connection
Strip
Lower
Folding
Line
Fluid Collection/
Drainage Channel

Fig. 2E

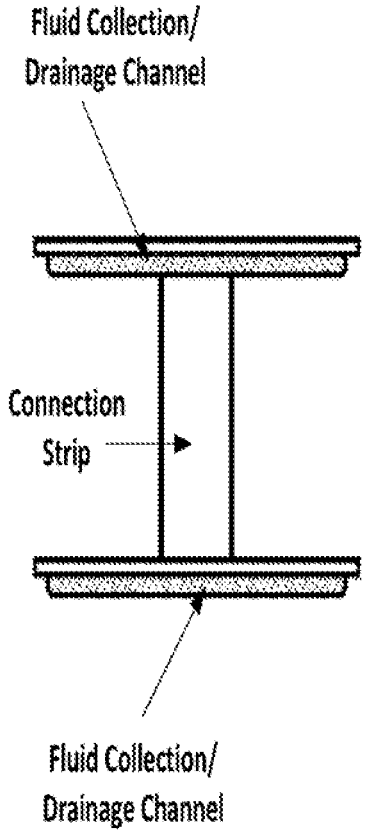

Fluid Collection/
Drainage Channel
Connection
Strip
Fluid Collection/
Drainage Channel

Fig. 3A

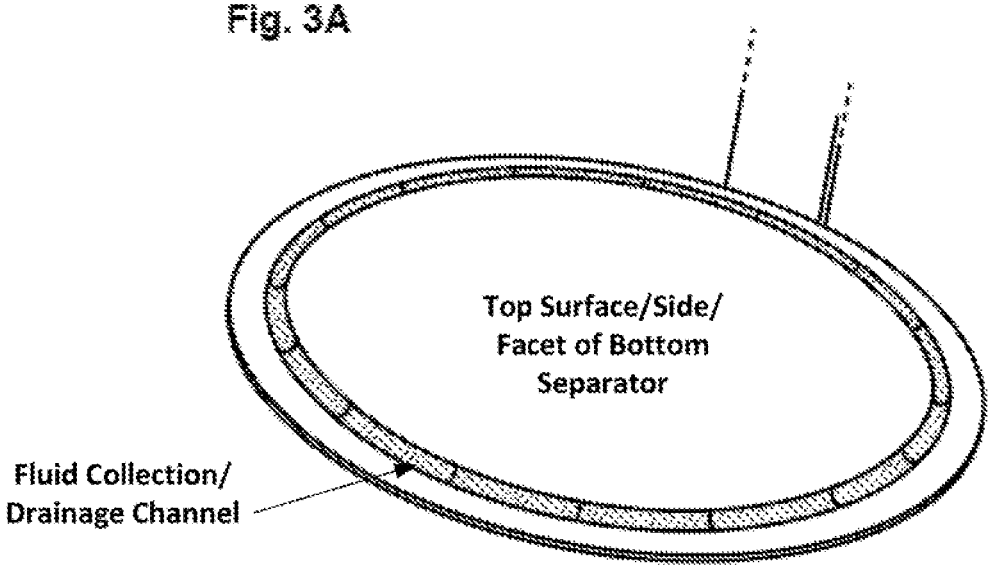

Top Surface/Side/
Facet of Bottom
Separator
Fluid Collection/
Drainage Channel

Fig. 3B

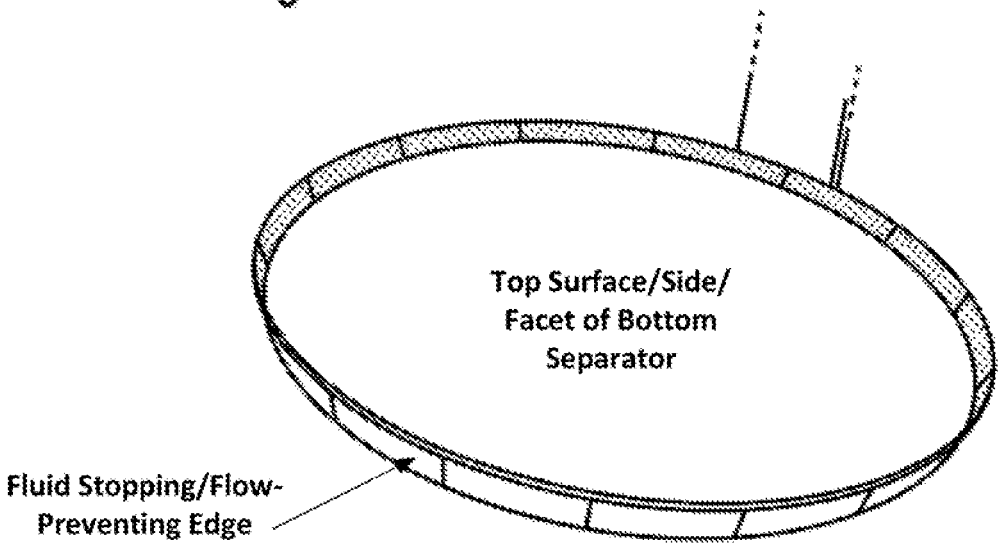

Top Surface/Side/
Facet of Bottom
Separator
Fluid Stopping/Flow-
Preventing Edge

Fig. 3C

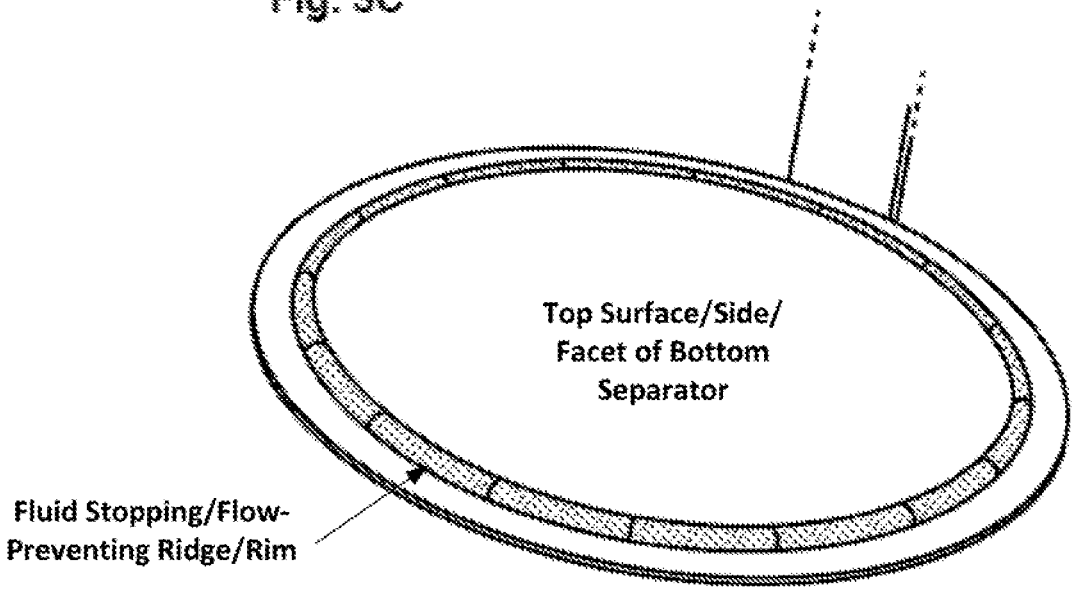

Top Surface/Side/
Facet of Bottom
Separator
Fluid Stopping/Flow-
Preventing Ridge/Rim

Fig. 3D

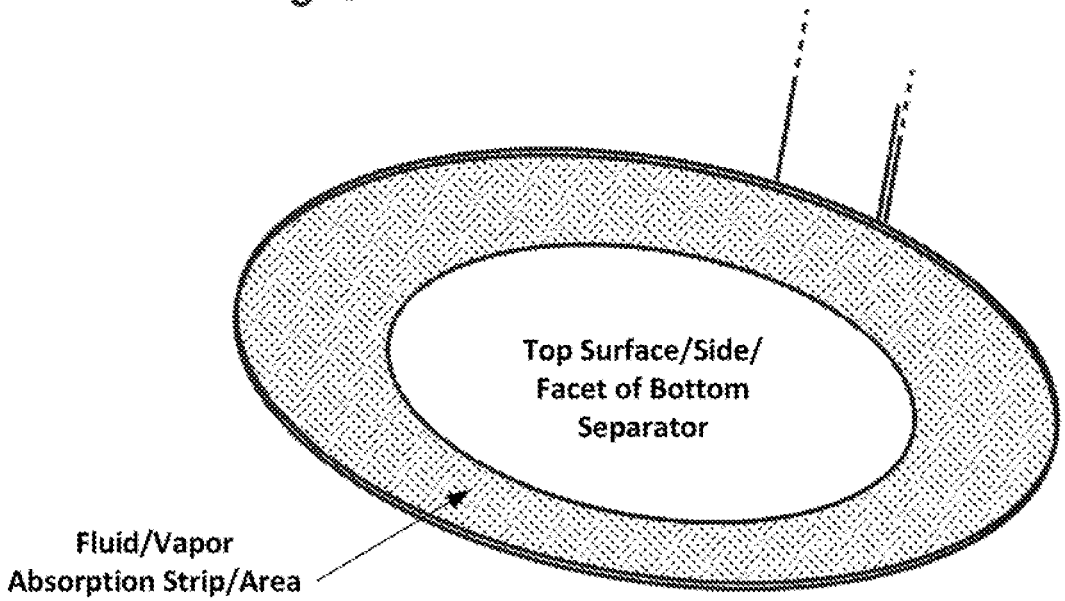

Top Surface/Side/
Facet of Bottom
Separator
Fluid/Vapor
Absorption Strip/Area

Fig. 3E

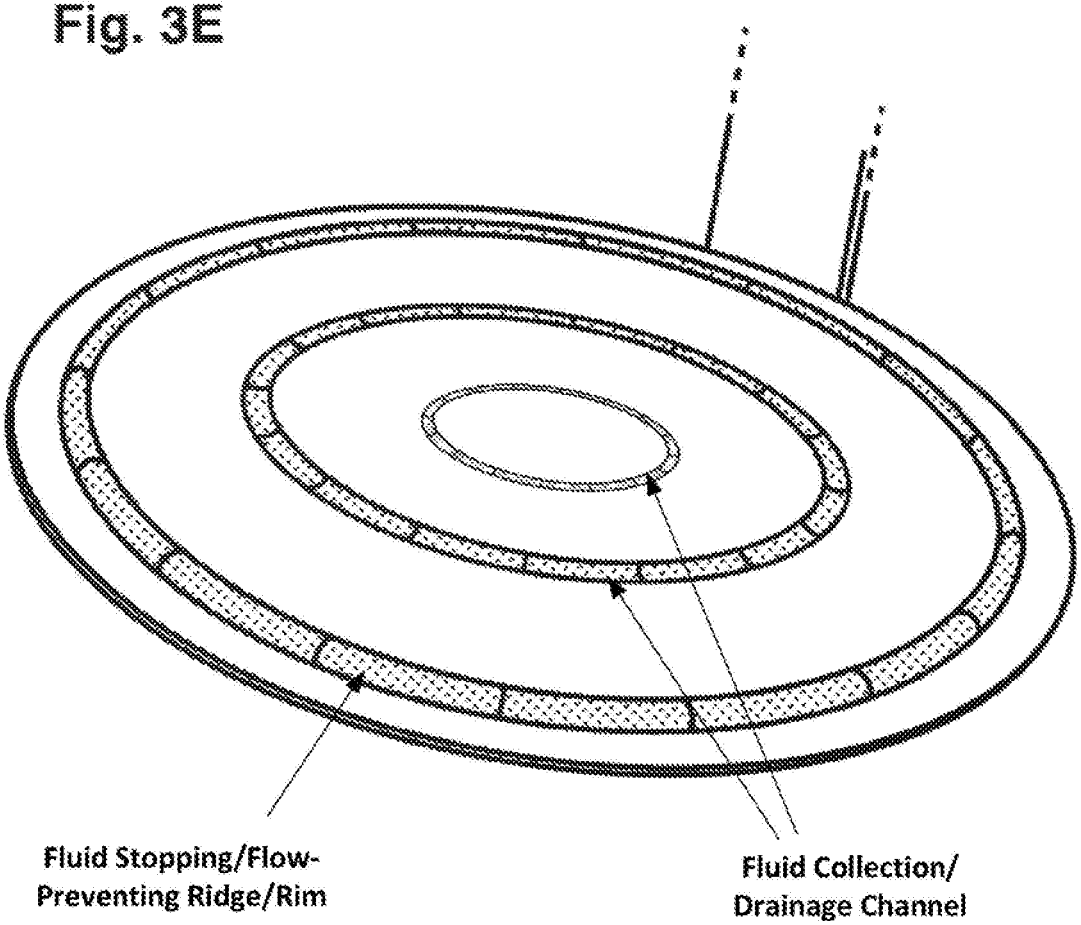

Fluid Stopping/Flow-Preventing Ridge/Rim
Fluid Collection/ Drainage Channel

Fig. 4

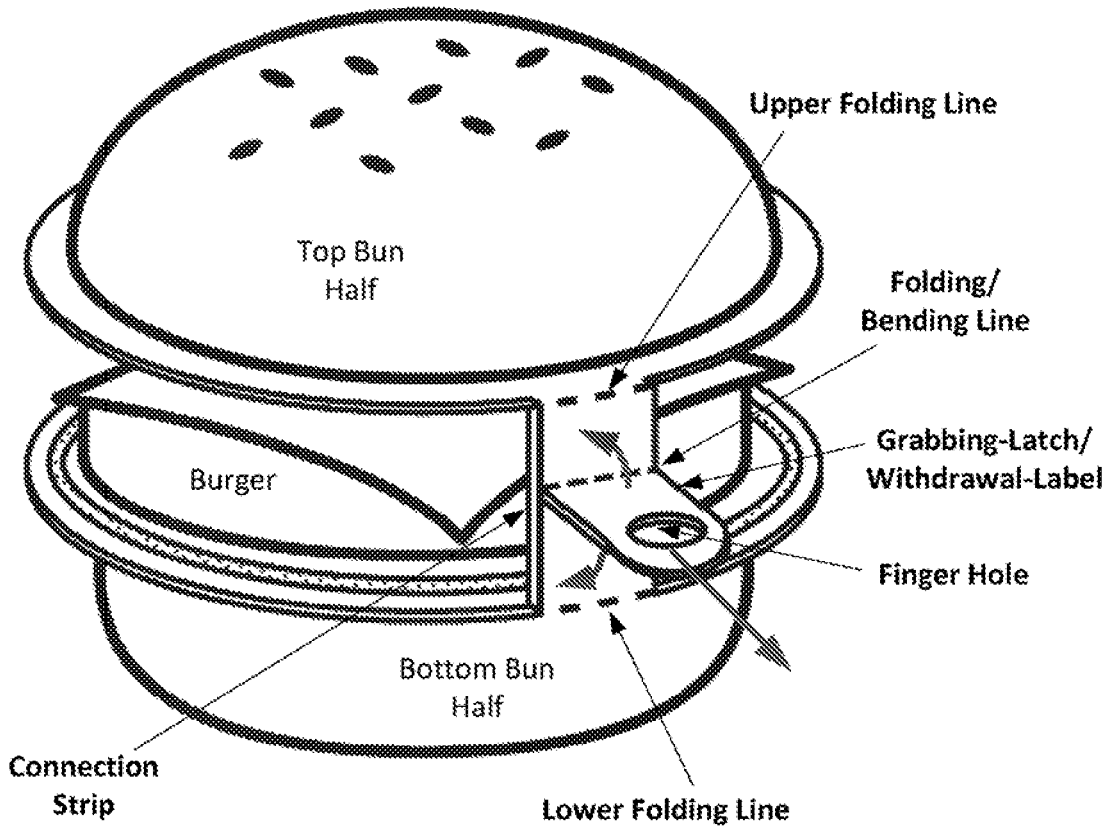

Upper Folding Line
Top Bun Half
Folding/ Bending Line
Grabbing-Latch/ Withdrawal-Label
Burger
Finger Hole
Bottom Bun Half
Connection Strip
Lower Folding Line

Fig. 5

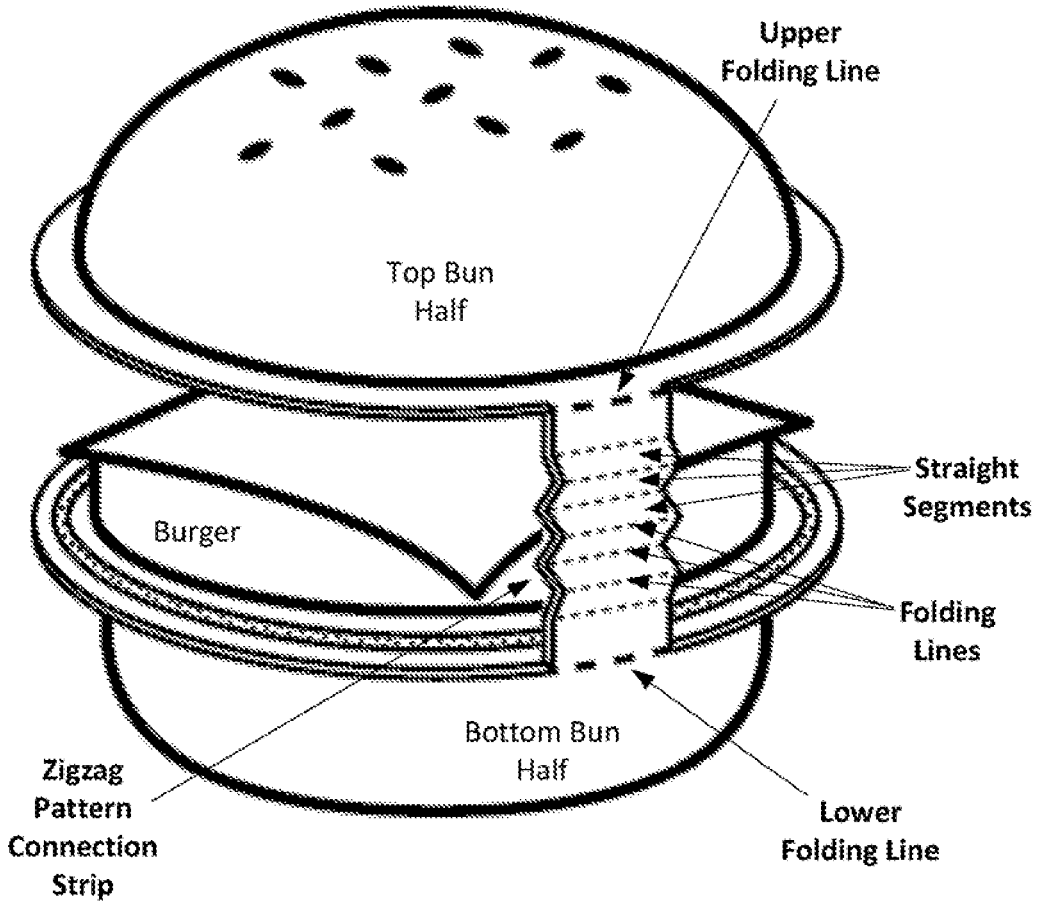

Upper
Folding Line
Top Bun
Half
Straight
Segments
Burger
Folding
Lines
Bottom Bun
Half
Zigzag
Pattern
Connection
Strip
Lower
Folding Line

Fig. 6

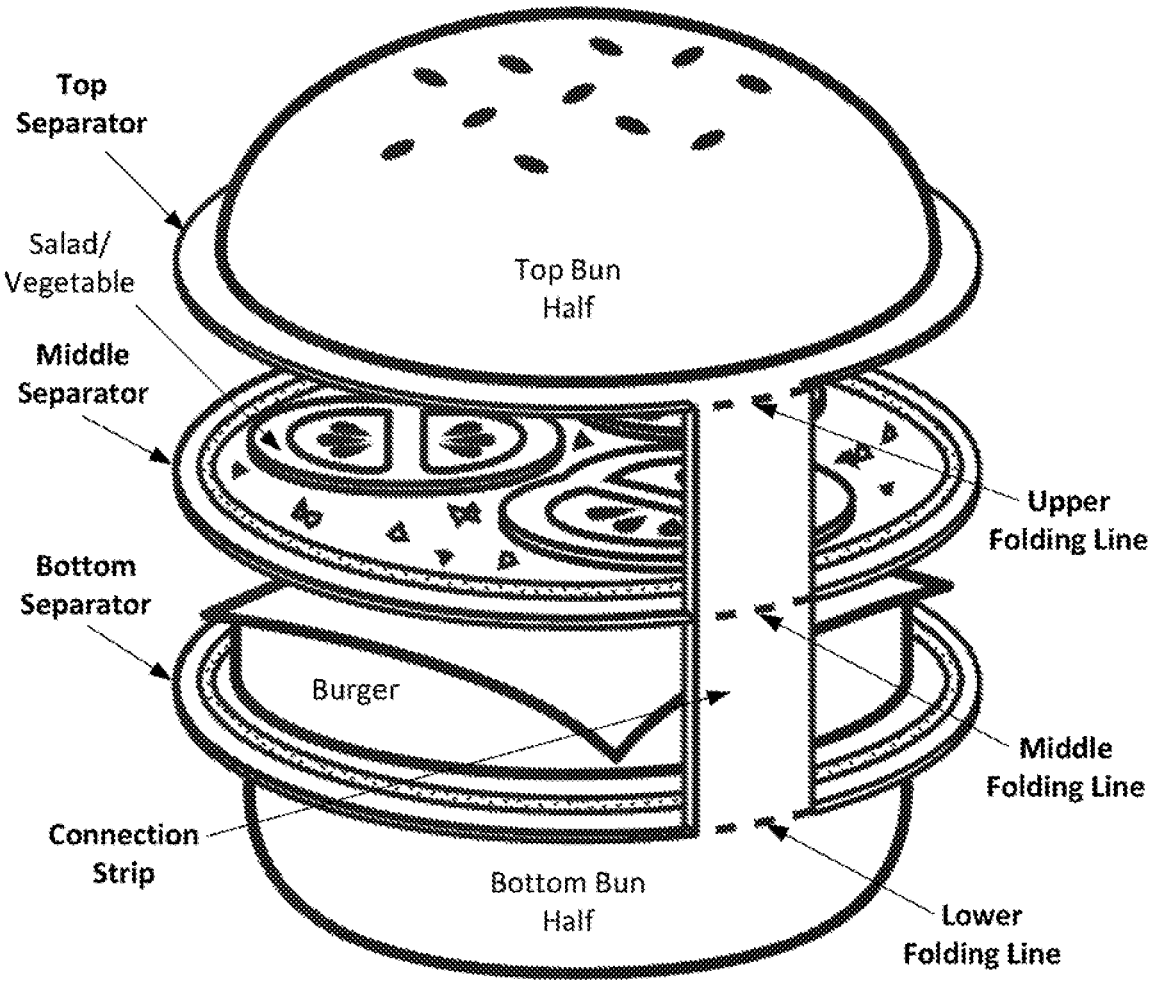
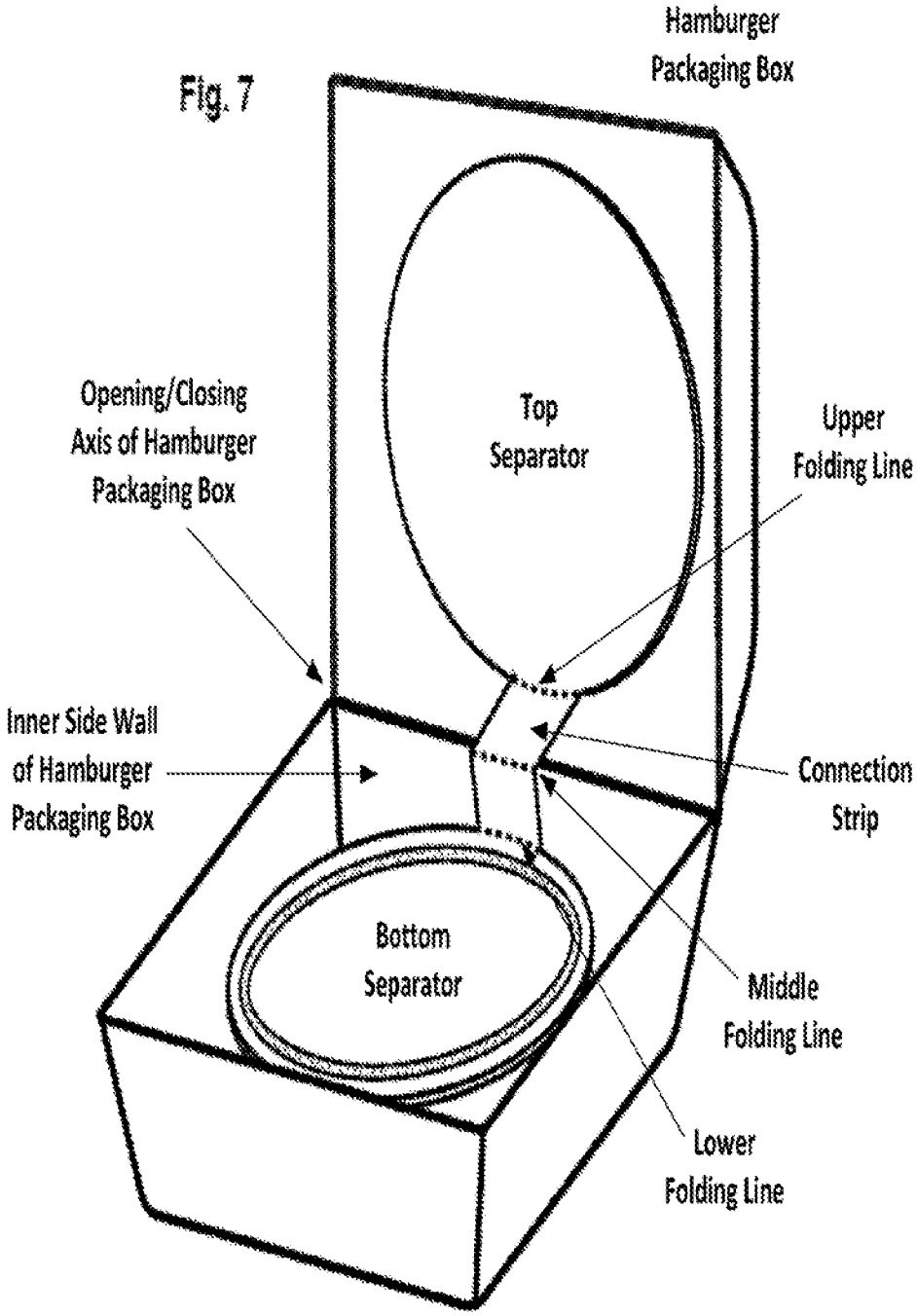

Top Separator
Salad/ Vegetable
Middle Separator
Bottom Separator
Connection Strip
Top Bun Half
Burger
Bottom Bun Half
Upper Folding Line
Middle Folding Line
Lower Folding Line

Fig. 7


Hamburger Packaging Box
Opening/Closing Axis of Hamburger Packaging Box
Top Separator
Upper Folding Line
Inner Side Wall of Hamburger Packaging Box
Connection Strip
Bottom Separator
Middle Folding Line
Lower Folding Line

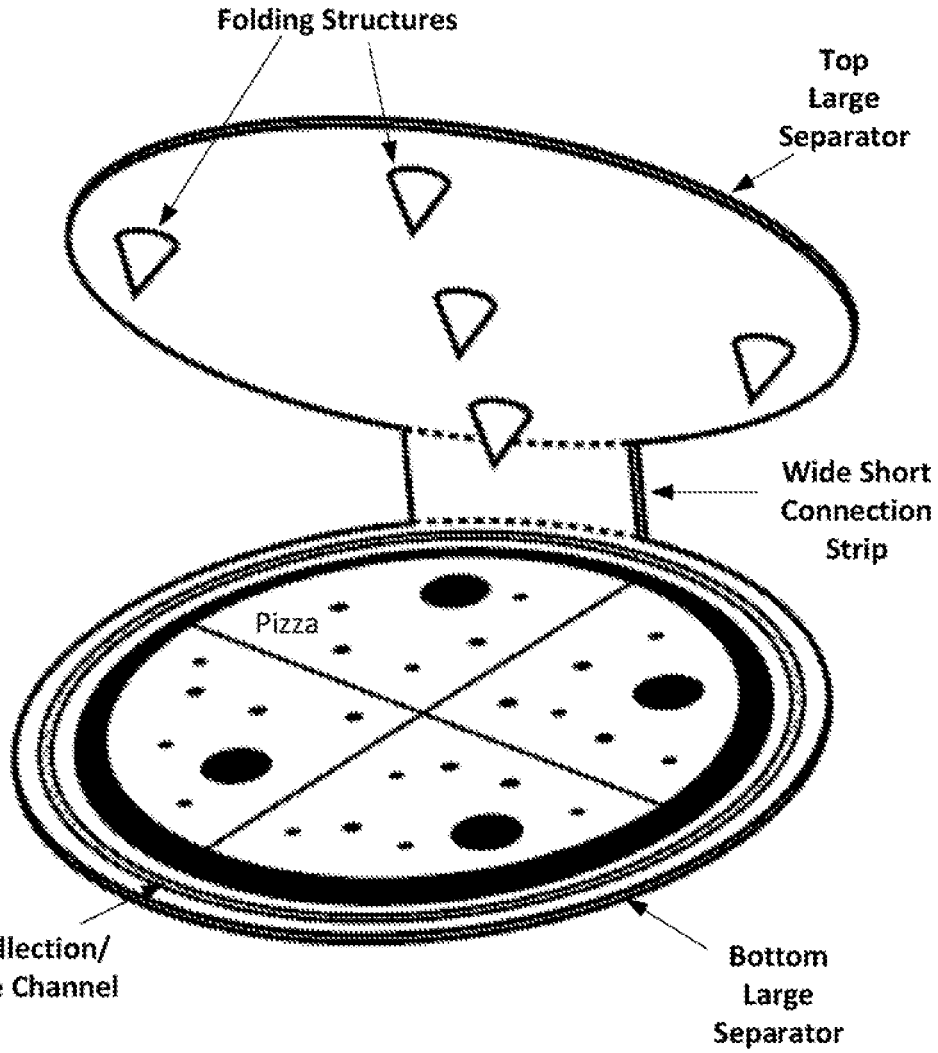

Folding Structures
Top
Large
Separator
Wide Short
Connection
Strip
Pizza
Fluid Collection/
Drainage Channel
Bottom
Large
Separator

Fig. 8A

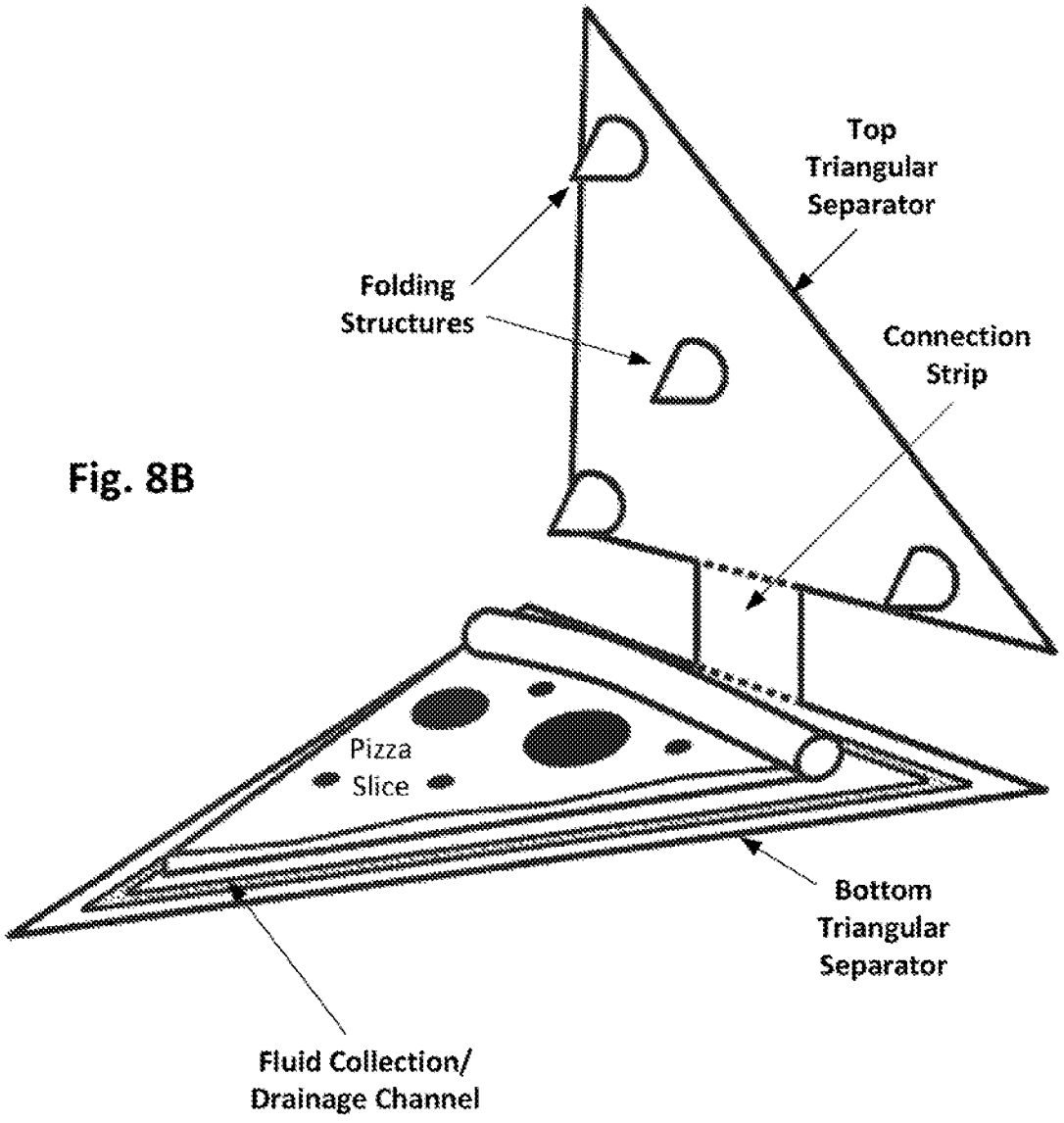

Top
Triangular
Separator
Folding
Structures
Connection
Strip
Pizza
Slice
Bottom
Triangular
Separator
Fluid Collection/
Drainage Channel

Fig. 8B

Fig. 8C

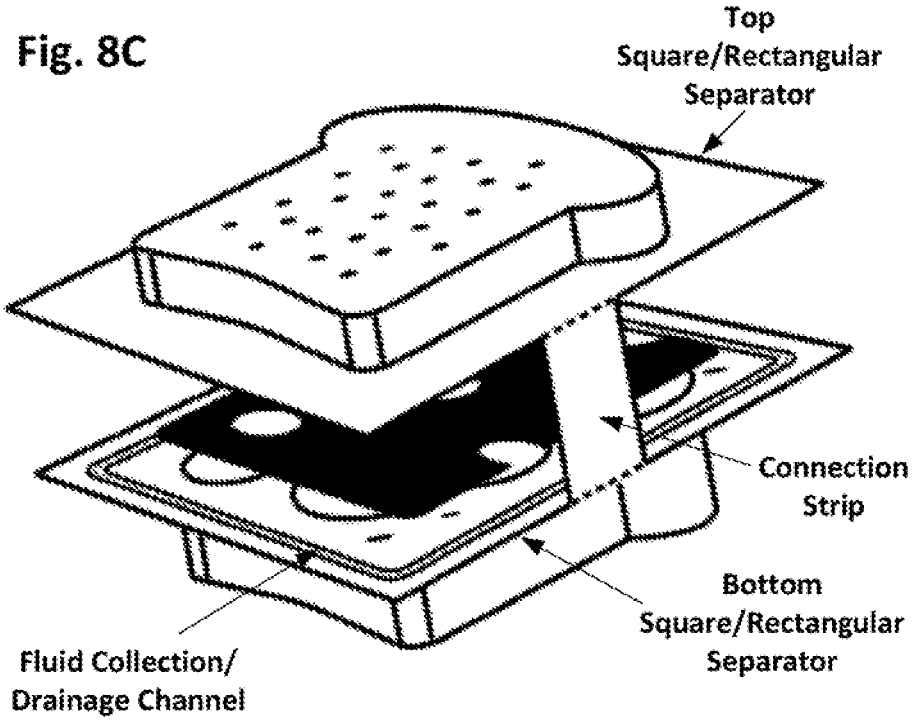

Top
Square/Rectangular
Separator
Connection
Strip
Bottom
Square/Rectangular
Separator
Fluid Collection/
Drainage Channel

Fig. 8D

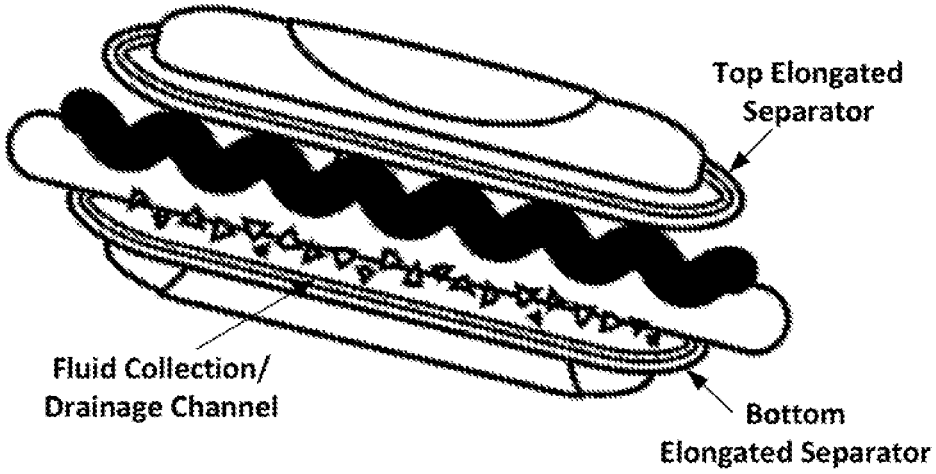
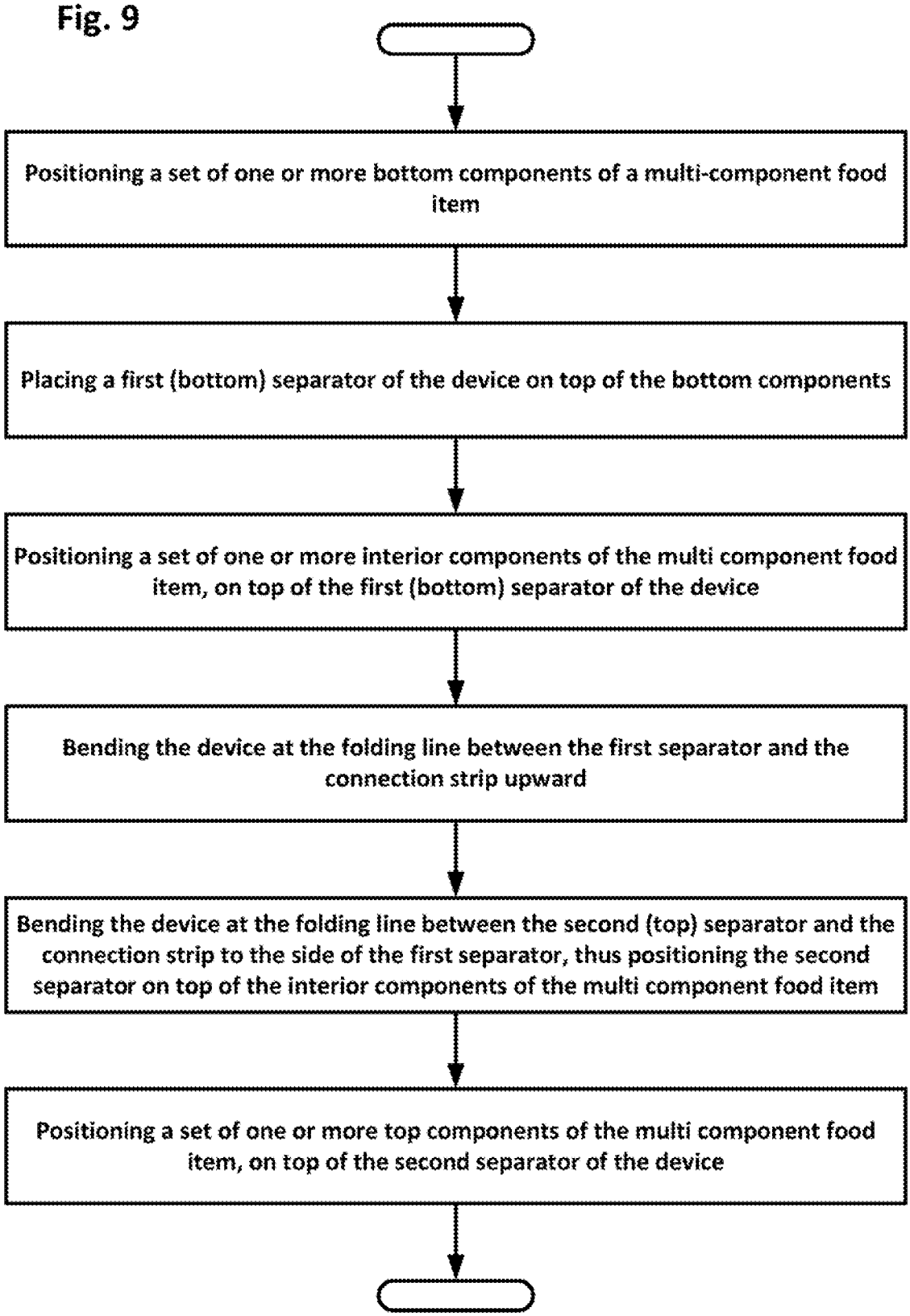

Top Elongated
Separator
Fluid Collection/
Drainage Channel
Bottom
Elongated Separator

Fig. 9


Positioning a set of one or more bottom components of a multi-component food item
Placing a first (bottom) separator of the device on top of the bottom components
Positioning a set of one or more interior components of the multi component food item, on top of the first (bottom) separator of the device
Bending the device at the folding line between the first separator and the connection strip upward
Bending the device at the folding line between the second (top) separator and the connection strip to the side of the first separator, thus positioning the second separator on top of the interior components of the multi component food item
Positioning a set of one or more top components of the multi component food item, on top of the second separator of the device

DEVICE APPARATUS SYSTEM AND METHOD FOR SEPARATING COMPONENTS OF A MULTI-COMPONENT FOOD ITEM

FIELD OF THE INVENTION

[0001] The present invention generally relates to the field of food and beverages. More specifically, the present invention relates to a device, mechanism, apparatus, system and method for separating components of a multi-component food item.

BACKGROUND

[0002] Over the years, the takeout, takeaway and food delivery business and industry have extensively grown. Traditional fast food giants, continuously seek means for improving their takeaway and delivery services, while full-service restaurants open spinoff, takeout-only sites—as ordering and delivery services prosper with the help of the Internet and remote ordering systems.

[0003] Still, remains a need—generally in the food and beverage industry and specifically in the fast growing food takeout, take-away, delivery and packaging fields—for packaging solutions that can improve the quality and the characteristics of 'packaged' and 'travelling' multi-component food items.

SUMMARY OF THE INVENTION

[0004] Disclosed, are a device, apparatus, system and method for separating components of multi-component food items. Components of a food item such as, but not limited to, a hamburger, a hotdog and/or a sandwich, may be separated such that certain components in the food item are not in contact with each other, thus preventing unwanted inter-component effects to some or all of the components, such as, but not limited to, their: cooling, heating, drying and/or wetting. Preventing unwanted inter-component effects, may improve the quality of the overall food item, for example, by reducing or eliminating sogginess and by maintaining or increasing the temperature, crispness and/or freshness of some or all of its sub components.

[0005] In some of the following discussions, the invention device and method, and embodiments thereof, are described and exemplified in the context of separating the two parts of a hamburger bun from their hamburger, vegetables and/or sauces content. It will be understood, however, by those skilled in the art, that the present invention may be utilized for component separation of various food item types, such as, but not limited to, the separation of: pastry, bread, bun, tortilla, cracker and/or pita type components of a sandwich or sandwich-like food item, from the interior components of the 'sandwich' and/or the separation of the different interior components from each other.

[0006] According to some embodiments of the present invention, a device for separating components of a multi-component food item may include: (1) a first separator and at least a second separator to partition among two parts of a sandwich/hamburger bread/bun and their content (e.g. meat, cheese, vegetable, sauces); (2) a connection strip for connecting the first separator and the at least second separator at a distance that allows their fitting into the sandwich/hamburger substantially next to the inward facing sides of the two parts of the sandwich/hamburger bread-slices/bun; and (3) a first and at least a second bending lines, to enable the insertion of the device into a sandwich/hamburger by facilitating the bending of both the first separator and the at least second separator to form a substantially perpendicular angle with the connection strip.

[0007] According to some embodiments, the first separator and the at least second separator of the device may be: Round, Oval, Square, Oblong, Triangular, and/or in any other shape complementing the shape of the sandwich/food-type for which it is intended. According to some embodiments, the device may be substantially flat prior to its bending, and may be constructed by cutting its desirable shape out of a flat sheet of material, made of one or more layers. According to some embodiments, the device may be made of paper, card board, plastic, aluminum, and/or any material or combination of materials that may prevent unwanted inter-component effects to some or all of the components of the sandwich/hamburger.

[0008] According to some embodiments, the device may include a thicker middle layer covered with two thinner outer layers. The thicker middle layer may, for example, be made of a paper or cardboard layer and/or a foamed polymer or natural substance—optionally including hollow chambers therein; wherein the outer layers may, for example, be made of a metallic (e.g. tin foil, aluminum paper) or plastic/polyethylene (sticky stretchable nylon) sheets, optionally having liquid/fluid resistance/proof and/or substantially high heat insulation characteristics.

[0009] According to some embodiments, the first separator and the at least second separator of the device may include one or more fluid collecting, blocking and/or absorbing element(s) on one or both of their surfaces/sides/facets for collecting, blocking and/or absorbing fluids from/of food item components. The fluid collecting, blocking and/or absorbing element(s) may, for example, take the form of: a channel, a ridge/bump, dents, a rim edge, an absorbing or flow-preventing material and/or any combination thereof. According to some embodiments, a fluid collecting, blocking and/or absorbing edge may be positioned on one or more of the separators (e.g. the bottom one), and on one (e.g. the top facing one) or both sides of the separator. According to some embodiments, substantially the entire separator(s) or outer surface(s) thereof may be fabricated from or coated with a fluid absorbing material.

[0010] According to some embodiments, the connection strip of the device may comprise, on its outward facing side, a grabbing latch or grabbing strip for holding and withdrawing the device prior to the eating of the sandwich/hamburger. According to some embodiments, the grabbing latch may include a finger hole for inserting a finger into/through the grabbing latch as part of withdrawal of the device from a food item (e.g. a sandwich/hamburger). According to some embodiments, the grabbing latch may be connected to the connection strip by a bending line, allowing it to be folded upwards/downwards and onto the connection strip to create a single plane with it and with the device separators (e.g. when separators are open).

[0011] According to some embodiments, the connection strip of the device, connecting between the first separator and the at least second separator, may comprise multiple zigzag bends allowing it to stretch in and/or out—respectively shortening and lengthening the distance between the device separators—to accommodate various thicknesses of sandwich/hamburger filling/interior components.

[0012] According to some embodiments, the device may include three, or more, separators, to allow for the separation of four food components or more. For example, components of a four (main) component hamburger by a three separators device, may include: a first separator separating between the bottom half of the hamburger bun and the meat patty; a second separator separating between the meat patty and a salad/vegetables component of the burger; and a third separator separating between the salad/vegetables and the top half of the hamburger bun.

[0013] According to some embodiments, a device for separating components of a multi-component food item may be connected or integrated into a hamburger packaging box. According to some embodiments, the connection strip of the device may be connected to a food item packaging box (e.g. a hamburger box). The connection strip may, for example, be connected to the inner side of a of a paper food item package, such that when the package is opened the separators of the device are substantially horizontally oriented within the package, while being connected to one or more of the package's side walls by the connection strip. According to some embodiments, as part of a package-integrated device embodiment, the separators may be connected directly to one or more of the package's side walls, wherein the connection may include bending lines allowing for the separators to tilt up or down around their connection line axis.

[0014] According to some embodiments, a device for separating components of a multi-component food item may be adapted to accommodate, and to separate among components of, various food types and items of different shapes and forms. A device for separating components of a multi-component food item may be accordingly fabricated to accommodate: a pizza—large and round, a sandwich—square or oval, a hotdog—elongated, or other multi-component food items.

[0015] According to some embodiments, a process for separating among components of a multi-component food item may include: (1) positioning a set of one or more bottom components of a multi-component food item; (2) placing a first separator of the device on top of the bottom components; (3) positioning a set of one or more interior components of the multi-component food item, on top of the first separator of the device; (4) bending the device at the folding line between the first separator and the connection strip upward; (5) bending the device at the folding line between the second separator and the connection strip to the side of the first separator, thus positioning the second separator on top of the interior components of the multi-component food item; and/or (6) positioning a set of one or more top components of the multi-component food item, on top of the second separator of the device.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] The subject matter regarded as the invention is particularly pointed out and distinctly claimed in the concluding portion of the specification. The invention, however, both as to organization and method of operation, together with objects, features, and advantages thereof, may best be understood by reference to the following detailed description when read with the accompanying drawings in which:

[0017] FIG. **1** is a perspective view diagram of an exemplary device for separating components of a multi-component food item, in accordance with some embodiments of the present invention, wherein the device is shown inside a hamburger sandwich;

[0018] FIGS. **2**A-**2**E are diagrams of an exemplary device for separating components of a multi-component food item, in accordance with some embodiments of the present invention, wherein the device is shown: closed in a perspective view (**2**A), open in a front view (**2**B), open in a side cross section view (**2**C), closed in a side cross-section view (**2**D) and closed in a front view (**2**E);

[0019] FIGS. **3**A-**3**E are diagrams of exemplary separators of an exemplary device for separating components of a multi-component food item, in accordance with some embodiments of the present invention, wherein shown separator views include: a perspective view of a separator with a fluid collection/drainage channel (**3**A), a perspective view of a separator with a fluid stopping/flow-preventing edge (**3**B), a perspective view of a separator with a fluid stopping/flow-preventing ridge/rim (**3**C), a perspective view of a separator with a fluid/vapor absorption strip/area (**3**D) and a perspective view of a separator with a combination of a fluid collection/drainage channels and a fluid stopping/flow-preventing ridge/rim (**3**E);

[0020] FIG. **4** is a perspective view diagram of an exemplary device for separating components of a multi-component food item, in accordance with some embodiments of the present invention, wherein the device includes a grabbing-latch/grabbing-strip/withdrawal-label and is shown inside a hamburger sandwich;

[0021] FIG. **5** is a perspective view diagram of an exemplary device for separating components of a multi-component food item, in accordance with some embodiments of the present invention, wherein the separators are connected to each other by a zig-zag shaped connection strip and the device is shown inside a hamburger sandwich;

[0022] FIG. **6** is a perspective view diagram of an exemplary device for separating components of a multi-component food item, in accordance with some embodiments of the present invention, wherein the device includes three separators and is shown inside a hamburger sandwich;

[0023] FIG. **7** is a perspective view diagram of an exemplary device for separating components of a multi-component food item, in accordance with some embodiments of the present invention, wherein the device is integrated into a hamburger packaging box;

[0024] FIGS. **8**A-**8**C are diagrams of exemplary devices for separating components of a multi-component food item, in accordance with some embodiments of the present invention, wherein shown devices include: a perspective view of a device hosting a pizza tray (**8**A), a perspective view of a device hosting a pizza slice (**8**B), a perspective view of a device inside a sliced meat/cheese sandwich (**8**C) and a perspective view of a device inside a hotdog and bun sandwich (**8**D); and

[0025] FIG. **9** is a flowchart showing the main steps executed as part of a process for separating components of a multi-component food item, by utilization of an exemplary embodiment of the invention's device, in accordance with some embodiments of the present invention.

[0026] It will be appreciated that for simplicity and clarity of illustration, elements shown in the figures have not necessarily been drawn to scale. For example, the dimensions of some of the elements may be exaggerated relative to other elements for clarity.

DETAILED DESCRIPTION

[0027] In the following detailed description, numerous specific details are set forth in order to provide a thorough understanding of some embodiments. However, it will be understood by persons of ordinary skill in the art that some embodiments may be practiced without these specific details. In other instances, well-known methods, procedures, components, units and/or circuits have not been described in detail so as not to obscure the discussion.

[0028] Embodiments of the present invention may include apparatuses for performing the operations herein. This apparatus may be specially constructed for the desired purposes, or it may comprise a general purpose apparatus selectively applicable or configurable for the desired purposes.

[0029] The processes and displays presented herein arc not inherently related to any particular system, device, apparatus, element, component, or assembly. Various general purpose embodiments may be used with in accordance with the teachings herein, or it may prove convenient to construct a more specialized embodiment to perform the desired method. The desired structure for a variety of these embodiments will appear from the description below. In addition, embodiments of the present invention are not described with reference to any particular packaged items or objects. It will be appreciated that a variety of items or objects may be packaged by implementing the teachings of the invention as described herein.

[0030] Throughout the specification, the terms "separating", "parting", "partitioning", "preventing contact", "absorbing", "preventing fluid/moisture passage" or the like, may refer to the function of any form of a separating partitions, or barriers, including mechanism—adapted to prevent contact among one or more components or ingredients of a food item, in order to at least partially limit unwanted inter-component effects to some or all of the components. The term 'Component(s)' or 'Food Component (s)' herein, may refer to any specific food ingredient, or to a combination of two or more food ingredients. The combination of two or more food ingredients may include any form of: aggregating, integrating, joining, connecting, linking, mixing and/or or putting the multiple ingredients together—optionally, by utilizing one or more cooking techniques such as, but not limited to: boiling, frying, baking, grilling, roasting and/or steaming.

[0031] Furthermore, throughout the specification, the term "folding line(s)" may refer to any form of a paper/cardboard fold mark(s) or cut mark(s)—and may include, but is not limited to, any combination of the following: a drawn mark (e.g. line, broken/dotted line, broken/dotted line with a scissors icon on it), a pressed mark (e.g. pressed line, pressed broken/dotted line) and/or a cut mark (e.g. broken/dotted line including an alternate repeating pattern of cut and not-cut segments). Any "folding line(s)" described herein and/or shown in the accompanying figures may, or may not, be pre-folded in a specific direction and/or manner, facilitating the later shaping/folding to specific orientation(s), as defined by the needed functionality.

[0032] Functions, operations, components and/or features described herein with reference to one or more embodiments, may be combined with, or may be utilized in combination with, any one or more other functions, operations, components and/or features described herein with reference to one or more other embodiments.

[0033] The present invention includes a device, apparatus, system and method for separating components of a multi-component food item. Components of a food item such as, but not limited to, a hamburger, a hotdog and/or a sandwich, may be separated such that certain components in the food item are not in contact with each other, thus preventing unwanted inter-component effects to some or all of the components, such as, but not limited to, their cooling, heating, drying and/or wetting. In some of the following discussions, the invention device and method, and embodiments thereof, arc described and exemplified in the context of separating the two parts of a hamburger bun from their hamburger, vegetables and/or sauces content. It will be understood, however, by those skilled in the art, that the present invention may be utilized for component separation of various food item types, such as, but not limited to, the separation of pastry, bread, bun, tortilla, cracker or pita type components of a sandwich or sandwich-like food item, from the interior components of the 'sandwich' and/or the separation of the different interior components from each other.

[0034] According to some embodiments of the present invention, a device for separating components of a multi-component food item may include: (1) a first separator and at least a second separator to partition among two parts of a sandwich/hamburger bun and their content (e.g. meat, cheese, vegetable, sauces); (2) a connection strip for connecting the first separator and the at least second separator at a distance that allows their fitting into the sandwich/hamburger substantially next to the inward facing sides of the two parts of the sandwich/hamburger bread-slices/bun; and (3) a first and at least a second bending lines, to enable the insertion of the device into a sandwich/hamburger by facilitating the bending of both the first separator and the at least second separator to form a substantially perpendicular angle with the connection strip.

[0035] In FIG. **1** there is shown a perspective view diagram of an exemplary device for separating components of a multi-component food item, in accordance with some embodiments of the present invention, wherein the device is shown inside a hamburger sandwich.

[0036] In the figure, a hamburger sandwich, including: a Top Bun Half, a Bottom Bun Half and a Burger. The device for separating components of a multi-component food item is shown inside the hamburger sandwich, wherein: the top separator—forming a substantially right angle with the connection strip of the device at the shown (upper) folding line—separates between the top bun half and the top of the burger; and, the bottom separator—forming a substantially right angle with the connection strip of the device at the shown (lower) folding line—separates between the bottom bun half, and the bottom of the burger. The upper surface/side/facet of the bottom separator is shown to include a fluid collection/drainage channel, for collecting fluids (e.g. oils, sauces, condensed vapor/steam) extracted from/by its supported burger.

[0037] According to some embodiments, the first separator and the at least second separator of the device may be round, oval, square, oblong, triangular, and/or in any other shape complementing the shape of the sandwich/food-type for which it is intended. According to some embodiments, the device may be substantially flat prior to its bending, and may be constructed by cutting its desirable shape out of a flat sheet of material, made of one or more layers. According to some embodiments, the device may be made of paper, card

board, plastic, aluminum, and/or any material or combination of materials that may prevent unwanted inter-component effects to some or all of the components of the sandwich/hamburger.

[0038] According to some embodiments, the device may include a thicker middle layer covered with two thinner outer layers. The thicker middle layer may, for example, be made of a paper or cardboard layer and/or a foamed polymer or natural substance—optionally including hollow chambers therein; wherein the outer layers may, for example, be made of a metallic (e.g. tin foil, aluminum paper) or plastic/polyethylene (sticky stretchable nylon) sheets, optionally having liquid/fluid resistance/proof and/or substantially high heat insulation characteristics.

[0039] In FIGS. **2**A-**2**E there are shown diagrams of an exemplary device for separating components of a multi-component food item, in accordance with some embodiments of the present invention, wherein the device is shown: closed in a perspective view (**2**A), open in a front view (**2**B), open in a side cross section view (**2**C), closed in a side cross section view (**2**D) and closed in a front view (**2**E).

[0040] The shown device of FIGS. **2**A-**2**E includes a first fluid collection/drainage channel on its top separator and a second fluid collection/drainage channel on its bottom separator. The device is shown closed in a perspective view (**2**A), wherein the separators are bent at their respective folding lines, to each from a right, or an approximately right, angle—with the connection strip of the device.

[0041] In FIG. **2**B there is shown a front view of the open device. The bottom separator shown, includes a fluid collection/drainage channel on its upper surface/facet and the top separator shown also includes a fluid collection/drainage channel on its upper, hidden, surface/facet—shown with a broken/dotted line. Further shown is the connection strip and the folding lines, connecting it to each of the separators.

[0042] In FIG. **2**C there is shown a side cross section view of the open device. The device is shown to be substantially flat at its open position and to include a middle layer and two outer layers on its sides. The top and bottom separators shown, both include a fluid collection/drainage channel on opposite sides, wherein the opposite side channels will both face upwards upon folding the separators, in the direction of the curved arrows, to form a right, or approximately right, angle with the connection strip, as shown in the following, FIG. **2**D.

[0043] In FIG. **2**D there is shown a side cross section view of the closed device. The fluid collection/drainage channels, of both the top separator and the bottom separator of the device, are shown to face upwards, due to the folding of the separators to form a right, or approximately right, angle with the connection strip.

[0044] In FIG. **2**E there is shown a front view of the closed device. The fluid collection/drainage channels, of both the top separator and the bottom separator of the device, are shown—in broken/dotted lines—to face upwards, due to the folding of the separators to form a right, or approximately right, angle with the connection strip.

[0045] According to some embodiments, the first separator and the at least second separator of the device may include one or more fluid collecting, blocking and/or absorbing element(s) on one or both of their surfaces/sides/facets for collecting, blocking and/or absorbing fluids from/of food item components. The fluid collecting, blocking and/or absorbing element(s) may, for example, take the form of: a channel, a ridge/bump, dents, a rim edge, an absorbing or flow-preventing material and/or any combination thereof. According to some embodiments, a fluid collecting, blocking and/or absorbing edge may be positioned on one or more of the separators (e.g. the bottom one), and on one (e.g. the top facing one) or both sides of the separator. According to some embodiments, substantially the entire separator(s) or outer surface(s) thereof may be fabricated from or coated with a fluid absorbing material.

[0046] In FIGS. **3**A-**3**E there are shown diagrams of exemplary separators of an exemplary device for separating components of a multi-component food item, in accordance with some embodiments of the present invention, wherein shown separator views include: a perspective view of a separator with a fluid collection/drainage channel (**3**A), a perspective view of a separator with a fluid stopping/flow-preventing edge (**3**B), a perspective view of a separator with a fluid stopping/flow-preventing ridge/rim (**3**C), a perspective view of a separator with a fluid/vapor absorption strip/area (**3**D) and a perspective view of a separator with a combination of a fluid collection/drainage channels and a fluid stopping/flow-preventing ridge/rim (**3**E).

[0047] In FIG. **3**A there is shown a perspective view of a separator with a fluid collection/drainage channel. The channel, located on the upper surface/side/facet of the separator, is shown to circle the center of the separator at a diameter which is smaller than the diameter of the separator.

[0048] One or more fluid collection/drainage channel(s), in accordance with some embodiments, may accordingly run at different diameters/girths/circumferences, wherein at least one, of the one or more channels, may run at a diameter/girth/circumference which is smaller than, but substantially close to, the diameter of the separator.

[0049] In FIG. **3**B there is shown a perspective view of a separator with a fluid stopping/flow-preventing edge. The edge, located on the upper surface/side/facet of the separator, is shown to circle the separator at/around its outer diameter, forming an obstacle that prevents fluids from leaking over the sides of the separator and down towards food item component(s) located under the separator.

[0050] In FIG. **3**C there is shown a perspective view of a separator with a fluid stopping/flow-preventing ridge/rim. The ridge, located on the upper surface/side/facet of the separator, is shown to circle the center of the separator at a diameter which is smaller than the diameter of the separator.

[0051] One or more fluid stopping/flow-preventing ridge(s)/rim(s), in accordance with some embodiments, may accordingly run at different diameters/girths/circumferences, wherein at least one, of the one or more ridges, may run at a diameter/girth/circumference which is smaller than, but substantially close to, the diameter of the separator.

[0052] In FIG. **3**D there is shown a perspective view of a separator with a fluid/vapor absorption strip/area. The strip, located on the upper surface/side/facet of the separator, is shown to circle the center of the separator at a diameter range having an upper value which is similar to the diameter of the separator.

[0053] One or more fluid/vapor absorption strip(s)/area(s), in accordance with some embodiments, may accordingly run at different diameter/girth/circumference ranges, wherein at least one, of the one or more strip(s), may run at a diameter range having an upper value which is either equal to; or smaller than, but substantially close to, the diameter of the separator.

[0054] According to some embodiments, specific area(s) (e.g. edges of up facing facets), whole area(s) (e.g. all up facing facets), or the entire area (e.g. all up and down facing facets), of the top separator and/or the bottom separator may accordingly be covered by a fluid/vapor absorbing material/layer.

[0055] In FIG. **3**E there is shown a perspective view of a separator with a combination of two fluid collection/drainage channels—at a first diameter; and a fluid stopping/flow-preventing ridge/rim—at a second, greater diameter.

[0056] According to some embodiments, any combination of: fluid collection/drainage channel(s), fluid stopping/flow-preventing edge(s), fluid stopping/flow-preventing ridge(s)/rim(s) and/or fluid/vapor absorption strip(s)/area(s)—may be implemented on the top facing and/or the bottom facing facets of one or more separators of a device for separating components of a multi-component food item.

[0057] According to some embodiments, the connection strip of the device may comprise, on its outward facing side, a grabbing latch or grabbing strip for holding and withdrawing the device prior to the eating of the sandwich/hamburger. According to some embodiments, the grabbing latch may include a finger hole for inserting a finger into/through the grabbing latch as part of withdrawal of the device from a food item (e.g. a sandwich/hamburger). According to some embodiments, the grabbing latch may be connected to the connection strip by a bending line, allowing it to be folded upwards/downwards and onto the connection strip to create a single plane with it and with the device separators (e.g. when separators are open).

[0058] In FIG. **4** there is shown a perspective view diagram of an exemplary device for separating components of a multi-component food item, in accordance with some embodiments of the present invention, wherein the device includes a grabbing-latch/withdrawal-label and is shown inside a hamburger sandwich.

[0059] The shown grabbing-latch/withdrawal-label is connected to the connection strip by a bending line, allowing it to be folded upwards/downwards—in the direction of the curved arrows—and onto the connection strip. The shown grabbing-latch/withdrawal-label also includes a finger hole, allowing a user to insert a finger into/through the grabbing latch and pull it in the direction of the straight arrow—as part of withdrawal of the device from the shown sandwich/hamburger.

[0060] According to some embodiments, the connection strip of the device, connecting between the first separator and the at least second separator, may comprise multiple zigzag bends allowing it to stretch in and/or out—respectively shortening and lengthening the distance between the device separators—to accommodate various thicknesses of sandwich/hamburger filling/interior components.

[0061] In FIG. **5** there is shown a perspective view diagram of an exemplary device for separating components of a multi-component food item, in accordance with some embodiments of the present invention, wherein the separators are connected to each other by a zigzag pattern shaped connection strip and the device is shown inside a hamburger sandwich.

[0062] In the figure, the zigzagged connection strip is shown to connect between the top and bottom separators. The zigzagged connection strip is shown to include folding lines between (i.e. at the connecting lines of) each of its sections/straight-segments. The folding lines may facilitate the opening (i.e. stretching out) and closing (i.e. squeezing in) of the connection strip, respectively lengthening and shortening the distance between the device separators.

[0063] According to some embodiments, the folding lines of the zigzagged connection strip may be pre-folded in alternate directions—wherein each folding line is pre-folded in an opposite direction—such that the connection strip is biased to assume/return-to a zigzagged shape.

[0064] According to some embodiments, the device may include three, or more, separators, to allow for the separation of four food components or more. For example, components of a four (main) component hamburger by a three separators device, may include: a first separator separating between the bottom half of the hamburger bun and the meat patty; a second separator separating between the meat patty and a salad/vegetables component of the burger; and a third separator separating between the salad/vegetables and the top half of the hamburger bun.

[0065] In FIG. **6** there is shown a perspective view diagram of an exemplary device for separating components of a multi-component food item, in accordance with some embodiments of the present invention, wherein the device includes three separators and is shown inside a hamburger sandwich.

[0066] The device is shown to include: a bottom separator separating between the bottom half of the hamburger bun and the meat patty; a middle separator separating between the meat patty and a salad/vegetables component of the burger; and a top separator separating between the salad/vegetables and the top half of the hamburger bun. Each of the shown bottom, middle and top separators are connected to the connection strip by a bending line.

[0067] According to some embodiments, a device for separating components of a multi-component food item may be connected or integrated into a hamburger packaging box. According to some embodiments, the connection strip of the device may be connected to a food item packaging box (e.g. a hamburger box). The connection strip may, for example, be connected to the inner side of a of a paper food item package, such that when the package is opened the separators of the device are substantially horizontally oriented within the package, while being connected to one or more of the package's side walls by the connection strip. According to some embodiments, as part of a package-integrated device embodiment, the separators may be connected directly to one or more of the package's side walls, wherein the connection may include bending lines allowing for the separators to tilt up or down around their connection line axis.

[0068] In FIG. **7** there is shown a perspective view diagram of an exemplary device for separating components of a multi-component food item, in accordance with some embodiments of the present invention, wherein the device is integrated into a hamburger packaging box.

[0069] In the figure there is shown a device for separating components of a multi-component food item, connected to the inner side of a hamburger packaging box. The connection strip of the shown device is attached—for example: glued, pasted, fastened, secured, affixed, clipped, stapled, or otherwise connected—to the inner side of the wall of the hamburger packaging box, on the side of the box constituting the opening/closing axis of the box. The connection strip is shown to include three bending lines—one at the connection point of each of the separators, allowing them to

independently bend up and down; and one, substantially at the middle of the connection strip, overlapping the opening/closing axis of the box and enabling the connection strip to fold along the wall of the packaging box as it is opened and/or closed.

[0070] According to some embodiments, a device for separating components of a multi-component food item may be adapted to accommodate, and to separate among components of, various food types and items of different shapes and forms. A device for separating components of a multi-component food item may be accordingly fabricated to accommodate: a pizza—large and round, a sandwich—square or oval, a hotdog—elongated, or other multi-component food items.

[0071] In FIGS. **8**A-**8**C there are shown diagrams of exemplary devices for separating components of a multi-component food item, in accordance with some embodiments of the present invention, wherein shown devices include: a perspective view of a device hosting a pizza tray (**8**A), a perspective view of a device hosting a pizza slice (**8**B), a perspective view of a device inside a sliced meat/cheese sandwich (**8**C) and a perspective view of a device inside a hotdog and bun sandwich (**8**D).

[0072] In FIG. **8**A, the device is shown to have substantially large separators, to accommodate a pizza tray, connected to each other by a relatively wide and short (e.g. in comparison to the hamburger associated embodiments described herein) connection strip. The top separator of the shown device, includes foldable structures on its bottom facing surface, for preventing the bottom surface of the top separator from coming in contact with the top facing side of the pizza.

[0073] Foldable structure(s), in accordance with some embodiments, may have: a square, rectangular, trapezoid, triangular, or other shape; and may each be connected to the bottom surface of the top separator by a folding line, allowing for its folding onto the plane of the top separator and its opening to a substantially perpendicular angle with it. The foldable structures, in accordance with some embodiments, may be arranged on the bottom surface of the top separator: as shown in FIG. **8**A, along its sedges, substantially at its center and/or at any combination of these positions/arrangements.

[0074] In FIG. **8**B, the device is shown to have triangular (slice) shaped separators, to accommodate a pizza slice, connected to each other by a connection strip. The shown connection strip connects to the top and bottom separators.

[0075] In FIG. **8**C, the device is shown to have quadrilateral (substantially square/rectangular) separators, to accommodate a sandwich, connected to each other by a connection strip. The shown connection strip connects to the top and bottom separators, substantially at the middle of one of their four sides, by a folding line.

[0076] In FIG. **8**D, the device is shown to have elongated separators, to accommodate a hotdog or a sausage sandwich, connected to each other by a connection strip. The shown connection strip connects to the top and bottom separators, substantially at the middle of one of their two longer sides, by a folding line.

[0077] According to some embodiments, a process for separating components of a multi-component food item may include: (1) positioning a set of one or more bottom components of a multi-component food item; (2) placing a first separator of the device on top of the bottom components; (3) positioning a set of one or more interior components of the multi-component food item, on top of the first separator of the device; (4) bending the device at the folding line between the first separator and the connection strip upward; (5) bending the device at the folding line between the second separator and the connection strip to the side of the first separator, thus positioning the second separator on top of the interior components of the multi-component food item; and/or (6) positioning a set of one or more top components of the multi-component food item, on top of the second separator of the device.

[0078] According to some embodiments, step (4), or both step (4) and step (5)—of the above process for separating components of a multi-component food item—may be performed prior to the execution of step (3).

[0079] In FIG. **9** there is shown a flowchart of the main steps executed as part of a process for separating components of a multi-component food item, by utilization of an exemplary embodiment of the invention's device, in accordance with some embodiments of the present invention.

[0080] Shown steps include: (1) positioning a set of one or more bottom components of a multi-component food item; (2) placing a first (bottom) separator of the device on top of the bottom components; (3) positioning a set of one or more interior components of the multi-component food item, on top of the first (bottom) separator of the device; (4) bending the device at the folding line between the first separator and the connection strip upward; (5) bending the device at the folding line between the second (top) separator and the connection strip to the side of the first separator, thus positioning the second separator on top of the interior components of the multi-component food item; and (6) positioning a set of one or more top components of the multi-component food item, on top of the second separator of the device.

[0081] According to some embodiments of the present invention, a device for separating components of a multi-component food item, may comprise: a first separator and at least a second separator to partition among three or more parts of the multi-component food item; a connection strip for connecting between the first separator and the at least second separator at a distance allowing for their fitting into the food item, at, or in proximity of, the inward facing facets of two or more outer components of the food item; and, a first and at least a second folding lines, at the connection area of each of the separators to the connection strip, to enable the insertion of the device into the multi-component food item by facilitating the bending of the first separator and the at least second separator to form a substantially perpendicular angle with the connection strip.

[0082] According to some embodiments, the first separator, or the at least second separator, or both, may each include one or more fluid collecting, blocking and/or absorbing element(s). The fluid collecting, blocking and/or absorbing element(s) may be selected from the group consisting of: a fluid collection/drainage channel, a fluid stopping/flow-preventing edge, a fluid stopping/flow-preventing ridge/rim, a fluid/vapor absorption strip/area and/or others. The fluid collecting, blocking and/or absorbing element(s) may be located, at least on the up facing surface; of the bottom most separator, from within the first separator and the at least second separator.

[0083] According to some embodiments, the inward facing surfaces of at least the first separator may be covered by a layer of a material having substantially high heat insulation characteristics.

[0084] According to some embodiments, the device may comprise a grabbing latch, connected to the outer side of the connection strip, for holding and withdrawing the device from within the multi-component food item, prior to eating. The device may include a folding line at the connection area of the grabbing latch, to facilitate the bending of the grabbing latch upwards or downwards and onto the connection strip to create a single plane with it and with the device separators when the separators are open.

[0085] According to some embodiments, the connection strip may comprise multiple zigzagged bends, connected by folding lines to on another, allowing for the connection strip to stretch in or out—respectively shortening and lengthening the distance between the device separators—to accommodate various thicknesses of inner component(s) of the multi-component food item.

[0086] According to some embodiments, the first separator may be connected to the connection strip at one of its edges; and, the at least second separator may include one separator connected to the opposite edge of the connection strip and one separator connected to the middle section of the connection strip.

[0087] According to some embodiments, the device may comprise a food packaging box having an opening side and an axis side, wherein the food packaging box is connected, by the inward facing surface of its axis side, to the outer—facing away from the food-item—side of the connection strip.

[0088] According to some embodiments, the connection strip may be of a rectangular shape, wherein the two opposite longer sides of the rectangular connection strip connect to the first separator and the at least a second separator.

[0089] According to some embodiments, the bottom facing surface, of the top most separator of the separators, may comprise foldable structures for preventing the bottom facing surface of the top most separator from coming in contact with the top facing side of the food item; wherein the foldable structures may be connected to the bottom facing surface of the top most separator by folding lines.

[0090] According to some embodiments, the shape of the first separator and the at least a second separator, may be selected from the group consisting of a circle, a square, a rectangle, an ellipse, an oval shape, an elongated shape with round edges and/or of any other shape complementing a multi-component food item.

[0091] According to some embodiments, the outer components of the multi-component food item may be bread slices, the top and bottom halves of a bun and/or any other parts/sides of a pastry/baked component.

[0092] According to some embodiments of the present invention, a method for separating food components, by utilizing a device for separating food components of a multi-component food item, may include: positioning a set of one or more bottom components of the multi-component food item; placing a first (bottom) separator of the device on top of the bottom components; positioning a set of one or more interior components of the multi-component food item, on top of the first (bottom) separator of the device; bending the device at the folding line between the first separator and the connection strip upward; bending the device at the folding line between the second (top) separator and the connection strip to the side of the first separator, thus positioning the second separator on top of the interior components of the multi-component food item; and positioning a set of one or more top components of the multi-component food item, on top of the second separator of the device.

[0093] The subject matter described above is provided by way of illustration only and should not be constructed as limiting. While certain features of the invention have been illustrated and described herein, many modifications, substitutions, changes, and equivalents will now occur to those skilled in the art. it is, therefore, to be understood that the appended claims are intended to cover all such modifications and changes as fall within the true spirit of the invention.

1. A method for separating food components, by utilizing a device for separating food components of a multi-component food item, said method comprising:

positioning a set of one or more bottom components of the multi-component food item;

placing a first separator of the device on top of the one or more bottom components;

positioning a set of one or more interior components of the multi-component food item, on top of the first separator of the device;

bending the device at a folding line between the first separator and a connection strip;

bending the device at a folding line between a second separator and the connection strip, thus positioning the second separator on top of the interior components of the one or more multi-components of the multi-component food item; and

positioning a set of one or more top components of the multi-component food item, on top of the second separator of the device.

2. The method of claim **1**, wherein said positioning the second separator on top of the interior components of the one or more multi-components of the multi-component food item comprises positioning the second separator in parallel to the first separator at a direction identical to a direction the first separator is placed at.

3. The method of claim **1**, wherein said first and second separators comprise one or more layers of material.

4. The method of claim **1**, wherein said method further comprises collecting, blocking or absorbing food related fluids.

5. The method of claim **1**, wherein said method further comprises preventing food related fluids from reaching the edge of at least said first separator.

6. The method of claim **5**, wherein at least said first separator comprises a channel running near an edge of said at least first separator to form an enclosed area upon said at least first separator, thereby preventing the food related fluids from flowing out of the enclosed area and reaching the edge of said at least first separator.

7. The method of claim **5**, wherein at least said first separator comprises a fluid stopping edge or rim thereby preventing the food related fluids from reaching the edge of said at least first separator.

8. The method of claim **5**, wherein said at least first separator comprises a fluid absorption area thereby preventing the food related fluids from reaching the edge of said at least first separator.

9. The method of claim **1**, wherein said method comprises preventing inter-component cooling or heating of the multi-component food item by covering said first and second separators with a layer of heat insulating material.

10. The method of claim **1**, further comprising maintaining crispness of some or all of the food components of the multi-component food item.

11. The method of claim **1**, wherein said method comprises shortening or lengthening the distance between said first and second separators to accommodate various thicknesses of one or more inner components of the multi-component food item, by said connection strip comprising multiple zigzagged bends, connected by folding lines to one another, allowing for said connection strip to stretch in or out.

12. The method of claim **1**, further comprising placing a third separator connected to the connection strip between one or more interior components of the multi-component food item and further between said first separator and said second separator.

13. The method of claim **1**, further comprising packaging the separated food components of a multi-component food item within a packaging box.

14. The method of claim **13**, wherein said connection strip is connected to an inner side of the packaging box.

15. The method of claim **1**, further comprising folding foldable structures positioned on a bottom facing surface of the second separator, for preventing the bottom facing surface of the second separator from contacting a top facing side of a food item.

16. The method of claim **1**, wherein the shape of the first and second separators is a circle, a square, a rectangle, an ellipse, an oval shape, an elongated shape with round edges or any other shape complementing a multi-component food item.

17. The method of claim **1**, wherein the outer components of the multi-component food item are bread slices, top and bottom halves of a bun or any other parts or sides of a pastry or baked food component.

18. The method of claim **1**, wherein the multi-component food item is a multi-component sandwich.

19. The method of claim **1**, wherein the device is configured to enable withdrawing the device from the separated multi-component food item prior to eating the multi-component food item.

20. The method of claim **1**, wherein the connection strip comprises a grabbing latch for holding and withdrawing the device prior to eating the multi-component food item.

* * * * *