(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 2 835 324 A1

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
11.02.2015 Bulletin 2015/07

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

(21) Application number: **14179861.1**

(22) Date of filing: **05.08.2014**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME

(30) Priority: **05.08.2013 NL 2011270**

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(54) Backing board for supporting comestibles, assembly for displaying comestibles and method for manufacturing a backing board

(57) The invention relates to a backing board (18) for supporting a comestible such as fish or meat. The backing board is arranged to be received in a display container for one or more comestibles. The backing board comprises at least a first layer (11), and at least a second, top layer (12). The top layer is arranged to support the comestible. The backing board has a capillary space (19) under the top layer. The top layer comprises one or more perforations (13) for allowing the collection of comestible drip from the supported comestible in the capillary space. Further a display assembly is provided comprising the backing board. Also a method for manufacturing a backing board and a method of collecting comestible drip is provided.

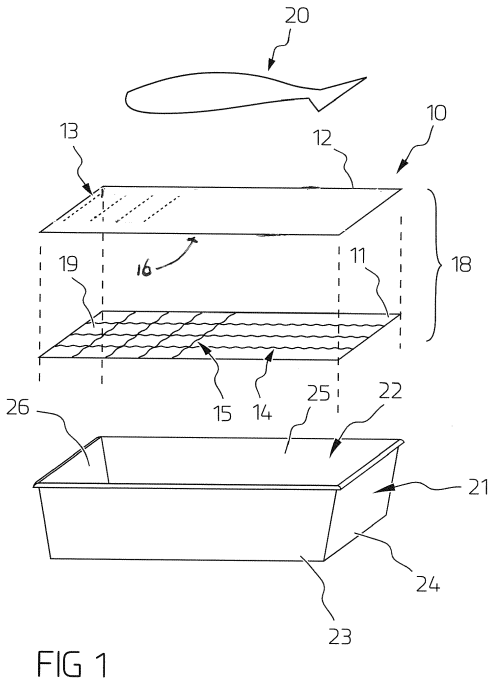

FIG 1

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Description

FIELD OF THE INVENTION

[0001] The invention relates to a backing board for supporting a comestible such as fish or meat. The invention also relates to an assembly for displaying a comestible comprising a backing board supporting the comestible held in a display container. The invention further relates to a method for manufacturing the backing board and a method for collecting comestible drip.

BACKGROUND

[0002] It is generally known to support a comestible, such as fish or meat, on a backing board. The backing board can offer support for the comestible. The backing board supports the comestible in the display container, e.g. when the display container and comestible are offered for sale in a grocery. In further embodiments the backing board can be used to support the comestible during processing, e.g. during transport or cleaning, prior to packaging. Further the backing board can support the comestible during packaging, e.g. when the backing board and comestible are put in a display container.

[0003] It is known to collect drip from the comestible using a sponge like material as backing board. Such a sponge like material has drawbacks. Amongst other drawbacks, the sponge like material is visible unattractive and is e.g. not rigid. To add rigidity the sponge like material is often strengthened using e.g. strengthening member, increasing the production costs. Carton can be biologically active.

[0004] WO 94/00366 discloses a tray for containing fluid-excluding foods, such as meat, fish and the like. The tray comprises a laminate having upper and lower laminate, with openings in the upper laminate. Fluid retaining cavities are formed in the lower laminate or between adjacent laminate to keep excluded liquids away from the food and out of sight of the purchaser. A capillary effect by the openings in the upper laminate makes the fluids flow to the cavities. Because of the small depth of the openings, the capillary action is limited, potentially resulting in residual fluids around the food, which is undesirable.

[0005] EP 0 743 262 A1 discloses a tray of plastic material for food substances which tend to release liquids. Foodstuffs are placed on an upper layer that is pierced by holes. Liquids flow through the holes and are absorbed by the underside of the upper layer, which has a rough surface and a close network of capillary channels for achieving the absorption effect. A space between the upper layer and a lower layer forms an interspace allowing the liquids to reach the underside of the upper layer. Potentially, liquids in the interspace that have not been absorbed yet may be squeezed back through the holes resulting in residual fluids around the food, which is undesirable.

[0006] It is a goal of the invention to provide an improved, preferably transparent, backing board that allows the collection of comestible drip. At least one of the drawbacks is to be overcome.

SUMMARY OF THE INVENTION

[0007] According to a first aspect a backing board for supporting a comestible such as fish or meat is provided. The backing board is arranged to be received in or to be an integral part of a display container for one or more comestibles. The container enables the transport of unit packages and allows putting the comestibles on display in a grocery to be sold.

[0008] In an embodiment the backing board comprises at least a first layer. The first layer has a surface and can be a sheet material. In an embodiment the backing board further comprises at least a second layer, e.g. a further sheet material. The second layer is the top layer of the backing board. The top layer is arranged to support the comestible. The layers are of comparable size. In some embodiment several second layers or several first layers can be used.

[0009] In an embodiment the top and first layers are arranged to have a capillary space under the top layer. Preferably a capillary space is formed under the top layer.

[0010] In an embodiment the top layer comprises one or more perforations for allowing the collection of comestible drip from the supported comestible in the capillary space. The perforation typically connects with the capillary space. Because perforations may be randomly applied to the top layer, one or more of the perforations may not be in connection with the capillary space.

[0011] The capillary action of the capillary space causes drip from the comestible to be transported into the perforations and towards capillary space. The capillary space between the layers is relatively large compared to the known alternative of having a capillary action in holes of the top layer. The capillary action by the capillary space between the layers results in a better transportation of the drip away from the comestible. Optionally, also the perforations provide a capillary action, further improving the transportation of the drip away from the comestible.

[0012] Accordingly, in an embodiment of the invention a more attractive two-layered backing board is provided. The two-layered backing board can have any one or combination of the following advantages: transparent, collecting drip preventing the container from getting wet/moist, collecting the drip separated from the comestible resulting in longer shelf life, biologically less active and can be provided with anti-slip for holding the comestible in position.

[0013] The one or more perforations can be arranged to effect a capillary action themselves too. The size of the perforations is preferably limited, e.g. smaller than 1 mm.

[0014] In an embodiment the backing board is an integral part of the display container. In such an embodiment

the first layer can be an integral part of the display container. The second, top, layer is mounted on the first layer of the display container. In an embodiment the first and second layers are brought together during a production process of the display container. In an embodiment the first and second layer are brought together during the packaging process of packaging a comestible in the display container.

[0015] In a preferred embodiment the backing plate including the two layers is a separate member that can be positioned into a display container. Preferably the backing plate is positioned inside the container during the packaging process, more preferably already supporting the comestible. The separate member allows for an efficient packaging process.

[0016] In a further embodiment the capillary space is formed between the two layers, that is to say sandwiched between the layers. This capillary space can be filled with a liquid as a result of a capillary action. The open area between two layers can effect a capillary action and the inventor surprisingly obtained the effect by bringing together two layers of material.

[0017] In an embodiment parts of the surfaces of the top and first layers are held together at a short distance. The capillary space can then be formed between the two layers held at a short distance. The short distance allows a capillary action as the surfaces of the first and second layers provide relatively large surfaces for interacting with the surface tension of the comestible drip. The capillary action will take in comestible drip, such as liquids. The short distance allows liquid to be taken in between the layers. The short distance can be less than 1mm, preferably less than 0.1mm, more preferably less than 0.05mm. The short distance can vary. In some embodiments the short distance is not or hardly visible: the layers are on top of each other, but can be separated from each other to form a tunnel with capillary action.

[0018] In an embodiment the two layered backing board comprises distance members. The distance members hold the first and second layers at a short distance forming an open capillary space between the layers.

[0019] In an embodiment the perforations of the top layer results in some residual material collecting at the side of the top layer facing the first layer. The residual material may result in a small spacing between the top layer and first layer. By puncturing the sheet material of the top layer some residual material can be left at the side of the top layer facing the first layer. In an embodiment that residual material can be used as a distance member, resulting in a small open volume at or around the puncture, which results in capillary action.

[0020] In an embodiment the distance member and connecting members between the first and second layers are integrally formed.

[0021] In an embodiment distance members are arranged between the first and second layer. E.g. a glue in between the (locally) coplanar layers will result in a short distance between the layers.

[0022] In an embodiment the first and top layers are connected. The layers are preferably locally connected. The connections are made at separate locations. Separate locations refer, throughout this disclosure, to the fact that a connecting line between two locations, where the layers are connected, comprises parts that are not connected. Between the separate connection locations surface areas of layers can be held at a short distance. Alternatively, the separate locations refer to randomly applied or ordered spot welded locations where the layers are connected. At the locations that are not spot welded the layers can be held at a short distance to allow the capillary space to be formed.

[0023] In an embodiment the top and first layers are connected by sealing. Sealing is preferred for connecting plastic layers.

[0024] In an embodiment the top and first layers are connected by connecting lines. A connecting line connects the layers along a line. By using connecting lines, it is prevented to connect large parts of the surfaces of the layers with each other. The connection lines hold the layers close together on either side of the line.

[0025] By connecting the layers at several separate locations, the capillary space can be split in several capillary pockets. A capillary pocket comprises an unconnected area of the two layers surround, for the most part, by a connection, preferably one or more connection lines between the layers. The connections between the layers, specifically connecting lines, can form at least two or more capillary pockets of closely held together top and first layers. The capillary pockets can function independently, collecting drip, but can also independently hold the drip.

[0026] In an embodiment each capillary pocket is connected to one or more perforations in the top layer for allowing comestible drip to enter the capillary pocket. Each pocket can be used for collection of drip.

[0027] In an embodiment the top layer has perforations at locations, at which between the top and first layer there is a capillary space. The perforations are preferably provided in proximity to the connections or connection lines holding the layers together. Near a connection the capillary action of the layers is maximum.

[0028] In an embodiment the backing board further comprises one or more extra containment spaces. The containment space can be formed between the top and first layers and has an open connection to the capillary space. The containment space is arranged to collect drip that entered the capillary space. The containment space provides an extra volume between the layers for the collection of drip.

[0029] In an embodiment the containment space is formed as a recess in the first layer. At the recess the first layer extends away from the top layer forming the containment space. By holding the two layers together, or preferably connecting the layers, still the recess will allow for a larger in between distance between the layers, creating the containment space.

[0030] In an embodiment the perforations are provided in the top layer at locations away from (sealing) connections between the top and first layers and away from an extra containment space formed between the top and first layer. The perforations form connections to the capillary space.

[0031] In an embodiment the perforations are needle punctures. The perforations can be at most 1 mm wide, preferably 0.05 mm - 1 mm wide, more preferably 0.1mm - 0.8 mm, most preferably 0.3 mm - 0.7 mm wide. Such perforations allow the capillary space to function.

[0032] In an embodiment the top surface has embossing and/or has spikes extending from an upper surface of the top layer for penetrating into the comestible. The embossing or spikes are arranged to hold the comestible in position during display and or transport of the backing plate.

[0033] Preferably the first layer and/or the top layer comprise a sheet material. In an embodiment the first layer and/or the top layer are formed from a sheet material. The first and second layer have surfaces that, at least locally, closely resemble, such that when the layers are brought together the layers are held at short distance from each other. Sheet material can be processed to obtain a desired surface. Preferably a flat surface is used. In an embodiment an undulated surface is used.

[0034] In an embodiment at least one layer comprises a transparent, colored or printed layer of sheet material. This provides a positive visual effect.

[0035] In an embodiment at least one of the layers of the backing board is a thermoformed sheet. This allows shaping the sheet to a desired shape and/or size.

[0036] In an embodiment at least one layer is a rigid sheet material. This provides rigidity of the backing board, which is advantageous for transport and support of the backing plate. In an embodiment at least one of the two layers is formed from a laminated sheet material. This allows combining several advantageous material properties in the layer material. In an embodiment a flexible sheet material forms the layers.

[0037] In an embodiment at least one layer comprises PS, PLA, PP, PET and/or PVC. In an embodiment at least one of the layers comprises foamed PS, PLA, PP and/or PET. Such materials are readily available and have proven positive properties to be used in combination with comestibles.

[0038] In an embodiment the layer is formed from a plastic material. In an embodiment the plastic is a hydrophilic plastic. In a further embodiment the plastic is a corona treated plastic. A corona treatment allows changing the surface energies of a material, improving the hydrophilic properties of the material. Specifically the surfaces of the layers facing each other are hydrophilic.

[0039] In an embodiment the containment space at least partly comprises a fluid absorbing material to increase the fluid storage capacity and/or improve the collection of the drip.

[0040] In an embodiment the backing board, or at least one of the layers, has one or more ridges extending in a direction of the backing board for providing additional stiffness in the direction of the backing board. The direction of the ridges is e.g. longitudinal, widthwise or diagonal. Such ridges can optionally be arranged to collect drip, e.g. by forming a containment space. Perforations can be made in the ridges. Preferably the ridges are lowered, i.e. extend under the general surface of the top layer.

[0041] According to a further aspect an assembly for displaying a comestible is provided. The assembly can comprise a comestible, a display container, optionally a transparent window and a backing board. The comestible, such as fish or meat, in particular one or more slices can be received in the assembly to be displayed.

[0042] In an embodiment the display container has a receiving space for the comestible. A transparent window can cover an open end of the display container and allows viewing of the comestible held in the receiving space of display container.

[0043] The backing board supports the comestible held in the display container. Optionally the backing board is transparent to enable viewing the comestible through the transparent window and the transparent backing board. The backing board can have any of the features disclosed herein.

[0044] In an embodiment the display container is a tray. The tray can have generally five walls surrounding the receiving space. Four walls can be arranged to configure the depth of the receiving space. An internal surface of the assembly can be positioned away from the open end and forms a viewing surface onto which the backing board is held. Such a tray can be used to display the comestible in a grocery.

[0045] In an embodiment the receiving space closed off by the cover has a product depth. The comestible received in the receiving space fills at most 90% of the product depth. In an embodiment the receiving space can be filled with an inert gas. In an embodiment the window comprises a transparent foil, preferably a sealing foil. Such a display container with window can be used for display in a grocery.

[0046] In an embodiment the comestible comprises one, two or more slices.

[0047] In an embodiment the backing board or a first layer of the backing board is an integral part of the display container.

[0048] According to a further aspect a method for manufacturing a backing board for supporting a comestible to be held in a display container is provided. The method according to the invention is directed at an efficient way for manufacturing, from readily available materials, a comestible drip absorbing backing board.

[0049] In an embodiment the method comprises providing a first layer of for example sheet material and providing a second, top layer of for example sheet material, the top layer arranged to support the comestible. The layers are held together, preferably connected, having a

capillary space between the two layers. In an embodiment the capillary space is formed between the layers. In an embodiment holding the layers together forms the capillary space. By holding the layers at a short distance a capillary action between the layers can be obtained.

[0050] In a further embodiment the method comprises providing perforations in the top layer for allowing the collection of comestible drip from the comestible supported by the top layer in the capillary space. The drip can penetrate the perforation and thereby reach the capillary space. The perforations can have a capillary action.

[0051] In an embodiment the layers are held together by sealing the layers. A sealing connection between plastic layers can be a cheap and efficient way for connecting. Surprisingly the connecting of layers can result in a manufacturing a backing plate having capillary effects.

[0052] In an embodiment the layers are held close together by connecting the layers at multiple and separate locations. The connections are such that between the separate locations the layers are held at a short distance from each other. The short distance, in the order of less than 1 mm, preferably less than 0.5 mm, results in a capillary action for collected drip.

[0053] In an embodiment the method comprises forming one or more containment spaces, wherein the containment space is connected to the capillary space, the containment space formed such that the layers are spaced apart more than the spacing distance between the layers in the capillary space. The containment space allows collecting a significant volume of drip in between the layers. The containment space can be formed in a single operation together with the capillary space, by holding, preferably connecting, the layers together.

[0054] In an embodiment the layers can be held at a short distance by residual material on a side of the top layer facing the first layer, formed by providing the perforation in the top layer. By puncturing the sheet material of the top layer some residual material can be left at the side of the top layer facing the first layer. In an embodiment that residual material can be used as a distance member, resulting in a small open volume at or around the puncture, which results in capillary action.

[0055] According to yet a further aspect a method for collecting comestible drip from a comestible is provided. The method comprises supporting the comestible using a backing board comprising two layers. The backing board has a capillary space under the top layer. The capillary space is formed between the two layers, preferably formed by holding the two layers at a short distance.

[0056] In an embodiment comestible drip is collected by the capillary action of perforations in the top layer of the backing board and/or the capillary space.

[0057] It will be clear that many embodiments are possible for applying the invention. The invention is limited by the claims only. Any combination of the features disclosed in this application, explicitly or implicitly, can be subject of the claims or divisional applications.

BRIEF DESCRIPTION OF THE DRAWINGS

[0058] The invention will further be described with reference to drawings, showing non-limiting exemplary embodiments of the invention, wherein:

Figure 1 shows an exploded view of display assembly according to a first embodiment;
Figure 2 shows a cross sectional view of a backing board according to an embodiment;
Figure 3 shows a cross sectional view of another embodiment of a display assembly; and
Figure 4 shows a cross sectional view of another embodiment of a backing board according to a further embodiment.

DETAILED DESCRIPTION OF THE DRAWINGS

[0059] Figure 1 shows an example of a display assembly 10 for displaying a comestible, such as a fish product 20. The assembly 10 comprises the fish product 20, a fresh fish, received in the receiving space 22 of a container 21 formed like a tray. The open end of the container 21 can be closed off using a cover or a seal, possibly at least partially formed from a transparent material having a transparent window. When the container is closed off and the fish is held inside, the fish may be viewed through the optional window. In case of a transparent foil as cover, the entire foil forms a window.

[0060] The container 21 has five walls, of which four standing side 23-26 are visible. The standing sides 23-26 surround the receiving space 22. A bottom side forms a fifth side. The comestible can have a product height of preferably at most 90% of the depth of the container 21. In some embodiments the window can be positioned in a cover increasing the product depth.

[0061] A backing board 18 is formed from two layers 11,12 of a sheet material. The two layers are shown in a separate form. In use the layers 11,12 are connected. Top layer 12 can support the comestible 20. Top layer 12 has perforations 13 of which only a part is shown. The perforations can be provided according to a pattern, but can also be provided at random. The perforations can be needle punctures.

[0062] One side of the second layer 12 faces the first layer 11. The other side of the second layer is arranged to support the comestible 20.

[0063] By perforating the top layer some residual material may be collected on a side 16 facing the first layer 11. Said residual material can form a distance member, holding the layers 11 and 12 at a short, e.g. less than 0.1mm, distance. Alternatively, the residual material may be removed before applying the top layer on the first layer or the top layer may be applied on the first layer such that the residual material is on the side of the top layer facing away from the first layer.

[0064] In the shown embodiment the layers 11,12 are generally of the same size. This however is not required.

Also multiple first and/or second layers can be used to form a backing board 18 according to the invention.

[0065] Although not visible in figures 1, both layers 11,12 are made from a transparent sheet material. In other embodiments the layers can be colored or printed. The first layer 11 and/or the second layer 12 can be formed from a laminated sheet material.

[0066] In an embodiment at least one of the layers of the backing board is a thermoformed sheet. This allows shaping the sheet to a desired shape and/or size. Figure 2 shows a thermoformed first layer 31.

[0067] An example of a thermoformed structure could be a layer having two ridges extending from left to right, formed as member providing rigidity to the layer. In another embodiment one of the layers can be made from an intrinsic rigid sheet material. The material or the strengthening member provides rigidity of the backing board, which is advantageous for transport and support of the comestible.

[0068] Suitable materials, from which any of the layers 11,12 can be made, comprise PS, PLA, PP, PET, PVC or foamed PS, PLA, PP, PET. Such materials are readily available and have proven positive properties to be used in combination with comestibles.

[0069] A first layer 11 and top layer 12 can be held together. In the shown embodiment glue or other connecting members are provided on the surface of the first layer 11 facing the second layer 12. The glue may be provided in a checkers pattern of horizontal 14 and vertical lines 15. The pattern results in closed areas, such as area 19. Although closed areas 19 are shown, the invention does not require complete enclosure of the area 19 by glue. Alternatively, the glue may be provided as dots.

[0070] The connecting member such as connection lines 14,15 are provided at separate locations. Between most of combinations of two random connection points on the connection lines 14,15 a line connecting the two points will cross positions without glue. At these locations the layers are not directly connected, but the layers 11,12 are held at a short distance because of the proximity connection lines 14,15.

[0071] When the layers 11, 12 are brought together the layers are connected across the connection lines 14,15. An area 19 will form a capillary space as the surfaces of the layers 11,12 are held at short distance from each other, resulting in a relative large surface area in relation to the available free volume. Capillary action is achieved.

[0072] To increase the capillary action between the surfaces of the facing layers 11,12 at least one, and preferably both layers are formed from hydrophilic material, such as a hydrophilic plastic. In a further embodiment the plastic is a corona treated plastic. A corona treatment allows changing the surface energies of a material, improving the hydrophilic properties of the material. Specifically the surfaces of the layers facing each other are hydrophilic. The hydrophilic property will further attract liquid, such as comestible drip.

[0073] The comestible drip can enter the capillary space formed between the layers 11,12, such as area 19, by penetrating the perforations 13. One or more perforations connect the upper side of the top layer 12, supporting the comestible, with the capillary space between the layers.

[0074] The backing board 18 is, in the embodiment of figure 1, formed prior to the processing and packaging of the comestible. At the processing and packaging facility for forming the display assembly, the backing board 18 can be used as a support for transport. Onto the backing board 18 the comestible 20 is positioned. The backing board 18 and comestible 20 can be processed, e.g. cleaned and transported, to be lifted and positioned together into the receiving space 22 of the container 21.

[0075] The backing board 18 can have reinforcement members. The reinforcement members can extend, e.g. longitudinally, widthwise or diagonally, along the layer and can support the comestible.

[0076] The open end of the container 21 can be closed using a cover or seal possibly providing a window to view the comestible held inside. During processing and packaging drip from the comestible can be collected through the perforations and into the capillary space or capillary.

[0077] According to the invention the backing board 18 comprising at least two layers collects the comestible drip, especially when the backing board 18 is received in the container 21 forming the display assembly. The backing plate can comprise further layers. In an embodiment a further layer is sandwiched between the top layer and first layer, e.g. a layer of non-woven material or an open cell structure material, that is arranged to additionally collect and maintain comestible drip.

[0078] The backing board can have further features / functionalities that improve the backing board functions.

[0079] Figure 2 shows a backing plate 30 in cross section. A first layer 31 and a second, top, layer 32 form the backing plate 30. Top layer 32 arranged to support the comestible is shown in cross section having a perforation 33. The perforation 33 can be a needle puncture of 0.03mm - 1mm in cross section, preferably about 0.4-0.6mm.

[0080] Layers 31,32 are formed from sheet material. The sheet material has a preferred thickness of about 0.05mm - 1mm, but larger thickness is possible. Exemplary sheet material of one or both of the layers 31,32 has a thickness of 100μm, 200μm or 300μm. Preferably the sheet material is somewhat flexible.

[0081] First layer 31 is formed having a U-shaped recess 36. The recess can extend over a significant part of a direction of the layer 31. It can be formed by thermoforming or another suitable technique. The recess can be several mm deep, e.g. 2-5mm.

[0082] The layers 31,32 are held at a short distance. A small open volume 37 or channel can exist between the layers 31,32. The flexibility of the layers can result in the layers coming at even closer distance.

[0083] The layers 31,32 may be held at a short distance by connections, such as a seal or glue 34,35. The connections can be connection lines extending over the surface of one or both layers. The seal can be a heat seal. In the drawing the connections 34,35 have a non-negligible height, resulting the layers being held apart a short distance of less than 0.5mm, preferably less than 0.2mm. A good working capillary space or capillary pockets are obtained by holding the layers less than 0.1mm apart or even less.

[0084] A capillary space is obtained according to the invention by holding the layers together, possibly connecting the layers, but providing unconnected surface of facing layers. The unconnected facing surface held a short distance of less than 0.5mm will, in combination with hydrophilic properties of the material show capillary action for comestible drip.

[0085] The small open volume 37 forms a capillary space, especially if the layer material is hydrophilic, e.g. a plastic with corona treatment. Both layers 31,32 can be corona treated.

[0086] Drip from comestible supported by the top layer 32 can reach the perforation 33 that is connected with the capillary space 37. The capillary action will collect the drip in the capillary space 37. Some drip will be able to reach the containment space 39 formed by the recess 36 extending away from the second layer 32. The drip that reaches the containment space 39 will be collected. The drip in the containment space will be prevented from leaving. A fluid absorbing material may be applied to at least a part of the containment space to increase the fluid storage capacity and/or improve the collecting of the drip.

[0087] In normal operation the second layer faces the comestible and faces the window of the display assembly. The capillary action causes drip to be absorbed in the containment space 39. Gravity may help the drip to be collected in the containment space 39 if the display assembly is in a substantially horizontal orientation with the comestible on top of the second layer, but also in e.g. a substantially vertical orientation wherein gravity is not directed to the second layer the drip can be absorbed due to the capillary action.

[0088] In other embodiments, wherein e.g. the display assembly is in normal operation held vertical, the recess 36 is positioned at a lower end of the backing board/display assembly.

[0089] Although not shown in figure 2 further layers can be sandwiched between the first and second layer.

[0090] In figure 3 the first layer 54 is shown as an integral part of the display container 50 of a display assembly 60. First layer 54 is the bottom side of container 50. A second, top, layer 51 having perforations 52 can be held at a short distance on top of the first layer 54 and can be connected thereto using sealing, seals or glue 53. As a result capillary space, or multiple capillary pockets are formed that, as a result of the capillary action, can collect comestible drip from a fish 55 via the perforation 52.

[0091] A cover 56 can be used to close off the open end of the container 50. The cover 56 may be partially transparent, resulting in a window, allowing a user, such as potential buyer, to see the comestible held inside the display assembly 60.

[0092] A lid of a hook part 57 and a corresponding notch 58 are formed on cover and container respectively for allowing the cover to engage the container. Other covers 56 can be formed by a plastic seal. Clearly many embodiments are possible to provide for a display assembly having similar functionalities as the display assembly described herein.

[0093] Figure 4 shows a further embodiment of a first undulating layer 70 and a second, top layer 71 having perforation 72 and supporting comestibles 73. A cam 74 provides further support for comestible and can also be a reinforcing member of the layer 71. The layers are held together to form the backing board 75 for supporting comestibles 73 using a seal 76 resulting in the formation of several capillary pockets 77,78 between the layers 70,71. The capillary pockets 77,78 are connected to extra containment spaces 79,80 formed by the undulations of first layer 70 extending away from the second layer. Any suitable manufacturing process can be used to form the undulations.

[0094] Any layer of any embodiment can be a laminate layer, e.g. comprising PE and PET.

[0095] Preferably the backing board is a rectangular board, but other geometric shapes are possible. Typically the backing board is about 5-40cm x 5-60cm wide, e.g. 5x5cm or 40x60cm. In an embodiment the backing board is about 15-25cm x 8-22cm wide.

[0096] The following clauses define exemplary embodiments of the invention.

Clause 1: A backing board for supporting a comestible such as fish or meat, the backing board arranged to be received in a display container for one or more comestibles, the backing board comprising at least a first layer and at least a second, top layer, the top layer arranged to support the comestible, wherein the backing board has a capillary space under the top layer, wherein the top layer comprises one or more perforations for allowing a collection of comestible drip, such as liquids, from the supported comestible in the capillary space, wherein the top layer and the first layer are held together at a short distance forming the capillary space between the two layers, the short distance being such that a capillary action is enabled in the capillary space for taking in the comestible drip.

Clause 2: The backing board according to clause 1, wherein distance members hold the layers at the short distance, the distance members optionally comprising residual material formed on a side of the top layer facing the first layer by perforating the top layer for forming the perforations.

Clause 3: The backing board according to any one

of the preceding clauses, wherein the top layer and the first layer are connected, preferably locally connected.

Clause 4: The backing board according to any one of the preceding clauses, wherein the top layer and the first layer are connected by one or more connecting lines, the connecting lines forming at least two or more capillary pockets of closely held together top layer and first layer, wherein each capillary pocket is connected to one or more perforations in the top layer for allowing comestible drip to enter the capillary pocket.

Clause 5: The backing board according to any one of the preceding clauses, wherein the top layer has perforations at locations at which between the top layer and the first layer there is a capillary space.

Clause 6: The backing board according to any one of the preceding clauses, wherein the backing board further comprises one or more extra containment spaces formed between the top layer and the first layer connected to the capillary space.

Clause 7: The backing board according to clause 6, wherein the containment space is formed in the first layer extending away from the top layer.

Clause 8: The backing board according to clause 6 or clause 7, wherein the perforations are provided in the top layer at locations away from (sealing) connections between the top layer and the first layer and away from an extra containment space formed between the top layer and the first layer.

Clause 9: The backing board according to clause 7 or clause 8, wherein at least a part of the containment space and/or the capillary space comprises a fluid absorbing material

Clause 10: The backing board according to any one of the preceding clauses, wherein the perforations are needle punctures, the perforations in an embodiment at most 1 mm wide, preferably 0.05mm - 1mm wide, more preferably 0.1mm - 0.8mm, most preferably 0.3mm - 0.7mm wide.

Clause 11: The backing board according to any one of the preceding clauses, wherein the top surface has embossing and/or has spikes extending from an upper surface of the top layer for penetrating into the comestible.

Clause 12: The backing board according to any one of the preceding clauses, wherein the first layer and/or the top layer comprises at least one of:

- a sheet material;
- a rigid sheet material;
- a laminated sheet material;
- a flexible sheet material;
- a transparent layer of sheet material;
- a colored layer of sheet material;
- a printed layer of sheet material;
- PS, PLA, PP, PET and/or PVC; or
- foamed PS, PLA, PP and/or PET.

Clause 13: The backing board according to any one of the preceding clauses, wherein the layer is formed from a plastic material, preferably a hydrophilic plastic, more preferably a corona treated plastic.

Clause 14: The backing board according to any of one the preceding clauses, wherein the backing board has one or more ridges extending, e.g. in a longitudinal, widthwise of diagonal direction, on the backing board for providing additional stiffness to the backing board.

Clause 15: An assembly for displaying a comestible comprising:

- a comestible, such as fish or meat, in particular one or more slices;
- a display container having a receiving space for the comestible;
- optionally a transparent window for viewing the comestible held in the receiving space of display container; and
- a backing board supporting the comestible held in the display container, wherein optionally the backing board is transparent for viewing the comestible through the transparent window and the backing board,

wherein the backing board is a backing board according to any one of the preceding clauses.

Clause 16: The assembly according to clause 15, wherein the backing board or a first layer of the backing board is an integral part of the display container

Clause 17: The assembly according to clause 15 or clause 16, the display container having an open end and optionally the window being part of a cover arranged on the open end for closing the receiving space of the display container.

Clause 18: The assembly according to any one of the clauses 15-17, wherein the display container is a tray, preferably having generally five walls surrounding the receiving space, wherein four walls are arranged to configure the depth of the receiving space, wherein preferably an internal surface of the assembly positioned away from the open end forms a viewing surface with backing board, onto which the backing board is preferably held.

Clause 19: The assembly according to any one of the clauses 15-18, wherein the receiving space closed off by the cover has a product depth, wherein the comestible received in the receiving space fills at most 90% of the product depth, and/or wherein the receiving space is filled with an inert gas and/or wherein the window comprises a transparent foil, preferably a sealing foil.

Clause 20: The assembly according to any one of the clauses 15-19, wherein the comestible comprises one, two or more slices.

Clause 21: A method for manufacturing a backing board for supporting a comestible to be held in a

display container, the method comprising:

providing a first layer of for example sheet material;
providing a second, top layer of for example sheet material, the top layer arranged to support the comestible;
holding, e.g. connecting, the top layer onto first layer forming a capillary space between the two layers; and
providing perforations in the top layer for allowing the collection of comestible drip, such as liquids, from the comestible supported by the top layer in the capillary space, wherein the top layer and the first layer are held together at a short distance forming the capillary space between the two layers, the short distance being such that a capillary action is enabled in the capillary space for taking in the comestible drip.

Clause 22: The method according to clause 21, wherein the layers are held together by connecting the layers at multiple and separate locations, such that between the separate locations the layers are held at the short distance from each other.
Clause 23: The method according to clause 21 or clause 22, wherein the layers are held together by sealing the layers.
Clause 24: The method according to any one of the clauses 21-23, wherein one or more containment spaces, the containment space being connected to the capillary space, are formed between the layers, such that the layers are spaced apart more than the spacing distance between the layers in the capillary space.
Clause 25: The method according to any one of the clauses 21-24, wherein providing the perforation in the top layer results in residual material on a side of the top layer facing the first layer, the residual material holding the first layer at the short distance from the top layer.
Clause 26: A method for collecting comestible drip from a comestible supported by a backing board comprising two layers held together with a capillary space formed between the layers, wherein comestible drip, such as liquids, is collected by a capillary action of perforations in the top layer of the backing board and/or the capillary space, wherein the layers are held together at a short distance forming the capillary space between the two layers, the short distance being such that the capillary action is enabled in the capillary space for taking in the comestible drip.

Claims

1. A backing board for supporting a comestible such as fish or meat, the backing board arranged to be received in a display container for one or more comestibles, the backing board comprising at least a first layer and at least a second, top layer, the top layer arranged to support the comestible, wherein the backing board has a capillary space under the top layer, wherein the top layer comprises one or more perforations for allowing a collection of comestible drip, such as liquids, from the supported comestible in the capillary space, wherein the top layer and the first layer are held together at a short distance forming the capillary space between the two layers, the short distance being such that a capillary action is enabled in the capillary space for taking in the comestible drip.

2. The backing board according to claim 1, wherein distance members hold the layers at the short distance, the distance members optionally comprising residual material formed on a side of the top layer facing the first layer by perforating the top layer for forming the perforations.

3. The backing board according to any one of the preceding claims, wherein the top layer and the first layer are connected by one or more connecting lines, the connecting lines forming at least two or more capillary pockets of closely held together top layer and first layer, wherein each capillary pocket is connected to one or more perforations in the top layer for allowing comestible drip to enter the capillary pocket.

4. The backing board according to any one of the preceding claims, wherein the backing board further comprises one or more extra containment spaces formed between the top layer and the first layer connected to the capillary space, wherein the containment space is preferably formed in the first layer extending away from the top layer.

5. The backing board according to claim 4, wherein the perforations are provided in the top layer at locations away from (sealing) connections between the top layer and the first layer and away from an extra containment space formed between the top layer and the first layer.

6. The backing board according to claim 4 or claim 5, wherein at least a part of the containment space and/or the capillary space comprises a fluid absorbing material.

7. The backing board according to any one of the preceding claims, wherein the perforations are needle punctures, the perforations in an embodiment at most 1 mm wide, preferably 0.05mm - 1mm wide, more preferably 0.1mm - 0.8mm, most preferably 0.3mm - 0.7mm wide.

8. The backing board according to any one of the preceding claims, wherein the backing board has one or more ridges extending, e.g. in a longitudinal, widthwise or diagonal direction, on the backing board for providing additional stiffness to the backing board, and wherein a ridge optionally forms a containment space.

9. The backing board according to any one of the preceding claims, wherein the top surface has embossing and/or has spikes extending from an upper surface of the top layer for penetrating into the comestible

10. An assembly for displaying a comestible comprising:

    a comestible, such as fish or meat, in particular one or more slices;
    a display container having a receiving space for the comestible;
    optionally a transparent window for viewing the comestible held in the receiving space of display container; and
    a backing board supporting the comestible held in the display container, wherein optionally the backing board is transparent for viewing the comestible through the transparent window and the backing board,

    wherein the backing board is a backing board according to any one of the preceding claims.

11. The assembly according to claim 10, wherein the backing board or a first layer of the backing board is an integral part of the display container.

12. A method for manufacturing a backing board for supporting a comestible to be held in a display container, the method comprising:

    providing a first layer of for example sheet material;
    providing a second, top layer of for example sheet material, the top layer arranged to support the comestible;
    forming a capillary space between the two layers by holding the top layer onto first layer; and
    providing perforations in the top layer for allowing the collection of comestible drip, such as liquids, from the comestible supported by the top layer in the capillary space, wherein the top layer and the first layer are held together at a short distance forming the capillary space between the two layers, the short distance being such that a capillary action is enabled in the capillary space for taking in the comestible drip.

13. The method according to claim 12, wherein the layers are held together by connecting the layers at multiple and separate locations, e.g. by sealing the layers, such that between the separate locations the layers are held at the short distance from each other.

14. The method according to any one of the claims 12-13, wherein one or more containment spaces, the containment space being connected to the capillary space, are formed between the layers, such that the layers are spaced apart more than the spacing distance between the layers in the capillary space.

15. The method according to any one of the claims 12-14, wherein providing the perforation in the top layer results in residual material on a side of the top layer facing the first layer, the residual material holding the first layer at the short distance from the top layer.

16. A method for collecting comestible drip from a comestible supported by a backing board comprising two layers held together with a capillary space formed between the layers, wherein comestible drip, such as liquids, is collected by a capillary action of perforations in the top layer of the backing board and/or the capillary space, wherein the layers are held together at a short distance forming the capillary space between the two layers, the short distance being such that the capillary action is enabled in the capillary space for taking in the comestible drip.

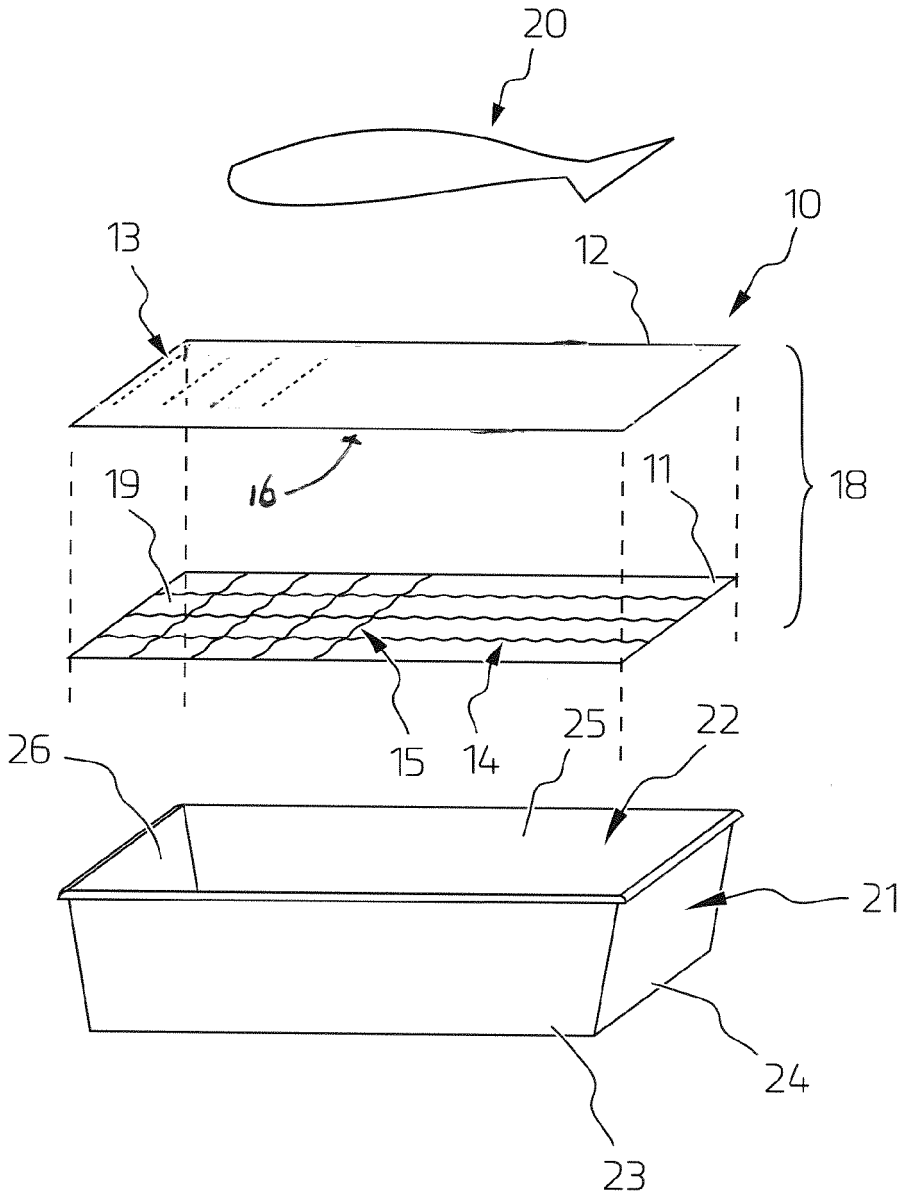

FIG 1

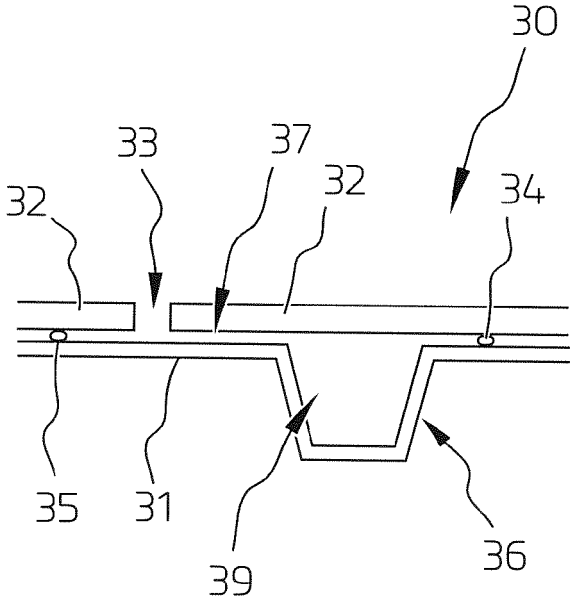

FIG 2

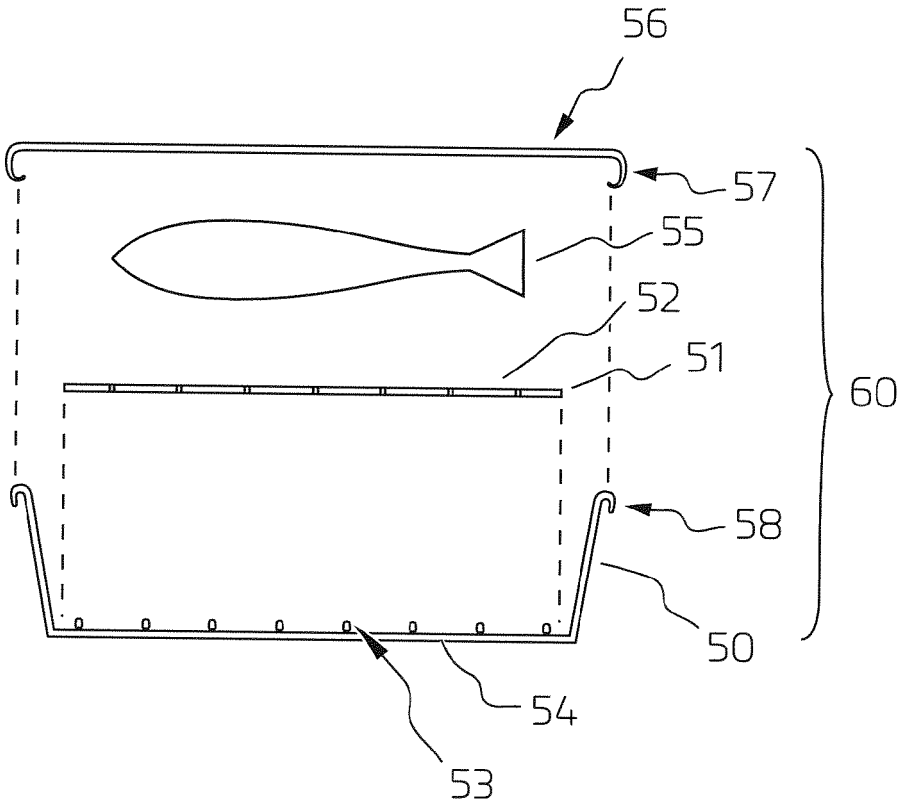

FIG 3

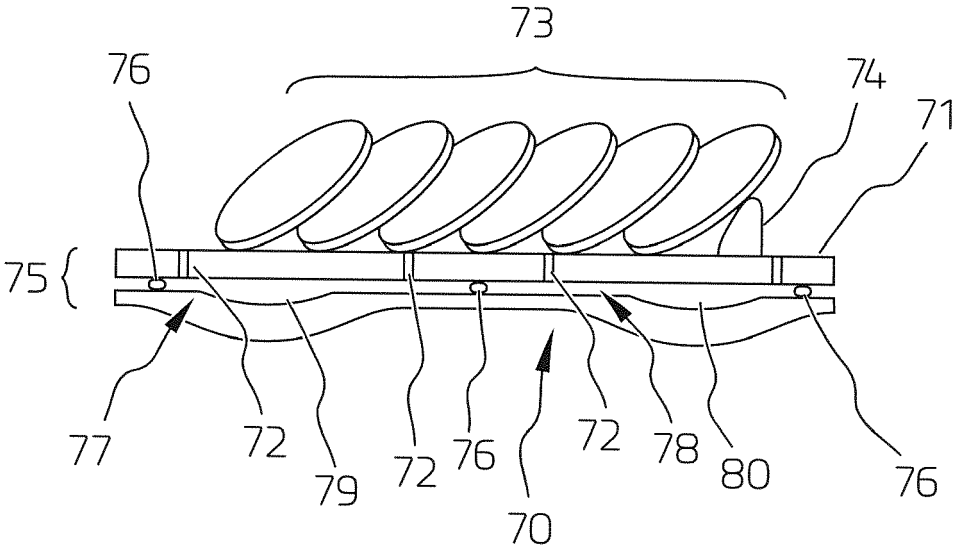

FIG 4

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EUROPEAN SEARCH REPORT

Application Number
EP 14 17 9861

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Place of search	Date of completion of the search	Examiner
Munich	18 September 2014	Leijten, René

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