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

(11) **EP 4 537 677 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
16.04.2025 Bulletin 2025/16

(21) Application number: **24205219.9**

(22) Date of filing: **08.10.2024**

(51) International Patent Classification (IPC):
A24B 13/00 *(2006.01)* ***A24F 23/02*** *(2006.01)*

(52) Cooperative Patent Classification (CPC):
A24B 13/00; A24F 23/02

(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 ME MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA
Designated Validation States:
GE KH MA MD TN

(30) Priority: **10.10.2023 FI 20236121**

(71) Applicant: **Wellgio Medical Oy Ltd.**
00200 Helsinki (FI)

(72) Inventor: **Aalto, Juha**
00200 Helsinki (FI)

(74) Representative: **Primrose Oy**
Unioninkatu 24
00130 Helsinki (FI)

(54) ORAL SNUFF PRODUCT AND METHOD FOR MANUFACTURING ORAL SNUFF PRODUCT

(57) The invention relates to an oral snuff product and a method for manufacturing the same. The oral snuff product comprises a filling material (2), and a saliva-permeable sheet material (20) arranged to form a snuff pouch (10). The saliva-permeable sheet material (20) is arranged to form outer surface of the snuff pouch (10) and provide surface characteristics of the outer surface (17) of the snuff pouch (10). The saliva-permeable sheet material (20) is provided with one or more surface features (30, 32, 34, 36, 37, 38, 39), the one or more surface features (30, 32, 34, 36, 37, 38, 39) being configured to alter the surface characteristics of the outer surface (17) of the snuff pouch (10) provided by the saliva-permeable sheet material (20) for generating visual identifier to the snuff pouch (10).

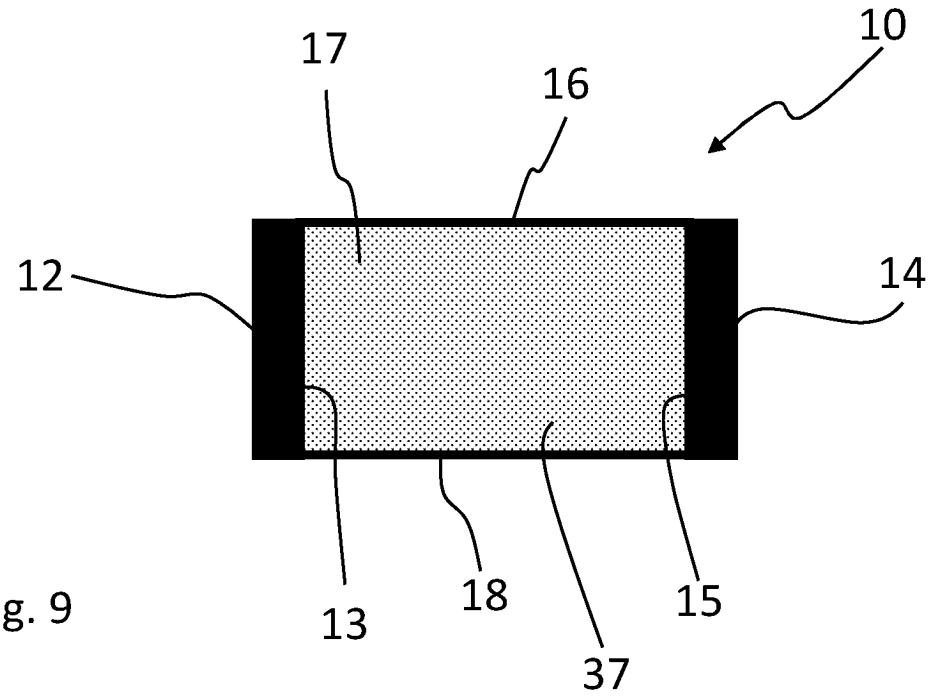

Fig. 9

EP 4 537 677 A1

Description

FIELD OF THE INVENTION

[0001] The present invention relates to an oral snuff product and more particularly to an oral snuff product according to preamble of claim 1. The present invention further relates to method for manufacturing an oral snuff product and more particularly to a method according to preamble of claim 7.

BACKGROUND OF THE INVENTION

[0002] Snuff which is intended for oral use is usually packed into separate dosage pouches. In the term "snuff" means smokeless tobacco product, nicotine product, or any other medical or non-medical product intended for oral use via oral mucosa.

[0003] For example, smokeless tobacco for oral use comprises chewing tobacco, dry snuff and moist snuff. The snuff in the present invention means moist snuff products.

[0004] The snuff is usually portion-packed in a saliva-permeable, porous wrapper material forming a dosage pouch. The snuff pouch encloses the snuff inside the snuff pouch which is sealed to keep the snuff inside. Pouched snuff is typically used by a user by placing the pouch between the upper or lower gum and the lip and keeping the pouch there in place for a limited period of time. The pouch material holds the snuff inside the snuff pouch while allowing saliva to pass into the pouch and allowing snuff, or ingredients thereof, to diffuse into a mouth of the user.

[0005] The snuff pouches are packed as separate dosage pouches in a snuff packaging which form a container for storing several separate dosage pouches. There are numerous different kinds of snuff types which have for example different flavours and/or different amounts of nicotine.

[0006] One of the problems associated with the prior art is that packing different types of snuff pouches in one snuff packaging is difficult as the different snuff pouches are manufactured at different productions lines or at different times. This either requires complicated manufacturing processes and equipment and manual labour.

BRIEF DESCRIPTION OF THE INVENTION

[0007] An object of the present invention is to provide an oral snuff product and a method for manufacturing an oral snuff product so as to solve or at least alleviate the prior art disadvantages.

[0008] The objects of the invention are achieved by an oral snuff product which is characterized by what is stated in the independent claim 1. The objects of the invention are further achieved with a method which is characterized by what is stated in the independent claim 7.

[0009] The preferred embodiments of the invention are disclosed in the dependent claims.

[0010] The invention is based on the idea of providing an oral snuff product comprising a filling material, and a saliva-permeable sheet material. The saliva-permeable sheet material is arranged to form a snuff pouch and enclose the filling material inside the snuff pouch. The saliva-permeable sheet material is further arranged to form outer surface of the snuff pouch and provide surface characteristics of the outer surface of the snuff pouch.

[0011] The saliva-permeable sheet material is provided with one or more surface features. The one or more surface features are configured to alter the surface characteristics of the outer surface of the snuff pouch provided by the saliva-permeable sheet material for generating visual identifier to the snuff pouch.

[0012] Accordingly, the saliva-permeable sheet material is provided with one or more surface features which alter the surface characteristics of the of the saliva-permeable sheet material. The one or more surface features are configured to alter the surface characteristics of the of the saliva-permeable sheet material such that a visual identifier is generated to the snuff pouch and outer surface thereof.

[0013] The visual identifier enables identifying the oral snuff product based on the one or more surface features. Therefore, the oral snuff products provided with the one or more surface features during manufacturing process may be sorted, selected and packed to a snuff packaging product based on the one or more surface features. This makes packing different types of oral snuff products in one snuff packaging is efficient.

[0014] In some embodiments, the one or more surface features are provided to indicate type of the oral snuff product or ingredients or characteristics of the filling material in the oral snuff product. Thus, the one or more surface features are indicative of the type of the oral snuff product or ingredients or characteristics of the filling material in the oral snuff product.

[0015] The one or more surface features provide an additional advantage as the types of the oral snuff products in the snuff packaging may be verified visually after packing into the snuff packaging. This enhances safety.

[0016] In the context of this application the term filling material comprises all snuff materials which are intended for use orally in an oral snuff pouch allowing the filling material to diffuse into a mouth of the user. Accordingly, the filling material, of snuff, means for example smokeless tobacco material, nicotine containing material, or any other medical or non-medical material intended for oral use via oral mucosa.

[0017] In the context of this application, the saliva-permeable sheet material which configured to allow saliva to pass into the snuff pouch formed by the saliva-permeable sheet material and to allow the filling material, or ingredients thereof, to diffuse into a mouth of the user.

[0018] In some embodiments, and usually, the saliva-permeable sheet material is a nonwoven fabric material.

[0019] The saliva-permeable sheet material is further a

material which is suitable for internal use in the mouth of the user.

[0020] The visual identifier means any physical feature which is visually identifiable from the outer surface of the saliva-permeable sheet material. Accordingly, the one or more surface features are configured to alter the surface characteristics of the saliva-permeable sheet material in manner providing the visual identifier. The saliva-permeable sheet material has surface characteristics of the raw material and the one or more surface features are configured to alter the surface characteristics of the raw material.

[0021] The surface characteristics of the snuff pouch mean any visible surface characteristics. Thus, the surface characteristics comprise visual surface characteristics such as colour of the saliva-permeable sheet material, coating or the like provided to the saliva-permeable sheet material. The surface characteristics further comprise structural surface characteristics such as shape, texture, pattern, or the like.

[0022] As visual identifier is generated by altering the surface characteristics of the saliva-permeable sheet material there is no need to remove anything from the oral snuff product before use by the user. Therefore, the identifier material added to the saliva-permeable sheet material is provided as suitable for safe use orally in mouth of the user.

[0023] The one more surface features are provided by modifying the saliva-permeable sheet material.

[0024] The one more surface features are provided by modifying the saliva-permeable sheet material such that one or more permanent surface features are provided to the saliva-permeable sheet material.

[0025] The saliva-permeable sheet material is provided with one or more permanent surface features. The one or more permanent surface features are provided by modifying the saliva-permeable sheet material or the structure of the saliva-permeable sheet material.

[0026] The one more surface features are provided as one more permanent surface features by modifying material structure of the saliva-permeable sheet material such that the surface characteristics of the snuff pouch are permanently changed.

[0027] Accordingly, the structure of the saliva-permeable sheet material is modified such that the surface characteristics of the snuff pouch are permanently changed. Thus, no additional material is added to the snuff pouch and the saliva-permeable sheet material. This makes the manufacturing process effective and simple.

[0028] In the context of this application, modifying the structure of the saliva-permeable sheet material means that the structure is modified permanently without adding material to the saliva-permeable sheet material. Modifying the structure means that material is removed, melted or heat treated such that the structure of the material is permanently changed.

[0029] Modifying the structure of the saliva-permeable sheet material means modifying the surface characteristics without bending, folding, creating bulges or depressions or printing. Modifying the structure of the saliva-permeable sheet material means modifying the surface characteristics without adding material to the saliva-permeable sheet material.

[0030] In some embodiments, the at least of the one more surface features comprise a permanent engraving on the outer surface of the snuff pouch provided by engraving the saliva-permeable sheet material.

[0031] The engraving means any surface feature which is provided by removing material from the saliva-permeable sheet material such that the surface characteristics of the snuff pouch are changed. Providing the surface feature as an engraving enable providing the visual identifier to the snuff pouch without adding material to the saliva-permeable sheet material.

[0032] The engraving is provided with any suitable engraving technique and equipment such as laser engraving.

[0033] In some embodiments, the at least of the one more surface features comprise a permanent etching on the outer surface of the snuff pouch provided by etching the saliva-permeable sheet material.

[0034] The etching means any surface feature which is provided by removing material from the saliva-permeable sheet material such that the surface characteristics of the snuff pouch are changed. Providing the surface feature as an etching enable providing the visual identifier to the snuff pouch without adding material to the saliva-permeable sheet material.

[0035] The etching is provided with any suitable etching technique and etching such as chemical etching.

[0036] In some embodiments, the at least of the one more surface features comprise a marking on the outer surface of the snuff pouch provided by processing the saliva-permeable sheet material such that the structure of the saliva-permeable sheet material is modified.

[0037] The marking means any surface feature which is provided by modifying the saliva-permeable sheet material such that the surface characteristics of the snuff pouch are changed but without adding any material. Providing the surface feature as a marking enables providing the visual identifier to the snuff pouch without adding material to the saliva-permeable sheet material.

[0038] The marking is provided with any suitable marking technique and equipment such as laser marking. The marking may be carried out for example with UV laser (ultraviolet laser), CO_2 laser or infrared laser. Laser marking causes change in colour or hue of the saliva-permeable sheet material. Thus, the visual appearance of the outer surface of the snuff pouch changes without any material being removed.

[0039] The at least of the one more surface features comprise a permanent marking or permanent laser marking on the outer surface of the snuff pouch provided.

[0040] In some embodiments, the at least of the one more surface features comprise a marking on the outer surface of the snuff pouch provided by heat treating the

saliva-permeable sheet material.

[0041] The marking by heat treating means any surface feature which is provided by modifying the saliva-permeable sheet material with heat such that the surface characteristics of the snuff pouch are changed but without adding any material.

[0042] The making by heat treating is provided with any suitable heat treating method and equipment. The marking by heat treating may be provided by laser, ultrasonic marking, or the like.

[0043] The heat treating is arranged to permanently change the structure of the saliva-permeable sheet material such that the surface characteristics of the snuff pouch are permanently changed. Thus, no additional material is added to the snuff pouch and the saliva-permeable sheet material.

[0044] The heat treating is arranged to change the structure of the saliva-permeable sheet material by melting the saliva-permeable sheet material such that the surface characteristics of the snuff pouch are permanently changed. The melting provides the marking to the snuff pouch.

[0045] Melting changes the structure of the saliva-permeable sheet material and provides permanently modified surface characteristics.

[0046] Accordingly, the saliva-permeable sheet material is provided with one or more surface features provided melting the saliva-permeable sheet material.

[0047] The at least of the one more surface features comprise a permanent melted marking on the outer surface of the snuff pouch provided by melting the saliva-permeable sheet material.

[0048] The one or more surface features are provided to the outer surface of the snuff pouch.

[0049] The outer surface of the snuff pouch comprises one or more seals and plain area outside the seals.

[0050] In some embodiments, the one or more surface features are provided to the plain area of the outer surface outside the seals of the snuff pouch.

[0051] In some embodiments, the one or more surface features are provided to one or more of the seals of the snuff pouch.

[0052] In some embodiments, the one or more surface features are provided to the plain area of the outer surface outside the seals of the snuff pouch and to one or more of the seals of the snuff pouch.

[0053] In some embodiments, the one more surface features comprise one or more of the following: a visual identified code, a visual identifier symbol, a visual identifier pattern, a visual identifier colour, and a visual machine readable code.

[0054] The visual identified code may comprise text and/or numbers or other characters.

[0055] The visual identifier pattern may comprise any patter or design provided on the outer surface of the snuff pouch.

[0056] The visual identifier colour may be any colour provided to the outer surface of the snuff pouch by altering the surface characteristic of the saliva-permeable sheet material.

[0057] The visual machine readable code may be QR-code or a barcode or the like which may be read by machine.

[0058] In some embodiments, the surface feature, such as the visual identified code, visual identifier symbol, visual identifier pattern, visual identifier colour, and visual machine readable code, is provided locally on the outer surface of the snuff pouch such that the surface feature covers only a part or subarea of the outer surface of the snuff pouch.

[0059] In some embodiments, the surface feature, such as the visual identifier pattern and visual identifier colour, is arranged to cover the entire outer surface of the snuff pouch.

[0060] The present invention is further based on the idea of providing a snuff packaging product comprising a container having a container base forming a receptacle configured to receive plurality of oral snuff products and a container lid removably attached to the container base. The snuff packaging product further comprises a plurality of oral snuff products provided into the container base. The oral snuff products are oral snuff products as described above.

[0061] In some embodiments, the plurality of oral snuff products are provided with similar one or more surface features.

[0062] In some embodiments, at least two of the oral snuff products are provided with different one or more surface features.

[0063] Further, in some embodiments, each of the oral snuff products is provided with one or more unique surface features.

[0064] The one or more surface features enable visually identifying the oral snuff products and/or visually separate different types of oral snuff products from each other.

[0065] The present invention is further based on the idea of providing a method for manufacturing an oral snuff product. The method comprises providing a snuff pouch from a saliva-permeable sheet material such that the saliva-permeable material forms outer surface of the snuff pouch and provides surface characteristics of the outer surface of the snuff pouch. The snuff pouch comprises a filling material enclosed inside the snuff pouch formed by the saliva-permeable sheet material. The method further comprises generating one or more surface features by altering surface characteristics of the outer surface of the snuff pouch provided by the saliva-permeable sheet material for providing visual identifier to the snuff pouch. The method comprises altering surface characteristics of the outer surface of the snuff pouch by modifying material structure of the saliva-permeable sheet material for generating the one or more surface features.

[0066] The visual identifier enables identifying the oral snuff product based on the one or more surface features.

Therefore, the oral snuff products provided with the one or more surface features during manufacturing process may be sorted, selected and packed to a snuff packaging product based on the one or more surface features. This makes packing different types of oral snuff products in one snuff packaging is efficient.

[0067] In some embodiments, the method comprises altering surface characteristics outer surface of the snuff pouch by modifying material structure of the saliva-permeable sheet material such that visual properties of the saliva-permeable sheet material are changed for generating the one or more surface features.

[0068] Modifying the visual properties of the saliva-permeable sheet material is carried out by subjecting the saliva-permeable sheet material locally or fully to a modifying process with any suitable technique or equipment. Modifying may be carried out for example by laser marking, engraving, etching, heat treating or the like.

[0069] In some embodiments, the method comprises altering surface characteristics outer surface of the snuff pouch by modifying material structure of the saliva-permeable sheet material for generating the one or more surface features.

[0070] Modifying the material structure of the saliva-permeable sheet material is carried removing material from the saliva-permeable sheet material locally or fully or subjecting the saliva-permeable sheet material locally or fully to heat treatment. The modifying material structure of the saliva-permeable sheet material can be carried out with any know modification technique and equipment configured to modify the material structure of the saliva-permeable sheet material without adding material to the saliva-permeable sheet material.

[0071] In some embodiments, the method comprises engraving the saliva-permeable sheet material such that material structure of the saliva-permeable sheet material is modified for providing the one more surface features on the outer surface of the snuff pouch.

[0072] In some other embodiments, the method comprises etching the saliva-permeable sheet material such that material structure of the saliva-permeable sheet material is modified for providing the one more surface features on the outer surface of the snuff pouch.

[0073] In some further embodiments, the method comprises marking or laser marking the saliva-permeable sheet material such that material structure of the saliva-permeable sheet material is modified for providing the one more surface features on the outer surface of the snuff pouch.

[0074] In some yet further embodiments, the method comprises heat treating or welding or melting the saliva-permeable sheet material such that material structure of the saliva-permeable sheet material is modified for providing the one more surface features on the outer surface of the snuff pouch.

[0075] In some embodiments, the method comprises forming the snuff pouch from the saliva-permeable sheet material and proving the filling material inside the snuff pouch. The method further comprises generating one or more surface features to the saliva-permeable sheet material before forming the snuff pouch from the saliva-permeable sheet material.

[0076] This enables generating one or more surface features to the saliva-permeable sheet material when the filling material is not in contact with the saliva-permeable sheet material.

[0077] In some embodiments, the method comprises forming the snuff pouch from the saliva-permeable sheet material and proving the filling material inside the snuff pouch. The method further comprises generating one or more surface features to the saliva-permeable sheet material during forming the snuff pouch from the saliva-permeable sheet material.

[0078] In some embodiments, the method comprises forming the snuff pouch from the saliva-permeable sheet material and proving the filling material inside the snuff pouch. The method further comprises generating one or more surface features to the saliva-permeable sheet material after forming the snuff pouch from the saliva-permeable sheet material.

[0079] This enables generating one or more surface features to the saliva-permeable sheet material based on the filling material enclosed inside the formed oral snuff product.

[0080] Forming the snuff pouch comprises folding and sealing the saliva-permeable sheet material to form a closed snuff pouch enclosing the filling material. The formed seals close the snuff pouch.

[0081] The sealing is carried out with a sealing method and with a sealing device.

[0082] The sealing is preferably carried out by non-additive bonding the saliva-permeable sheet material to bond the folds of the saliva-permeable sheet material together for forming the closed snuff pouch. The sealing is carried out with a non-additive sealing method and with a non-additive sealing device.

[0083] Non-additive sealing means that no adhesive material or glue is used for forming the seals.

[0084] The sealing is carried out by non-additive welding the saliva-permeable sheet material to bond the folds of the saliva-permeable sheet material together for forming the closed snuff pouch. The sealing is carried out with a non-additive welding method and with a non-additive welding device.

[0085] The welding is carried out by laser welding or ultrasonic welding. The laser welding, non-additive welding, or the ultrasonic welding enable providing the seal and bonding by melting the saliva-permeable sheet material. Thus, no glue or other adhesives are needed. The welding is carried out with a laser welding method and with a laser welding device. The laser welding device comprises a laser source. The welding is carried out with an ultrasonic welding method and with an ultrasonic welding device. The ultrasonic welding device comprises an ultrasonic vibration source.

[0086] In some embodiments, the method comprises

altering the surface characteristics of the outer surface of the snuff pouch by modifying material structure of the saliva-permeable sheet material with the sealing method and/ or with the sealing device.

[0087] In some embodiments, the sealing is carried out by non-additive welding method and the surface characteristics of the outer surface of the snuff pouch are carried out by modifying material structure of the saliva-permeable sheet material by the non-additive welding method.

[0088] The sealing is carried out by non-additive welding device and the surface characteristics of the outer surface of the snuff pouch are carried out by modifying material structure of the saliva-permeable sheet material by the non-additive welding device. The surface characteristics of the outer surface of the snuff pouch are carried out before, after or during the sealing with the sealing method and/or sealing device.

[0089] Utilizing the sealing method and/or sealing device for providing the one or more surface features enables simple and efficient manufacturing the oral snuff product.

[0090] In some embodiments, the sealing is carried out by non-additive laser welding or ultrasonic welding and the surface characteristics of the outer surface of the snuff pouch are carried out by modifying material structure of the saliva-permeable sheet material by the non-additive laser welding or ultrasonic welding. The sealing is carried out by non-additive laser welding device or ultrasonic welding device and the surface characteristics of the outer surface of the snuff pouch are carried out by modifying material structure of the saliva-permeable sheet material by the non-additive laser welding device or ultrasonic welding device. The surface characteristics of the outer surface of the snuff pouch are carried out before, after or during the sealing with the laser welding or ultrasonic welding and/or laser welding device or ultrasonic welding device.

[0091] The one or more surface features are provided with same method and/or device with the sealing of the snuff pouch.

[0092] In some embodiments, the method comprises sorting the formed snuff pouch provided with the one or more surface features based on the one or more surface features.

[0093] This enables separating formed snuff pouches from each other based on the one or more surface features.

[0094] In some embodiments, the method comprises sorting the formed snuff pouch provided with the one or more surface features into a snuff packaging product based on the one or more surface features.

[0095] This enables sorting formed snuff pouches into snuff packaging products based on the one or more surface features.

[0096] In some embodiments, the method comprises detecting one or more surface features of the saliva-permeable sheet material of the snuff pouch and sorting the snuff pouch based on the detected one or more surface features.

[0097] In some embodiments the method comprises scanning the one or more surface features of the saliva-permeable sheet material of the snuff pouch with an optical scanner and sorting the snuff pouch based on the scanned one or more surface features.

[0098] The optical scanner together with the one or more surface features enables automatic sorting of snuff pouches into snuff packaging.

[0099] An advantage of the invention is that the one or more surface features provided on the outer surface of the snuff pouch enable different types of oral snuff products packed in one snuff packaging even if they are manufactured at different productions lines or at different times. Further advantage is that the types of oral snuff products packed in a snuff packaging may be verified.

BRIEF DESCRIPTION OF THE DRAWINGS

[0100] The invention is described in detail by means of specific embodiments with reference to the enclosed drawings, in which

Figures 1 to 3 show schematically an example of a conventional oral snuff product;

Figures 4 to 10 show schematically different embodiments of an oral snuff product according to the present invention;

Figures 11 and 12 show schematically an embodiment of a snuff packaging product comprising several oral snuff products according to the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0101] Figures 1 to 3 show schematically an oral snuff product. The oral snuff product 10 comprises a snuff pouch 10 formed from a saliva-permeable sheet material 20. The saliva-permeable sheet material 20 is folded and sealed to form the closed snuff pouch 10 enclosing filling material. The saliva-permeable sheet material 20 is configured to allow saliva pass through inside the closed snuff pouch 20 and allowing the filling material, or ingredients thereof, to diffuse into a mouth of the user.

[0102] The snuff pouch 10 may be folded and sealed in numerous different ways and the present invention is not restricted to any specific way.

[0103] The closed snuff pouch 10 defines inside the snuff pouch 10 an inner space in which the filing material is provided.

[0104] The snuff pouch 10 of figures 1 to 3 comprises a first end 12 provided with first end seal 13 and second end 14 provided with a second end seal 15. The snuff pouch 10 further comprises first side 16 and a second side 18 extending between the first end 12 and the second end 14.

[0105] Figure 1 shows the snuff pouch 10 from an

upper side and figure 2 shows the snuff pouch from bottom side. The bottom side is provided with a longitudinal seal 19 extending between the first end 12 and the second end 14, or between the first end seal 13 and the second end seal 15.

[0106] Figure 3 shows schematically a side view of the snuff pouch 10 and the filling material 2 enclosed inside inner space of the snuff pouch 10.

[0107] The saliva-permeable sheet material 20 is arranged to form the snuff pouch 10 and the outer surface 17 of the snuff pouch 10. The outer surface 17 of the snuff pouch 10 comprises the free areas of plain areas of the outer surface 17 and the seals 13, 15 and 19. The plain area of the outer surface 17 means the area outside the seals 13, 15 and 19.

[0108] As the saliva-permeable sheet material 20 is arranged to form snuff pouch 10, the outer surface of the snuff pouch 10 is formed by the saliva-permeable sheet material 20. Therefore, the saliva-permeable sheet material 20 is arranged to provide surface characteristics of the outer surface 17 of the snuff pouch 10.

[0109] The saliva-permeable sheet material 20 is provided with one or more surface features which are configured to provide alterations to the surface characteristics of the outer surface 17 of the snuff pouch 10 provided by the saliva-permeable sheet material 20. Accordingly, the one or more surface features provide alterations to the outer surface of the snuff pouch and further visual identifier(s) to the snuff pouch 10. Thus, the one or more surface features are configured to provide alteration(s) to the visual appearance of the oral snuff product or the snuff pouch 10.

[0110] Figures 4 to 10 show schematically different kinds of surface features provided to the saliva-permeable sheet material 20.

[0111] In figure 4 the surface feature comprises visual characters or code 30 provided to the saliva-permeable sheet material 20 and outer surface 17 of the snuff pouch 10. The visual characters may comprise letters, numbers or some other characters. The visual characters may also disclose ingredient of the filling material 2 or manufacturing date or the like information.

[0112] In figure 5 the surface feature comprises a machine readable visual code, QR-code, 32 provided to the saliva-permeable sheet material 20 and outer surface 17 of the snuff pouch 10. The machine readable visual code may comprise QR-code, barcode or the like machine readable visual code.

[0113] In figure 6 the surface feature is visual symbol 34 provided to the saliva-permeable sheet material 20 and outer surface 17 of the snuff pouch 10. The visual symbol may comprise any graphical symbol, such as pharmaceutical symbol or the like symbol describing properties of the oral snuff product.

[0114] In figure 7 the surface feature is visual graphical design 36 provided to the saliva-permeable sheet material 20 and outer surface 17 of the snuff pouch 10. The visual graphical design 36 may comprise a logo, ornament, or the like.

[0115] Figures 4 to 7 disclose embodiments in which the surface feature is provided locally on part of the outer surface 17 of the snuff pouch 10.

[0116] In figure 8 the surface feature is visual pattern 38 provided to the saliva-permeable sheet material 20 and the outer surface 17 of the snuff pouch 10. The visual pattern 38 may be any kind of pattern provided to the whole outer surface 17 of the snuff pouch 10, as in figure 8, or only partly.

[0117] In figure 9 the surface feature is colouring 37 provided to the saliva-permeable sheet material 20 and the outer surface 17 of the snuff pouch 10. The colouring 37 may be any kind of colouring provided to the whole outer surface 17 of the snuff pouch 10 fully, as in figure 8, or only partly.

[0118] Figures 4 to 7 disclose embodiments in which the surface feature is provided locally on the upper surface of the snuff pouch 10.

[0119] Figure 10 shows an embodiment in which the surface feature is provided as visual characters provided locally on the bottom surface of the snuff pouch 10.

[0120] Figures 11 and 12 show schematically a snuff packaging product 50 comprising a container having a container base 54 forming a receptacle configured to receive plurality of oral snuff products 10a, 10b and a container lid 52 removably attached to the container base 54. The container base 54 and the container lid 52 are provided as circular elements.

[0121] As shown in figure 12, the snuff packaging product 50 comprises plurality of oral snuff products 10a, 10b provided into the container base 54 and inside the container formed by the container base 54 and the container lid 52.

[0122] The oral snuff products 10a, 10b comprise the snuff pouch 10 formed by the saliva-permeable sheet material 20 and enclosing the filling material 2 inside the snuff pouch 10. The saliva-permeable sheet material 20 one or more of the snuff pouches 10a, 10b is provided with the one or more surface features 30, 32, 34, 36, 37, 38, 39 as disclosed above. Therefore, the one or more oral snuff products 10a, 10b comprises one or more surface features 30, 32, 34, 36, 37, 38, 39 in the saliva-permeable material such that the one or more oral snuff products 10a, 10b are provided with visual identifier(s).

[0123] Each of the oral snuff products 10a, 10b in the snuff packaging product 50 is provided with similar or identical one or more surface features 30, 32, 34, 36, 37, 38, 39.

[0124] Alterna each of the oral snuff products 10a, 10b in the snuff packaging product 50 is provided with one or more unique surface features 30, 32, 34, 36, 37, 38, 39.

[0125] Further alternatively, at least two of the oral snuff products 10a, 10b in the snuff packaging product 50 is provided with different one or more unique surface features 30, 32, 34, 36, 37, 38, 39.

[0126] A method for manufacturing an oral snuff pouch

comprises providing a snuff pouch 10 from a saliva-permeable sheet material 20 such that the saliva-permeable material 20 forms outer surface 17 of the snuff pouch 10 and provides surface characteristics of the outer surface 17 of the snuff pouch 10. During the manufacturing, the snuff pouch 10 is provided with filling material 2 which is enclosed inside the snuff pouch 10 formed by the saliva-permeable sheet material 20.

[0127] The one or more unique surface features 30, 32, 34, 36, 37, 38, 39 are provided to the outer surface 17 of the snuff pouch 10.

[0128] In some embodiments, the one or more unique surface features 30, 32, 34, 36, 37, 38, 39 are provided to the plain area of the outer surface 17 outside the seals 13, 15 and 19 of the snuff pouch 10.

[0129] In some embodiments, the one or more unique surface features 30, 32, 34, 36, 37, 38, 39 are provided to one or more of the seals 13, 15 and 19 of the snuff pouch 10.

[0130] In some embodiments, the one or more unique surface features 30, 32, 34, 36, 37, 38, 39 are provided to the plain area of the outer surface 17 outside the seals 13, 15 and 19 of the snuff pouch 10 and to one or more of the seals 13, 15 and 19 of the snuff pouch 10.

[0131] The snuff pouch 10 is usually manufactured from a sheet material by folding, sealing and cutting. During the manufacturing, the filling material 2 is applied such that the formed snuff pouch 10 encloses the filing material inside the snuff pouch 10.

[0132] The sheet material or sheet-like material is the saliva-permeable material 20.

[0133] There are numerous different ways to fold, cut and seal the sheet-like saliva-permeable material 20 into snuff pouches.

[0134] One example is provided in the following.

[0135] The manufacturing usually begins by providing the sheet-like saliva-permeable material 20. Then filling material 2 is applied on the sheet-like saliva-permeable material 20. The sheet-like saliva-permeable material 20 folded into an elongated tube-like form inside which filling material 2 is provided. The elongated tube-like form is sealed with a longitudinal sealing. After that the elongated tube-like form is cut and sealed transversely into snuff pouches 10 having the filling material 2 enclosed inside.

[0136] According to the above disclosed, a snuff pouch 10 according to figures 1 and 2 is formed. The longitudinal sealing of the tube-like form provides the longitudinal seal 19 extending between the first end 12 and the second end 14 of the snuff pouch 10. The transverse cuts and sealing of the tube-like form provide the first end seal 13 and the second end seal 15 at the first end 12 and the second end 14 of the snuff pouch 10, respectively.

[0137] The sealing is carried out with a sealing method and a sealing device (not shown). The sealing method is preferably a non-additive sealing method.

[0138] Welding or non-additive welding is used as the sealing method. Welding or non-additive welding is carried out welding device or non-additive welding device.

[0139] Welding is carried out by laser welding or by ultrasonic welding, and with laser welding device or ultrasonic welding device. Laser welding and ultrasonic welding are non-additive welding methods which heat and melt the saliva-permeable sheet material to form a bond between the folds.

[0140] The method for manufacturing the snuff pouch 10 further comprises generating one or more surface features 30, 32, 34, 36, 37, 38, 39 by altering surface characteristics of the outer surface 17 of the snuff pouch 10 provided by the saliva-permeable sheet material 20 for providing visual identifier to the snuff pouch 10.

[0141] Alternatively, one or more surface features 30, 32, 34, 36, 37, 38, 39 are provided by altering surface characteristics outer surface 17 of the snuff pouch 10 by modifying visual properties by modifying structure of the saliva-permeable sheet material 20 for generating the one or more surface features 30, 32, 34, 36, 37, 38, 39.

[0142] Modifying visual properties of the saliva-permeable sheet material 20 may comprise engraving, etching, marking, melting or heat treating the saliva-permeable sheet material 20, or removing material from the saliva-permeable sheet material 20.

[0143] The one or more surface features 30, 32, 34, 36, 37, 38, 39 may be generated to the sheet-like saliva-permeable sheet material 20 before forming the snuff pouch 10 by folding, cutting and sealing. Alternatively, the one or more surface features 30, 32, 34, 36, 37, 38, 39 may be generated to the saliva-permeable sheet material 20 during forming the snuff pouch 10 by folding, cutting and sealing. Further alternatively, the one or more surface features 30, 32, 34, 36, 37, 38, 39 may be generated to the sheet-like saliva-permeable sheet material 20 of a readymade snuff pouch after before forming the snuff pouch 10 by folding, cutting and sealing.

[0144] The one or more surface features 30, 32, 34, 36, 37, 38, 39 may be generated with the sealing method and sealing device utilized for the sealing the snuff pouch.

[0145] Accordingly, the one or more surface features are provided by altering the surface characteristics of the outer surface of the snuff pouch by modifying material structure of the saliva-permeable sheet material with the sealing method and sealing device, or non-additive sealing method and non-additive sealing device.

[0146] The one or more surface features are provided by altering the surface characteristics of the outer surface of the snuff pouch by modifying material structure of the saliva-permeable sheet material with the welding method and welding device, or with the non-additive welding method and non-additive welding device.

[0147] The one or more surface features are provided by altering the surface characteristics of the outer surface of the snuff pouch by modifying material structure of the saliva-permeable sheet material with the non-additive laser welding or non-additive ultrasonic welding, and with the non-additive laser welding device or non-additive ultrasonic welding device. The manufacturing method

may further comprise sorting the formed snuff pouches 10 provided with the one or more surface features 30, 32, 34, 36, 37, 38, 39 based on the one or more surface features 30, 32, 34, 36, 37, 38, 39. The sorting may comprise sorting the formed snuff pouches 10 into snuff packaging based on the one or more surface features 30, 32, 34, 36, 37, 38, 39.

[0148] The sorting is carried out by detecting the one or more surface features 30, 32, 34, 36, 37, 38, 39 of the saliva-permeable sheet material 20 of the snuff pouch 10 and sorting the snuff pouch 10 based on the detected one or more surface features 30, 32, 34, 36, 37, 38, 39. The sorting can be carried out manually or automatically. When automatic sorting is utilized, the method comprises scanning the one or more surface features 30, 32, 34, 36, 37, 38, 39 of the saliva-permeable sheet material 20 of the snuff pouch 10 with an optical scanner and sorting the snuff pouch 10 based on the scanned one or more surface features 30, 32, 34, 36, 37, 38, 39.

[0149] The invention has been described above with reference to the examples shown in the figures. However, the invention is in no way restricted to the above examples but may vary within the scope of the claims.

Claims

1. An oral snuff product comprising

- a filling material (2), and
- a saliva-permeable sheet material (20), the saliva-permeable sheet material (20) being arranged to form a snuff pouch (10) and enclose the filling material (2) inside the snuff pouch (10), and

the saliva-permeable sheet material (20) is arranged to form outer surface of the snuff pouch (10) and provide surface characteristics of the outer surface (17) of the snuff pouch (10),
the saliva-permeable sheet material (20) is provided with one or more surface features (30, 32, 34, 36, 37, 38, 39), the one or more surface features (30, 32, 34, 36, 37, 38, 39) being configured to alter the surface characteristics of the outer surface (17) of the snuff pouch (10) provided by the saliva-permeable sheet material (20) for generating visual identifier to the snuff pouch (10), **characterized in that** the one more surface features (30, 32, 34, 36, 37, 38, 39) are provided by modifying material structure of the saliva-permeable sheet material (20) such that the surface characteristics of the snuff pouch are changed.

2. An oral snuff product according to claim 1, **characterized in that** the one more surface features (30, 32, 34, 36, 37, 38, 39) are provided as one more permanent surface features (30, 32, 34, 36, 37, 38, 39) by modifying material structure of the saliva-permeable sheet material (20) such that the surface characteristics of the snuff pouch are permanently changed.

3. An oral snuff product according to claim 1 or 2, **characterized in that**:

- the at least of the one more surface features (30, 32, 34, 36, 37, 38, 39) comprise an engraving on the outer surface of the snuff pouch (10) provided by engraving the saliva-permeable sheet material (20); or
- the at least of the one more surface features (30, 32, 34, 36, 37, 38, 39) comprises an etching on the outer surface of the snuff pouch (10) provided by etching the saliva-permeable sheet material (20); or
- the at least of the one more surface features (30, 32, 34, 36, 37, 38, 39) comprise a marking on the outer surface of the snuff pouch (10) provided by processing the saliva-permeable sheet material (20); or
- the at least of the one more surface features (30, 32, 34, 36, 37, 38, 39) comprise a melted marking on the outer surface of the snuff pouch (10) provided by melting the saliva-permeable sheet material (20).

4. An oral snuff product according to any one of claim 1 to 3, **characterized in that** the at least of the one more surface features (30, 32, 34, 36, 37, 38, 39) is provided by processing the saliva-permeable sheet material (20) with a laser or a heat source or ultrasonic vibration source.

5. An oral snuff product according to any one of claims 1 to 4, **characterized in that** the one more surface features (30, 32, 34, 36, 37, 38, 39) comprise one or more of the following:

- a visual identified code (30, 39);
- a visual identifier symbol (34, 36);
- a visual identifier pattern (38);
- a visual identifier colour (37); or
- a visual machine readable code (32).

6. An oral snuff product according to any one of claims 1 to 5, **characterized in that** the outer surface (17) of the snuff pouch (10) comprises one or more seals (13, 15, 19) and plain area outside the seals (13, 15, 19), and that:

- the one or more unique surface features (30, 32, 34, 36, 37, 38, 39) are provided to the plain

area of the surface (17) outside the seals 1(3, 15, 19) of the snuff pouch (10); or
- the one or more surface features (30, 32, 34, 36, 37, 38, 39) are provided to one or more of the seals (13, 15, 19) of the snuff pouch (10); or
- the one or more surface features (30, 32, 34, 36, 37, 38, 39) are provided to the plain area of the outer surface (17) outside the seals (13, 15, 19) of the snuff pouch (10) and to one or more of the seals (13, 15, 19) of the snuff pouch (10).

7. A method for manufacturing an oral snuff product, the method comprises providing a snuff pouch (10) from a saliva-permeable sheet material (20) such that the saliva-permeable material (20) forms outer surface (17) of the snuff pouch (10) and provides surface characteristics of the outer surface (17) of the snuff pouch (10), the snuff pouch (10) comprising a filling material (2) enclosed inside the snuff pouch (10) formed by the saliva-permeable sheet material (20), the method further comprises generating one or more surface features (30, 32, 34, 36, 37, 38, 39) by altering surface characteristics of the outer surface (17) of the snuff pouch (10) provided by the saliva-permeable sheet material (20) for providing visual identifier to the snuff pouch (10) **characterized in that** the method comprises altering surface characteristics of the outer surface (17) of the snuff pouch (10) by modifying material structure of the saliva-permeable sheet material (20) for generating the one or more surface features (30, 32, 34, 36, 37, 38, 39).

8. A method according to claim 7, **characterized in that** the method comprises:

- forming the snuff pouch (10) from the saliva-permeable sheet material (20) and proving the filling material (2) inside the snuff pouch (10), the method further comprises:

  - generating one or more surface features (30, 32, 34, 36, 37, 38, 39) to the saliva-permeable sheet material (20) before forming the snuff pouch (10) from the saliva-permeable sheet material (20); or
  - generating one or more surface features (30, 32, 34, 36, 37, 38, 39) to the saliva-permeable sheet material (20) during forming the snuff pouch (10) from the saliva-permeable sheet material (20); or
  - generating one or more surface features (30, 32, 34, 36, 37, 38, 39) to the saliva-permeable sheet material (20) after forming the snuff pouch (10) from the saliva-permeable sheet material (20).

9. A method according to claim 7 or 8, **characterized in that** the method comprises:

- providing a snuff pouch (10) from the saliva-permeable sheet material (20) by folding and sealing the saliva-permeable sheet material with a sealing method to form the snuff pouch (10) enclosing the filling material, and
- altering the surface characteristics of the outer surface of the snuff pouch by modifying material structure of the saliva-permeable sheet material with the sealing method; or
- providing a snuff pouch (10) from the saliva-permeable sheet material (20) by folding and sealing the saliva-permeable sheet material with a non-additive sealing method to form the snuff pouch (10) enclosing the filling material, and
- altering the surface characteristics of the outer surface of the snuff pouch by modifying material structure of the saliva-permeable sheet material with the non-additive sealing method.

10. A method according to claim 9, **characterized in that** the method comprises:

- carrying out the sealing by a non-additive welding method, and
- altering the surface characteristics of the outer surface of the snuff pouch by modifying material structure of the saliva-permeable sheet material with the non-additive welding method; or
- carrying out the sealing by a non-additive laser welding, and
- altering the surface characteristics of the outer surface of the snuff pouch by modifying material structure of the saliva-permeable sheet material with the non-additive laser welding; or
- carrying out the sealing by a non-additive ultrasonic welding, and
- altering the surface characteristics of the outer surface of the snuff pouch by modifying material structure of the saliva-permeable sheet material with the non-additive ultrasonic welding.

11. A method according to any one of claims 7 to 10, **characterized in that** the method comprises:

- sorting the formed snuff pouch (10) provided with the one or more surface features (30, 32, 34, 36, 37, 38, 39) based on the one or more surface features (30, 32, 34, 36, 37, 38, 39); or
- sorting the formed snuff pouch (10) provided with the one or more surface features (30, 32, 34, 36, 37, 38, 39) into a snuff packaging product (50) based on the one or more surface features (30, 32, 34, 36, 37, 38, 39).

12. A method according to claim 11, **characterized in that** the method comprises:

- detecting one or more surface features (30, 32, 34, 36, 37, 38, 39) of the saliva-permeable sheet material (20) of the snuff pouch (10) and sorting the snuff pouch (10) based on the detected one or more surface features (30, 32, 34, 36, 37, 38, 39); or
- scanning the one or more surface features (30, 32, 34, 36, 37, 38, 39) of the saliva-permeable sheet material (20) of the snuff pouch (10) with an optical scanner and sorting the snuff pouch (10) based on the scanned one or more surface features (30, 32, 34, 36, 37, 38, 39).

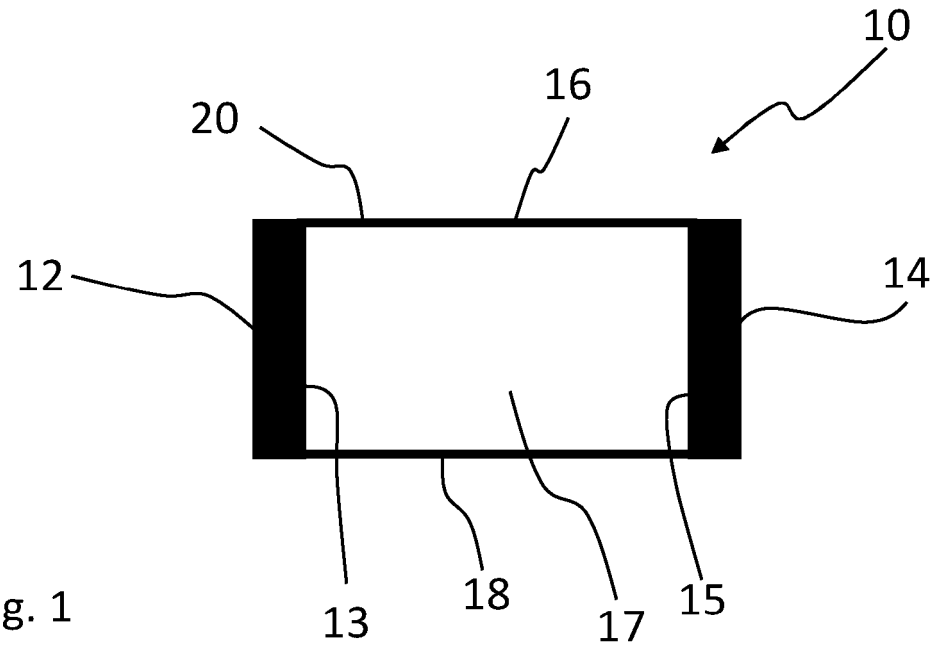

Fig. 1

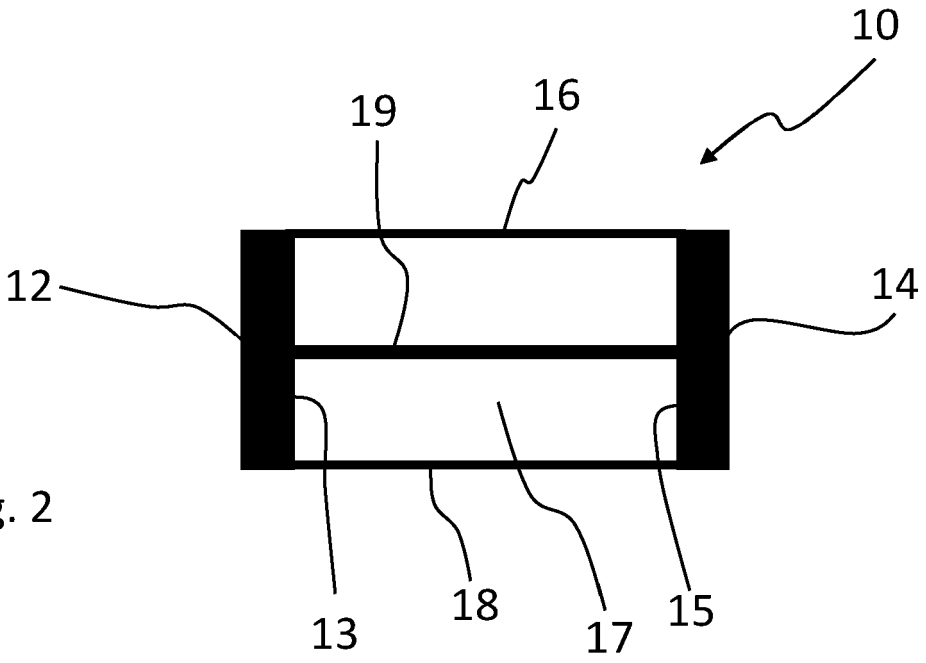

Fig. 2

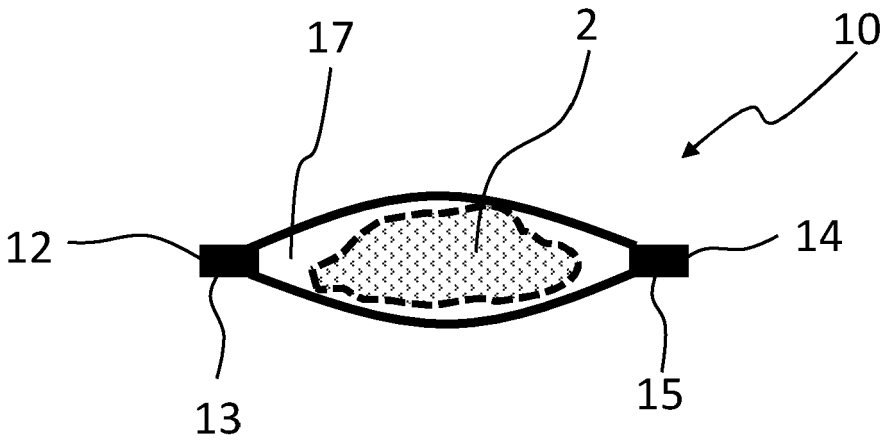

Fig. 3

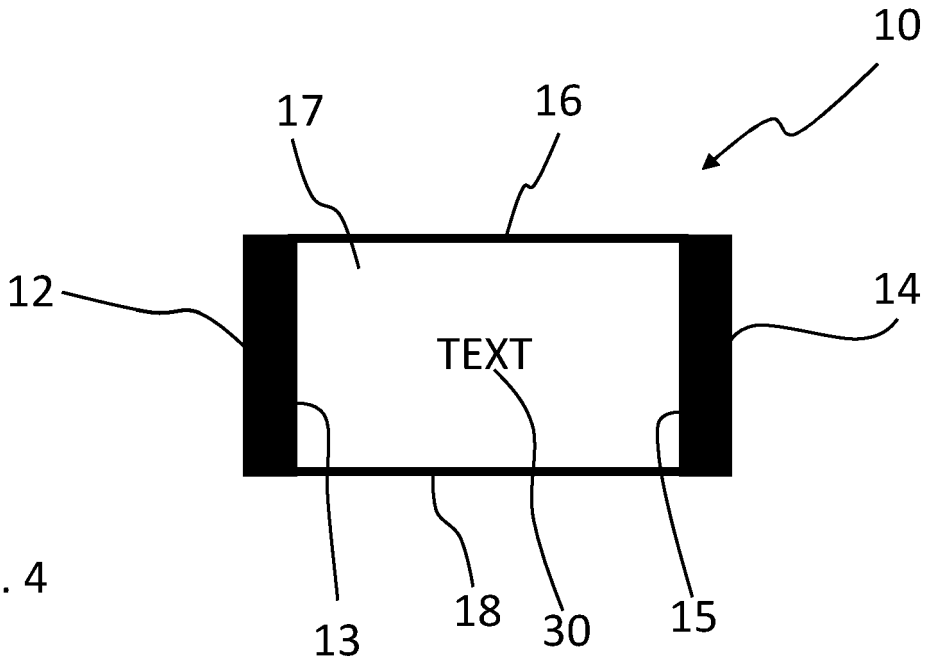

Fig. 4

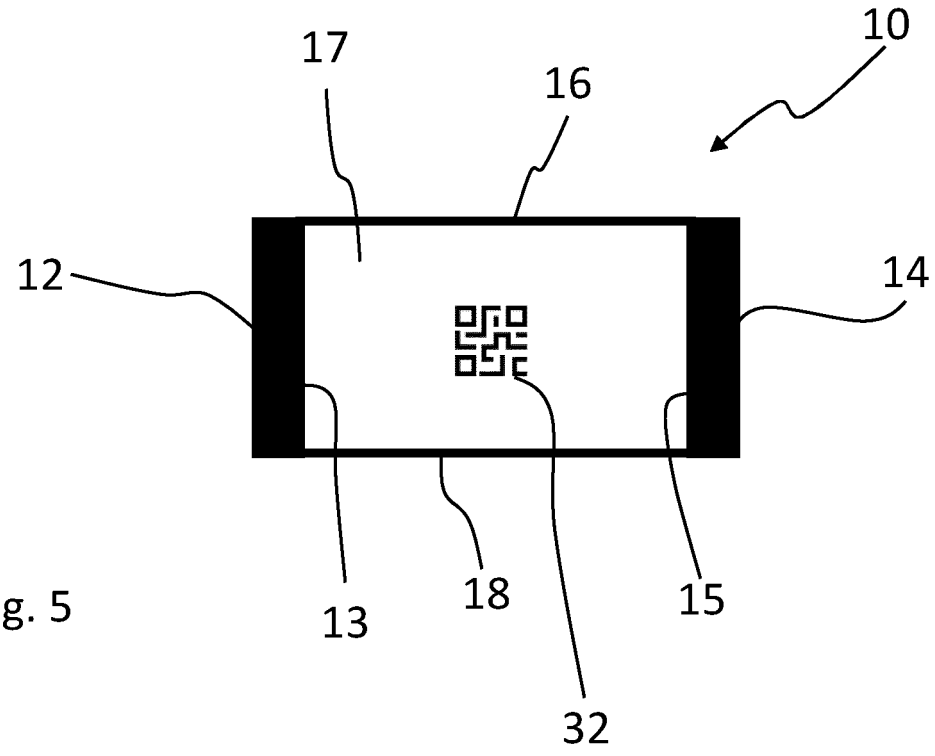

Fig. 5

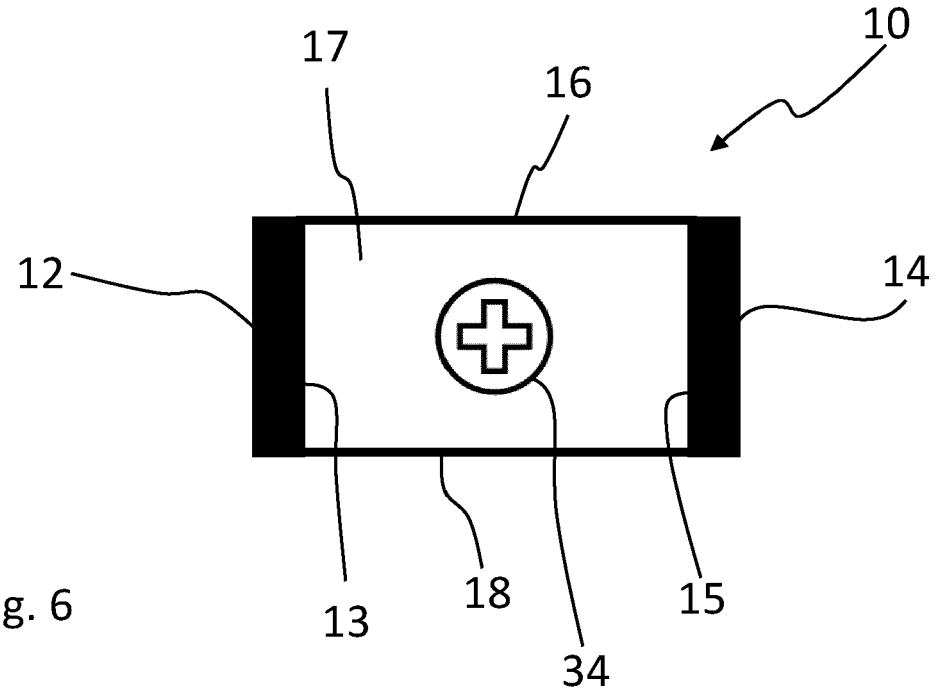

Fig. 6

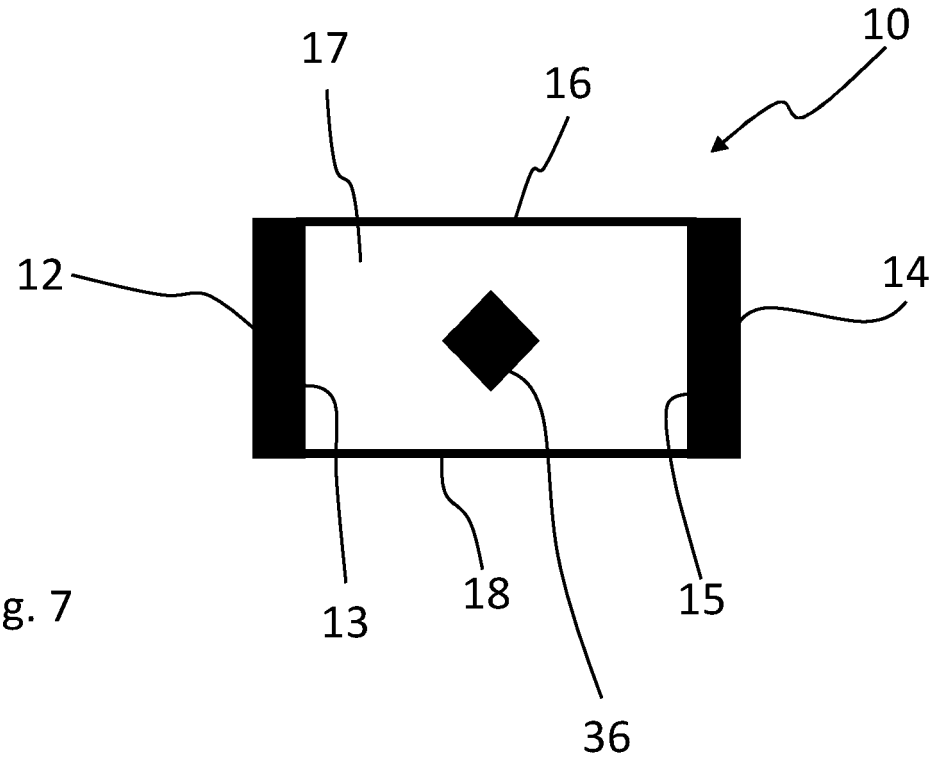

Fig. 7

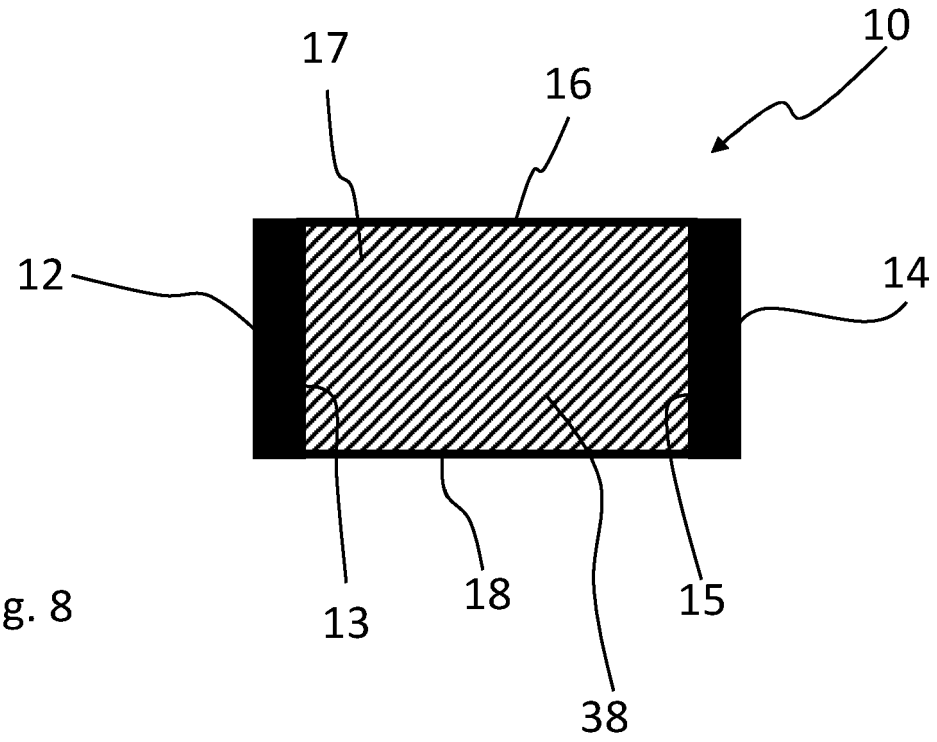

Fig. 8

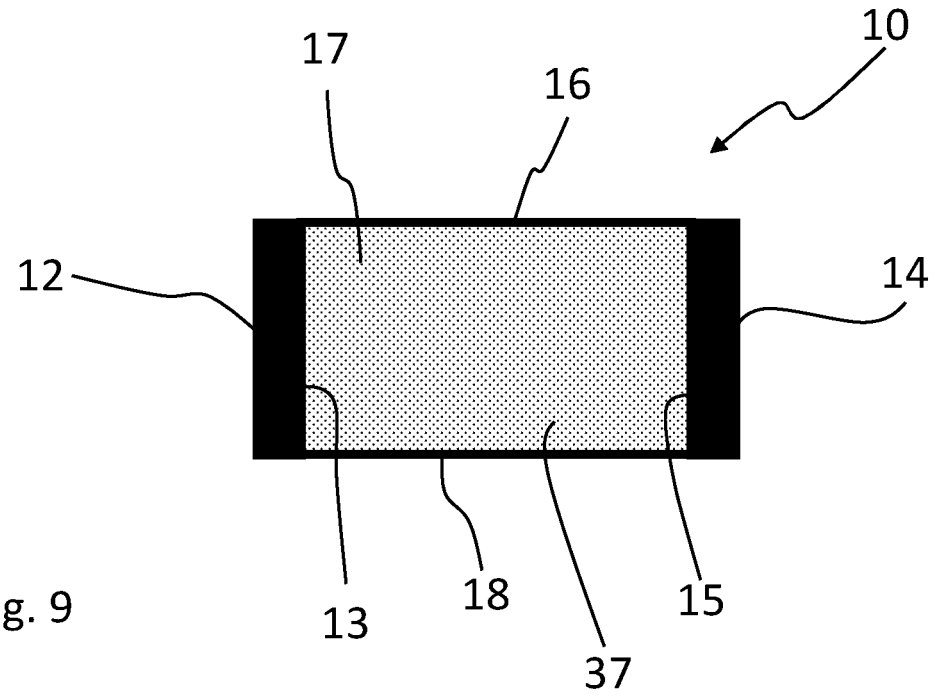

Fig. 9

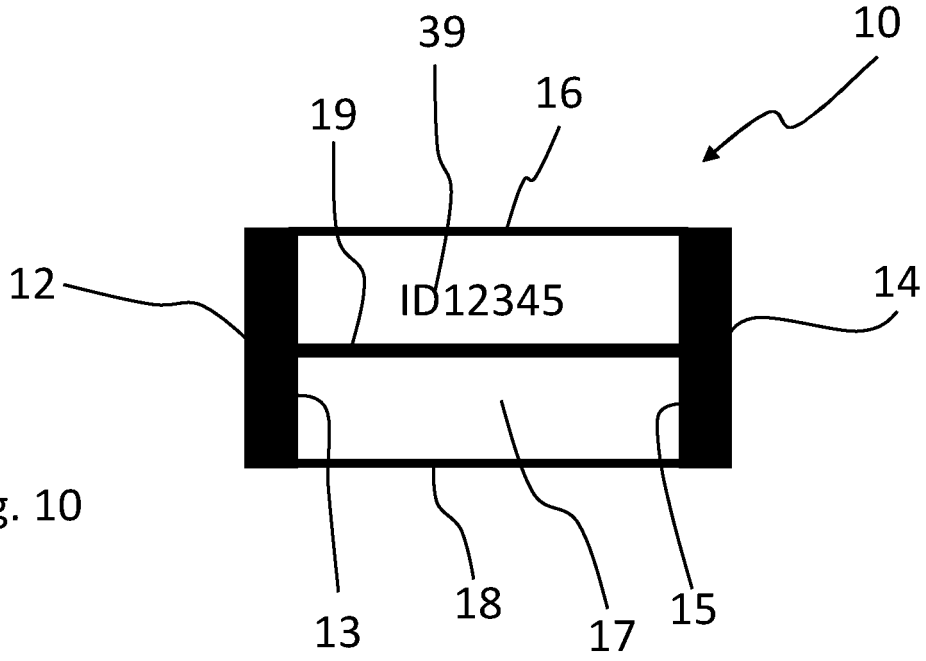

Fig. 10

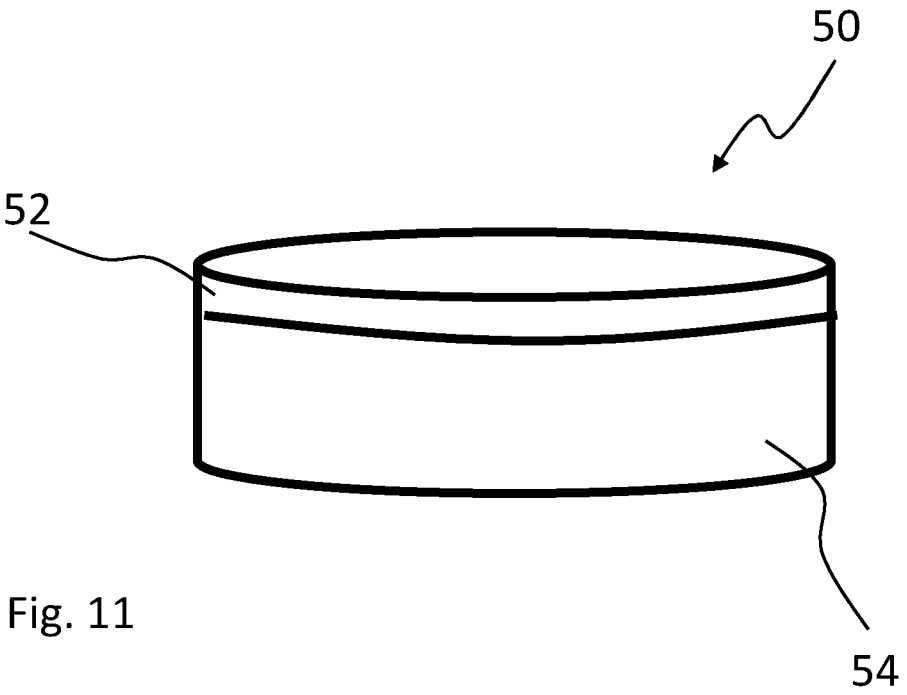

Fig. 11

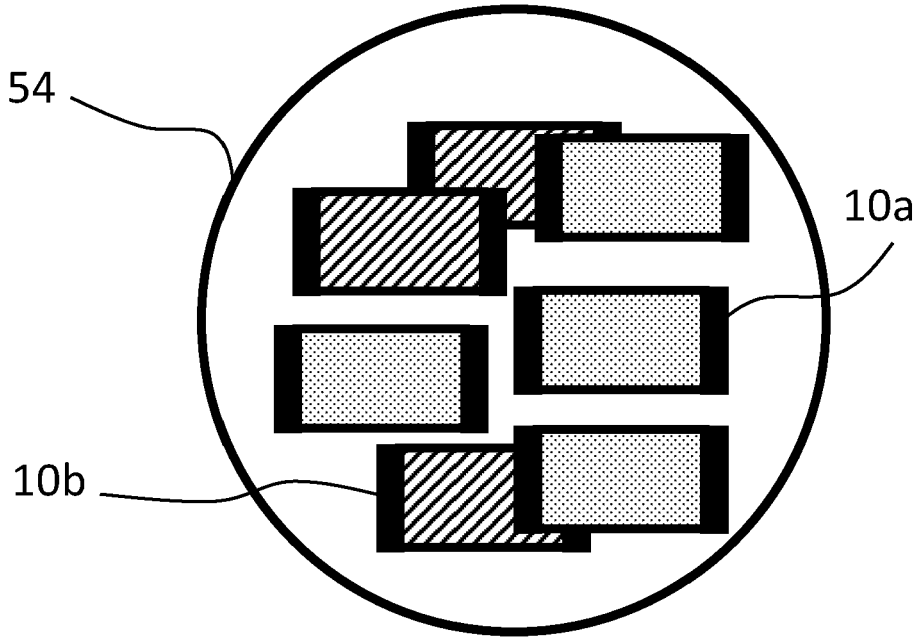

Fig. 12

Europäisches Patentamt
European Patent Office
Office européen des brevets

EUROPEAN SEARCH REPORT

Application Number
EP 24 20 5219

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2014/255452 A1 (REDDICK EDWIN MATTHEW [US] ET AL) 11 September 2014 (2014-09-11)	1-8, 10-12	INV. A24B13/00
Y	* paragraph [0011] - paragraph [0014] *	9,10	A24F23/02
	* paragraph [0016] - paragraph [0017] *		
	* paragraph [0021] - paragraph [0023] *		
	* paragraph [0026] *		
	* paragraph [0028] *		
	* paragraph [0030] *		
	* paragraph [0031] *		
	* paragraph [0033] *		
	* paragraph [0034] *		
	* paragraph [0062] *		
	* paragraph [0064] - paragraph [0065] *		
	* paragraph [0067] *		
	* paragraph [0071] *		

X	US 2012/085360 A1 (KAWATA NORIO [JP] ET AL) 12 April 2012 (2012-04-12)	1,3,5-7	
A	* paragraph [0010] - paragraph [0015] *	8-12	
	* paragraph [0025] - paragraph [0026] *		
	* paragraph [0033] - paragraph [0041] *		TECHNICAL FIELDS SEARCHED (IPC)
	* paragraph [0055] *		
	* paragraph [0058] - paragraph [0059] *		A24B
	-----		A24F
X	US 2017/172202 A1 (URBAN BJÖRN [DE]) 22 June 2017 (2017-06-22)	1-7,11, 12	
A	* claims 13-16 *	8-10	
	* paragraph [0005] *		
	* paragraph [0010] *		
	* paragraph [0016] - paragraph [0017] *		
	* paragraph [0019] *		
	* paragraph [0021] *		
	* paragraph [0055] *		
	* paragraph [0067] *		

	-/--		

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	7 February 2025	Dimoula, Kerasina

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

Europäisches Patentamt
European Patent Office
Office européen des brevets

EUROPEAN SEARCH REPORT

Application Number
EP 24 20 5219

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2021/177036 A1 (JOHNSON SAVANNAH [US] ET AL) 17 June 2021 (2021-06-17) * paragraph [0039] * * paragraph [0055] - paragraph [0061] * * claims 1-22 *	1-12	
Y	US 2010/300464 A1 (GEE DIANE L [US] ET AL) 2 December 2010 (2010-12-02) * paragraph [0002] * * paragraph [0004] * * paragraph [0063] *	9,10	
A	EP 2 976 950 A1 (JT INT SA [CH]) 27 January 2016 (2016-01-27) * the whole document *	1-12	
			TECHNICAL FIELDS SEARCHED (IPC)

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	7 February 2025	Dimoula, Kerasina

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 24 20 5219

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

07-02-2025

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2014255452 A1	11-09-2014	CN 105377234 A	02-03-2016
		DK 2968114 T3	22-07-2019
		EP 2968114 A1	20-01-2016
		JP 6599308 B2	30-10-2019
		JP 2016518869 A	30-06-2016
		US 2014255452 A1	11-09-2014
		WO 2014164509 A1	09-10-2014
US 2012085360 A1	12-04-2012	EP 2454954 A1	23-05-2012
		JP WO2010147024 A1	06-12-2012
		TW 201106883 A	01-03-2011
		US 2012085360 A1	12-04-2012
		WO 2010147024 A1	23-12-2010
US 2017172202 A1	22-06-2017	AU 2015282955 A1	05-01-2017
		EP 2962580 A1	06-01-2016
		US 2017172202 A1	22-06-2017
		WO 2016001273 A1	07-01-2016
US 2021177036 A1	17-06-2021	CA 3160454 A1	17-06-2021
		EP 4072348 A2	19-10-2022
		JP 2023505800 A	13-02-2023
		US 2021177036 A1	17-06-2021
US 2010300464 A1	02-12-2010	US 2010300464 A1	02-12-2010
		US 2013152955 A1	20-06-2013
		US 2017049144 A1	23-02-2017
		US 2020085093 A1	19-03-2020
		US 2024268446 A1	15-08-2024
EP 2976950 A1	27-01-2016	DK 2976951 T3	06-04-2021
		EP 2976950 A1	27-01-2016
		EP 2976951 A1	27-01-2016

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82