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(54) **METHOD FOR THE COSMETIC TREATMENT OF HAIR AND WASHING UNIT TO APPLY SAID METHOD**

(57) A method is described for the cosmetic treatment of hair and a washing unit (100) for its performance, wherein the method provides for the arrangement on a basin (200) of the washing unit (100) of a substantially horizontal support surface (305), turning the back of the

person's head downwards, spreading the person's hair on said support surface (305), applying a cosmetic and/or trichological product in liquid, semi-liquid or paste form on the spread-out hair.

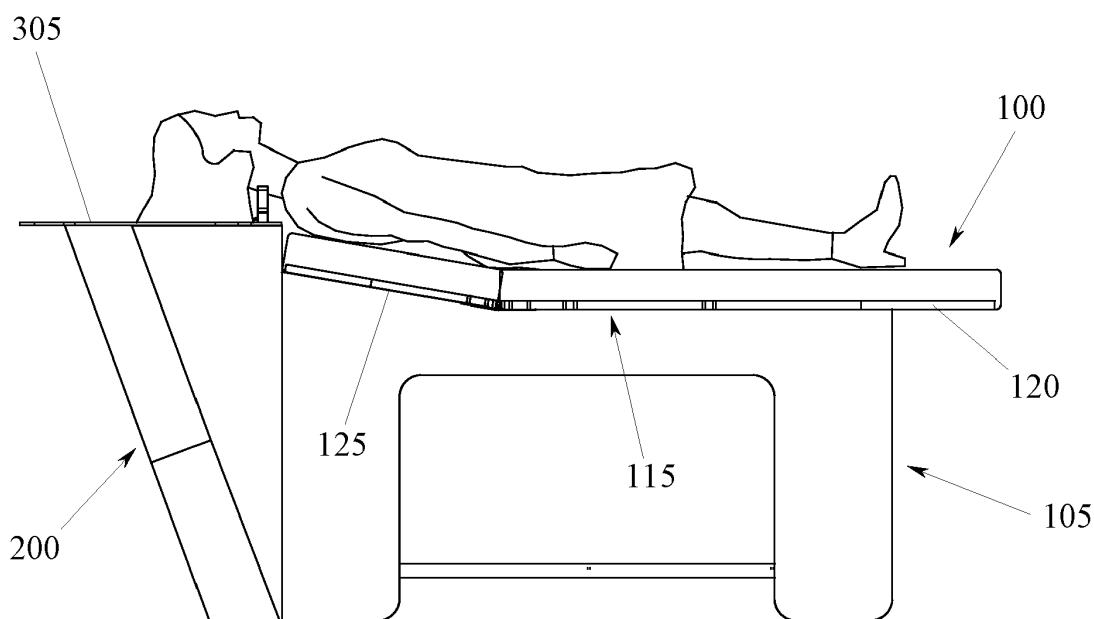


FIG. 4

Description

Technical field

[0001] The present invention relates to a method for the cosmetic treatment of hair and a washing unit specifically designed to implement said method. In particular, the method and the washing unit are directed at a treatment that provides for application on the hair of a cosmetic and/or trichological product in liquid, semi-liquid or paste form, including, but not limited to, a hair dye or hair bleach.

Prior art

[0002] In order to alter the colour of a person's hair, it is known that the first thing a hairdresser does is to have the person sit on a chair, and then places a protective cape on the person.

[0003] Since the person is sitting on a chair, gravity causes the hair to fall vertically, such as around the person's neck or onto their shoulders, and possibly over the back of the chair.

[0004] The hairdresser then gathers the hair into locks and, raising said locks one by one with their hands, applies onto them a cosmetic and/or trichological product in liquid, semi-liquid or paste form designed to alter the colour, typically a hair dye or a hair bleach. Said cosmetic and/or trichological product is normally applied onto each lock of hair using a spatula or a specific brush, usually starting from the roots and going towards the tips of the hair.

[0005] Once this application phase is completed, the cosmetic and/or trichological product is left to act for a certain period of time, after which the person is accompanied to the washing unit, where the hair is washed thoroughly to remove the residual product.

[0006] One problem of this procedure consists of the fact that application of the cosmetic and/or trichological product onto the locks of hair is a particularly uncomfortable and complicated operation, since the hairdresser has to support the lock of hair with one hand and simultaneously apply the cosmetic and/or trichological product holding the spatula or brush with the other hand.

[0007] Furthermore, due to the precarious support provided to the lock of hair, it is extremely difficult for the hairdresser to distribute the cosmetic and/or trichological product uniformly over all the hair in the lock, with the consequent risk of leaving some hair uncovered or not completely treated.

[0008] Another problem consists of the fact that, during application of the cosmetic and/or trichological product and/or during subsequent treatment at the washing unit, small quantities of product may fall from the hair, dirtying the floor and sometimes, despite the presence of the protective cape, dirtying the chair and the person as well.

[0009] In order to apply the cosmetic and/or trichological product onto the hair of a person seated on a chair,

the hairdresser is normally forced to work standing up, which can cause major fatigue, particularly in the lower back area.

Illustration of the invention

[0010] In light of what has been stated, one object of the present invention is to solve the aforementioned problems of the prior art, with a simple, rational and relatively inexpensive solution.

[0011] This and the other objects are achieved by means of the characteristics of the invention reported in the independent claims. The dependent claims outline aspects of the invention that are preferred and/or particularly advantageous, but not strictly necessary for its implementation.

[0012] In particular, an embodiment of the present invention provides a method for the cosmetic treatment of a person's hair, comprising the steps of:

- arranging a substantially horizontal support surface,
- turning the back of the person's head downwards and preferably, but not necessarily, positioning it above said support surface,
- spreading the person's hair on said support surface,
- applying a cosmetic and/or trichological product in liquid, semi-liquid or paste form on the spread-out hair.

[0013] Thanks to this solution, during treatment, the person's hair is supported by the support surface, allowing extremely simple and easy application of the cosmetic and/or trichological product.

[0014] On the support surface, the person's hair can, in fact, be spread out in an orderly and distanced manner, for example in a fan arrangement, which allows the hairdresser to apply the cosmetic and/or trichological product in a uniform and precise manner.

[0015] The support surface also serves as a protective screen that prevents any small quantities of the cosmetic and/or trichological product from falling to the floor or onto the person.

[0016] In order to apply the cosmetic and/or trichological product onto the hair spread out on the support surface of the present invention, a hairdresser could also work seated on a chair or a stool, thus reducing muscular fatigue, particularly in the lower back area. According to an aspect of the invention, the method may provide for applying the cosmetic and/or trichological product while the person is lying in a substantially supine position on a bed positioned adjacent to the support surface.

[0017] Thanks to this solution, in order to carry out the hair treatment, the person does not need to tilt their head backwards, but can keep their neck substantially straight, thus assuming a more comfortable posture, both during application of the cosmetic and/or trichological product and during any period of time necessary for the cosmetic and/or trichological product to take effect.

[0018] According to another aspect of the invention, the cosmetic and/or trichological product applied onto the hair may be a product that changes the colour of the hair, such as a hair dye or a hair bleach.

[0019] In this manner, the method may be advantageously used to change the hair colour of the person being treated.

[0020] However, the same method may also be used for the application of other cosmetic and/or hair treatment products.

[0021] A further aspect of the invention provides for application of the cosmetic and/or trichological product to be carried out directly with the hands or by means of a brush or a spatula.

[0022] In this manner, the cosmetic and/or trichological product can be applied to the hair in a very simple and effective manner.

[0023] According to a further aspect of the invention, the support surface may be positioned at the top of a basin of a washing unit.

[0024] Thanks to this solution, after application of the cosmetic and/or trichological product, the hair may be advantageously washed or rinsed inside the basin of the washing unit, without having to ask the person to move.

[0025] A further embodiment of the present invention provides a washing unit comprising:

- a basin,
- a tap for the supply of water,
- a drain positioned on the bottom of the basin,
- a support structure designed to receive and support a person, with the back of the head turned downwards and positioned above the basin, and
- a support surface for the person's hair, which is applicable in a substantially horizontal position to the top of the basin, where it may be arranged to be positioned underneath the back of the head of the person who is on the support structure.

Thanks to this solution, a washing unit is provided that is specifically equipped to carry out the cosmetic treatment method on hair outlined previously, obtaining all the related benefits.

[0026] According to an aspect of the invention, the support structure for the person may be a bed positioned adjacent to the basin and designed to accommodate the person in a substantially supine position.

[0027] In this manner, during treatment, the person can maintain a more comfortable and relaxing posture.

[0028] However, in other embodiments, the support structure for the person may also be a chair or another type of seat, possibly equipped with an opportunely inclined and/or inclining backrest.

[0029] A further aspect of the invention provides for the washing unit also to comprise a headrest for the person who is positioned on the support structure, wherein said headrest is designed to support the occipital portion of the head, such as at or close to the first cervical ver-

tebra (atlas).

[0030] Thanks to this solution, the person can maintain their head above the basin of the washing unit, without effort for the entire duration of the treatment.

[0031] This headrest may be provided in the form of a single body or, alternatively, in the form of a plurality of separate bodies (e.g. two) designed to come into contact with the person's head in different points.

[0032] In any case, a preferred aspect of the invention is the fact that said headrest is rigidly fixed to the basin and constructively separate from the support surface.

[0033] In this manner, before carrying out any hair washing phase, the support surface may be easily removed without the person having to raise their head.

Brief description of the drawings

[0034] Further characteristics and advantages of the invention will emerge from reading the possible but non-limiting description that follows, with the assistance of the figures illustrated in the attached tables.

Figure 1 is an axonometric view of a washing unit according to an embodiment of the present invention, shown without the support surface for the hair. Figure 2 is the axonometric view of Figure 1, wherein the washing unit is shown with the support surface for the hair.

Figure 3 is a longitudinal cross-section along a vertical plane of the washing unit of Figure 2.

Figure 4 is a side view of the washing unit of Figure 2, with a person in the treatment phase.

Figure 5 is a view from above of the head of the person shown in Figure 4.

Detailed description

[0035] A washing unit 100 is shown in the aforementioned figures, or rather a piece of equipment intended to be used principally in hair salons for washing people's hair.

[0036] The washing unit 100 comprises, in the first place, a support structure 105, which is generally designed to accommodate and to support the person who is to be treated.

[0037] In the example illustrated, the support structure 105 is a bed on which the person may lie in a substantially supine position.

[0038] As illustrated in Figure 3, said support structure 105 may therefore comprise a base frame 110 provided with floor-resting support elements, such as four feet, above which a flat surface 115 designed to support the person's body is arranged.

[0039] The base frame 110 may be realised in any form or size and with any type of material. The flat surface 115 may have a substantially rectangular form that extends mainly along a pre-set horizontal longitudinal axis A.

[0040] Along said longitudinal axis A, the flat surface

115 may be divided into at least two portions, of which a first portion 120 is typically designed to support the legs and possibly the sacral region of the body, and a second portion 125 is typically designed to support the back.

[0041] In several embodiments, the first and the second portion 120 and 125 of the flat surface 115 could both be perfectly horizontal.

[0042] In the example shown, the second portion 125 of the flat surface 115 is nonetheless at least slightly inclined with respect to the first portion 120, preferably upwards starting from said first portion.

[0043] To improve the person's comfort, said inclination may possibly be adjustable.

[0044] For example, the second portion 125 of the flat surface 115 may be hinged to the first portion 120 along a horizontal hinge axis X perpendicular to the longitudinal axis A. Furthermore, the support structure 105 may comprise motorised control mechanisms 130, such as a linear electric actuator, which are designed to rotate the second portion 125 with respect to the first portion 120 around said hinge axis X.

[0045] Both the first portion and the second portion 120 and 125 of the flat surface 115 may be covered with a soft mattress, for example padded with foam rubber.

[0046] Although the support structure 105 is realised in the form of a bed in the example shown, it is also possible, in other embodiments, for the support structure 105 to be a chair or any other seat designed to accommodate the person.

[0047] Alongside the support structure 105, the washing unit 100 comprises a basin 200.

[0048] In particular, the reciprocal position of the basin 200 and the support structure 105 is chosen in a manner that the back portion of the head of the person who is on the support structure 105 may be positioned above the basin 200 turned downwards (see Fig.4).

[0049] The back portion of the head generally means the portion of the head opposite the face with respect to the binaural frontal plane of the cranium.

[0050] In order to obtain this result, the basin 200 may be aligned on a plane with the support structure 105 along the longitudinal axis A and the flat surface 115 and positioned adjacent to the second portion 125.

[0051] The basin 200 may be separate from the support structure 105 or, as in the example shown, may be rigidly fixed to it, for example to the base frame 110.

[0052] In general, the basin 200 has a bottom surface 205 and a series of side walls 210 that rise up from the bottom surface 205 and that terminate at a top edge 215 designed to delimit an access opening 220 for the basin 200.

[0053] The basin 200 may be realised in any material that holds water, such as ceramic, resins, metal or glass.

[0054] A tap 225 is rigidly fixed to the basin 200, such as a mixer tap, which may be connected to a water distribution system, in a manner to allow selective supply of hot and/or cold water inside the basin 200 by means of a dispenser 230.

[0055] In the example shown, the dispenser 230 is a spray head connected to the tap 225 by means of a flexible tube that allows it to be manually moved into different positions inside and outside the basin 200.

[0056] As visible in the cross-section of Figure 3, the tap 225 is preferably contained inside the basin 200, at a lower height to the top edge 215 of it.

[0057] Similarly, when not in use, the dispenser 230 may be attached to a bracket positioned inside the basin 200, in a manner that the dispenser 230 is also positioned below the top edge 215.

[0058] The basin 200 is also provided with a drain 235, which is preferably positioned on the bottom surface 205 of the basin 200, to allow the water to drain into a sewer system.

[0059] At the top edge 215 of the basin 200, and close to the support structure 105, the washing unit 100 also comprises a headrest 240, which is designed to support the occipital portion of the head of the person who is on the support structure 105, for example at or close to the first cervical vertebra (atlas), in a manner efficiently to support the person's head above the basin 200 as described previously, but leaving the large part of the back of the person's head exposed, so that all the hair substantially falls towards the inside of the basin 200.

[0060] In the example shown, the headrest 240 comprises two bodies 245, realised in gel or another rubbery material for example, which project above the top edge 215 of the basin 200 and are designed to come into contact with the person's head in two separate areas of the occipital portion, preferably on opposite sides to the mid-sagittal plane of the cranium.

[0061] However, in other embodiments, the headrest 240 may comprise a single body, preferably opportunistically shaped, which projects above the top edge 215 of the basin 200 and is designed to come into contact with the occipital portion of the head.

[0062] In any case, it is preferable for the headrest 240 to be rigidly fixed to the basin 200, for example close to the section of the top edge 215 that is nearest to the support structure 105.

[0063] In order to support the person's head better, the washing unit 100 may also comprise a neck support 250, which is substantially interposed on a plane between the headrest 240 and the support structure 105, along the longitudinal axis A of the flat surface 115. Said neck support 250 may be formed of a cradle-shaped body, which projects above the top edge 215 of the basin 200, in a manner to support the back of the neck of the person who is on the support structure 105.

[0064] The neck support 250 may also be rigidly fixed to the basin 200, for example close to the section of the top edge 215 that is nearest to the support structure 105.

[0065] The washing unit 100 is also provided with a covering element 300, which is designed to be applied in a removable manner to the top of the basin 200, for example, but not necessarily, to at least partially close the access opening 220.

[0066] The covering element 300 may be realised in any material, for example metal or plastic. In particular, the covering element 300 may comprise a support surface 305, which is designed to be placed on the top edge 215 of the basin 200, and possibly a plurality of dowels 310 (see Fig.3) that project from the lower surface of said support surface 305 and are designed to be inserted into the basin 200 and to remain in direct contact with the side walls 210, in a manner to stably block the support surface 305 transversally to the basin 200.

[0067] Resting on the top edge 215, the support surface 305 is designed to be moved substantially on the horizontal plane.

[0068] In this document, the term "substantially on the horizontal plane" is intended to mean that the support surface 305 may be both perfectly horizontal and slightly inclined with respect to the horizontal plane, for example with a gradient lower than or equal to 10° sexagesimal degrees.

[0069] Resting on the top edge 215, the support surface 305 may also be used to close at least partially the access opening 220 of the basin 200, preferably, but not necessarily, being positioned below the back of the head of the person who is on the support structure 105, as outlined previously.

[0070] In particular, it is preferable for the support surface 305, when resting on the top edge 215 of the basin 200, to be positioned at a lower height to the top of the headrest 224, for example in a manner that the back of the person's head is not in direct contact with the support surface 305, but remains at least slightly distanced from it.

[0071] In the example shown, the support surface 305 has a longer extension of the access opening 220 of the basin 200, in a manner to project laterally with respect to the top edge 215 and thus provide a larger surface.

[0072] However, in other embodiments (not shown here), the support surface 305 may have an extension such as to be positioned laterally and flush with the top edge 215 of the basin 200, in a manner not to increase the side dimensions of the washing unit 100.

[0073] It is also possible for the support surface 305 to have an extension that is equal to or slightly lower than the one of the access opening 220 of the basin 200, in a manner that it can be inserted at least partially inside the basin, where it may be supported by the side walls 210 and/or by the bottom surface 205.

[0074] The support surface 305 may also have one or more pass-through openings 315, in a circular shape for example, which may be used as handles to facilitate movement of the support surface 305 and/or as places to hold or block storage containers or jars containing cosmetic and/or hair treatment products, for example.

[0075] Thanks to the characteristics described above, the washing unit 100 is specifically suited to allowing an operator, typically a hairdresser, to perform a cosmetic and/or hair treatment on a person's hair, such as a treatment to change its colour.

[0076] The treatment in question may, in the first place, provide for the hairdresser having the person get onto the support surface 105 of the washing unit 100, in this case having them lie in a substantially supine position on the flat surface 115 of the bed.

[0077] The treatment then provides for placing the support surface 305 in a substantially horizontal position above the basin 200, as outlined previously.

[0078] While the person is on the support structure 105, the person's head is positioned and maintained above the support surface 305, with their face turned upwards and the back of their head turned downwards (see Fig.4).

[0079] Preferably, the back of the person's head is maintained at least slightly raised with respect to the support surface 305.

[0080] For example, the caudal portion of the person's head may be rested on the headrest 240, with the back portion of the neck held and supported by the neck support 250.

[0081] In this manner, gravity causes the person's hair to fall and rest on the support surface 305.

[0082] At this point, the hairdresser may spread the hair on the support surface 305, in a manner that it is lying substantially horizontally on it and preferably spread out and separated.

[0083] For example, the hairdresser may spread the hair on the support surface 305 in a manner that it is distributed in a fan shape around the person's head (see Fig.5).

[0084] After spreading the hair on the support surface 305, the hairdresser may then apply a cosmetic and/or trichological product in liquid, semi-liquid or paste form onto it.

[0085] Hair product means, in general, any product with a trichological action, or designed to perform a trichological treatment of any nature, such as nutritional, thickening, strengthening or other, on the hair.

[0086] In several embodiments, this cosmetic and/or trichological product may be a product that changes the colour of the hair, such as a hair bleach or a hair dye, typically, but not necessarily, of the permanent type.

[0087] In certain cases, the hairdresser may apply two or more cosmetic and/or hair treatment products to the hair, such as two or more hair dyes with different colours, applying one over the other or applying each of them to different locks of hair or onto different sections of the hair.

[0088] In any case, the application of each cosmetic and/or trichological product may be performed directly with the hands, possibly protected with gloves, or with the aid of specific utensils, such as a brush or a spatula.

[0089] Thanks to the presence of the support surface 305 that supports the hair, this application of the cosmetic and/or trichological product can be extremely easy, uniform and precise, as the hairdresser is substantially operating like a painter on a palette.

[0090] Once the application phase is completed, the person may be left in the current position for a certain

time, such as the time sufficient for the cosmetic and/or trichological product to take effect.

[0091] After this time has passed, the support surface 305 may be removed from the basin 200 of the washing unit 100, so that gravity causes the person's hair to fall inside it.

[0092] In this regard, it is preferable for the basin 200 to have a considerable depth, for example over 500 mm, in a manner also to hold very long hair.

[0093] When inside the basin 200, the hair can be washed with any cleansing products (e.g. shampoo) and/or with water, which can be supplied by means of the tap 225 and the relative dispenser 330, for example to remove any residues of cosmetic and/or trichological product.

[0094] According to the example illustrated above, the support surface 205 is therefore realised in a separate component to the basin 200, to which it is applied in a removable manner, or in a manner to be detached and removed from it.

[0095] However, in other embodiments, the support surface 305 can also be connected to the basin 200 by means of coupling elements, for example an articulated system or a sliding system, which maintain these two components constantly connected to each other, but allow the support surface 305 to be moved, with respect to the basin 200, between an operating position, in which the support surface 305 is positioned above the basin 200, in a manner at least partially to close the access opening 220, and a position of inactivity, in which the support surface 305 leaves said access opening 220 open, or, in any case, increases its degree of opening with respect to the condition it is in when in the operating position, in order to allow efficient washing/rinsing of the hair.

[0096] Other embodiments could also provide for the support surface 305 being rigidly fixed above the basin 200.

[0097] In this case, the support surface 305 could have, for example, an extension such as not to block the access opening 220 completely, but to leave at least a portion constantly open, such as a portion positioned above and/or close to the head of the person being treated.

[0098] In this manner, the hair could be spread out on the support surface 305 during the phase of application of the cosmetic and/or trichological product, while it could be dropped into the basin 200 through the open portion of the access opening 220 to perform the washing/rinsing phase.

[0099] It is also possible that, although remaining located at the top of the basin 200, the support surface 305 is not used to partially close the access opening 220, but to delimit it externally.

[0100] For example, the basin 200 could be shaped in a manner that the access opening 220 is relatively small and is at least partially surrounded by a fairly broad edge that makes the support surface 305 available to support the hair.

[0101] Also, in this case, the support surface 305 could be fixed, moving or removable with respect to the basin 200.

[0102] A person skilled in the art could obviously make numerous technical-applicative changes to what is described above, without thus falling outside the scope of the invention as claimed below.

10 Claims

1. A method for cosmetic treatment of a person's hair, comprising the steps of:

- arranging a substantially horizontal support surface (305),
- turning the back portion of the person's head downwards,
- spreading the person's hair on said support surface (305),
- applying a cosmetic and/or trichological product in liquid, semi-liquid or paste form on the spread-out hair.

2. The method according to claim 1, wherein the cosmetic and/or trichological product is applied while the person is lying in a substantially supine position on a bed positioned adjacent to the support surface (305).

3. The method according to any one of the previous claims, wherein the cosmetic and/or trichological product is designed to change the colour of the hair.

4. The method according to any one of the previous claims, wherein application of the cosmetic and/or trichological product is carried out directly with the hands or by means of a brush or a spatula.

5. The method according to any one of the previous claims, wherein the support surface (305) is positioned at the top of a basin (200) of a washing unit (100).

6. A washing unit (100) comprising:

- a basin (200),
- a tap (225) for the supply of water,
- a drain (235) positioned on the bottom (205) of the basin (200),
- a support structure (105) designed to receive and support a person with the back of the head turned downwards and positioned above the basin (200), and
- a support surface (305) for the person's hair, which is applicable in a substantially horizontal position at the top of the basin (200).

7. The washing unit (100) according to claim 6, wherein the support structure (105) is a bed positioned adjacent to the basin (200) and designed to accommodate the person in a substantially supine position.

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8. The washing unit (100) according to any one of claims 6 or 7, comprising a headrest (240) for the person who is on the support structure (105), wherein said headrest (240) is designed to support the occipital portion of the head.

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9. The washing unit (100) according to claim 8, wherein said headrest (240) is rigidly fixed to the washing unit (200).

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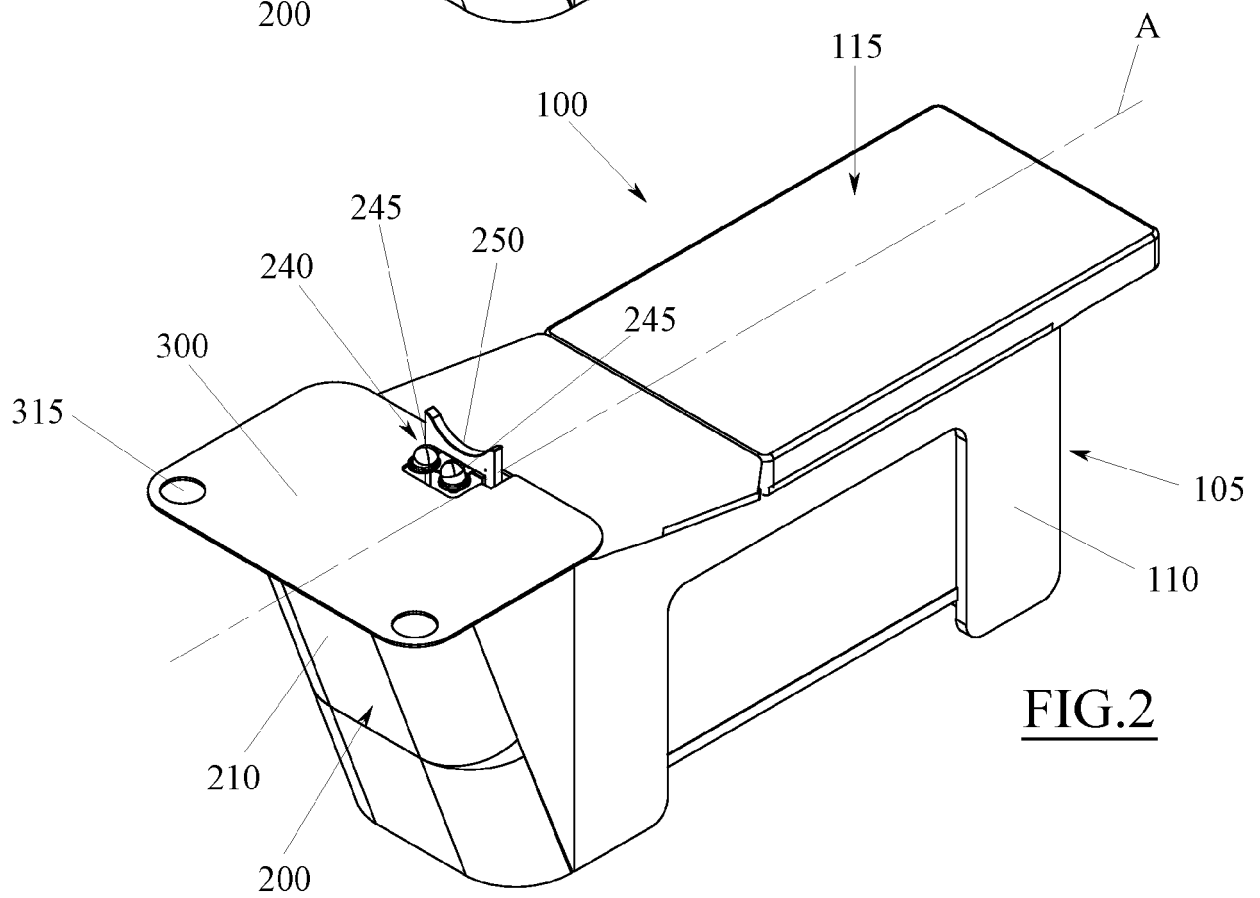
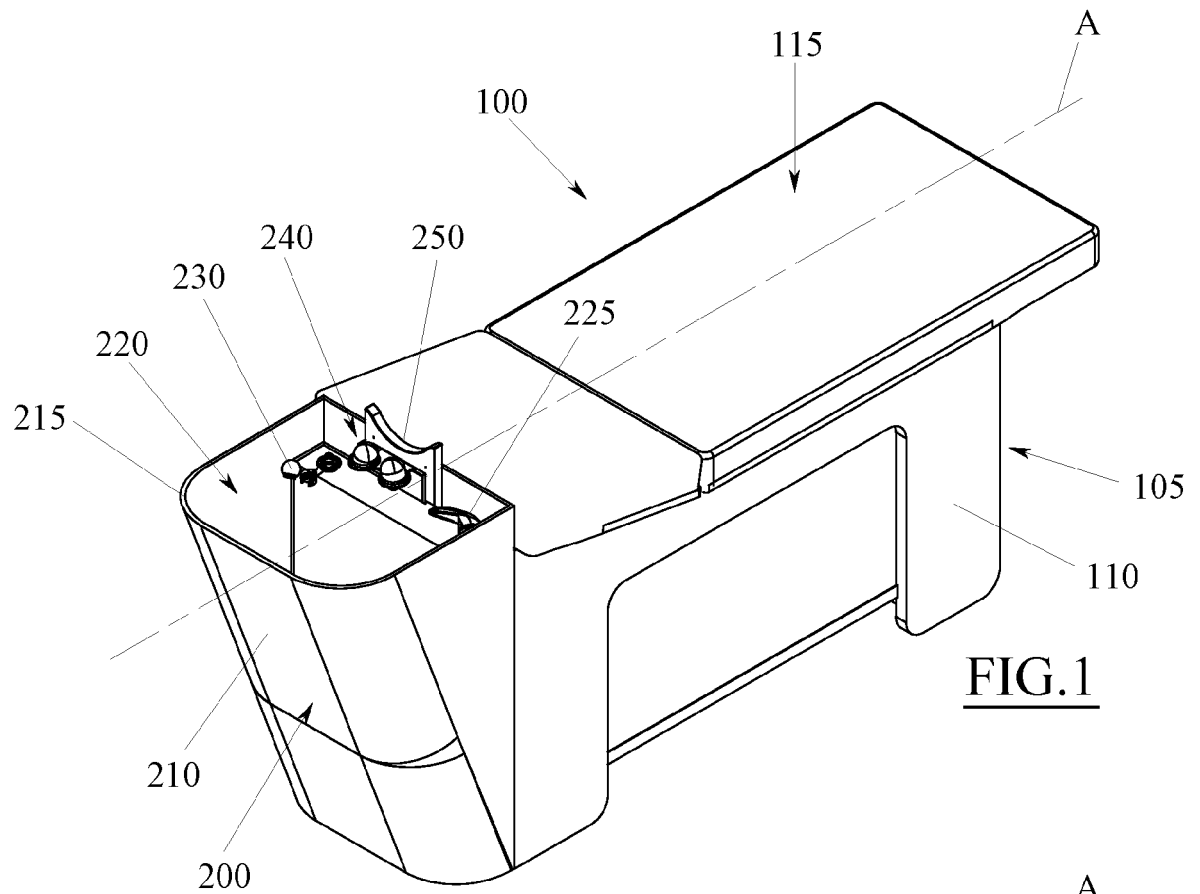
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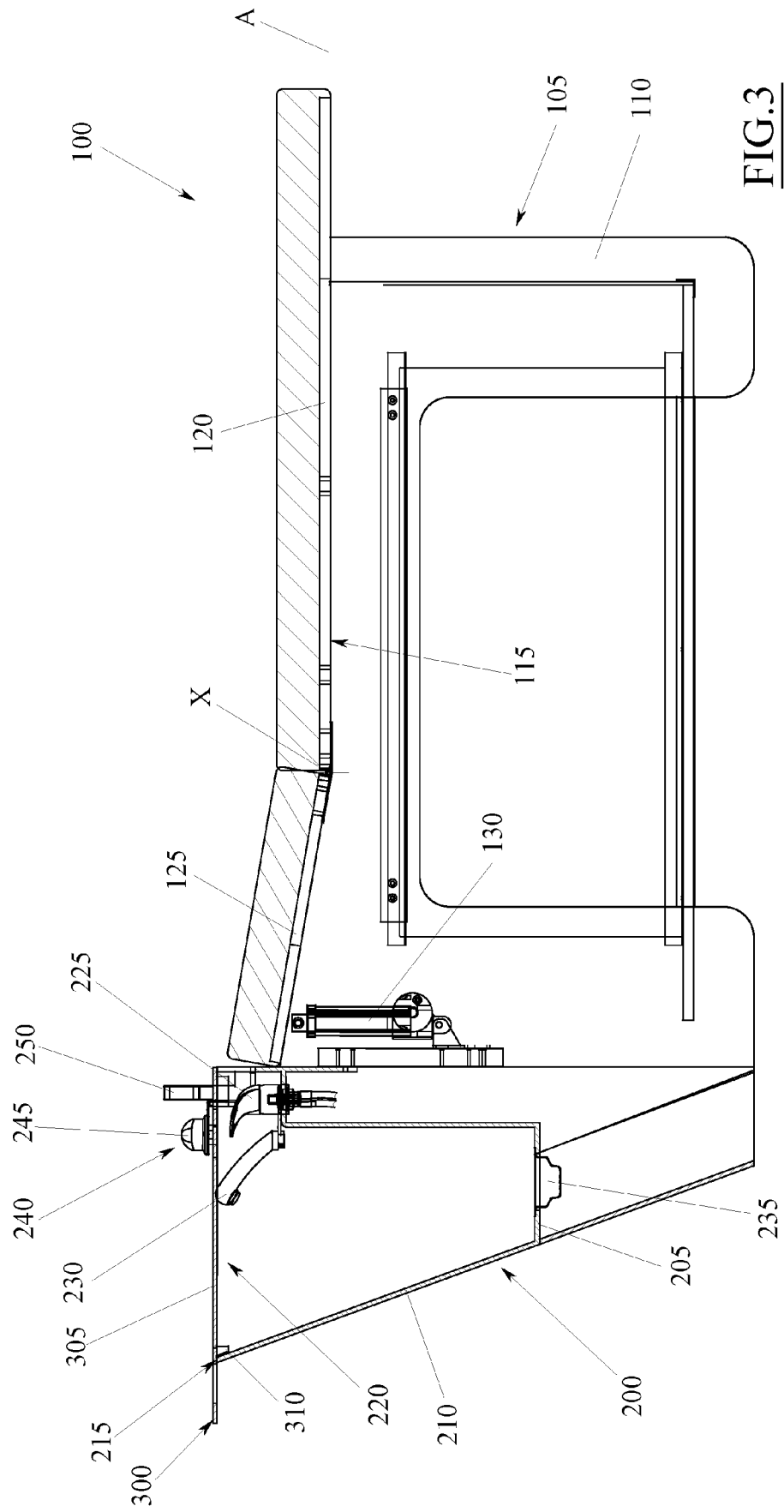
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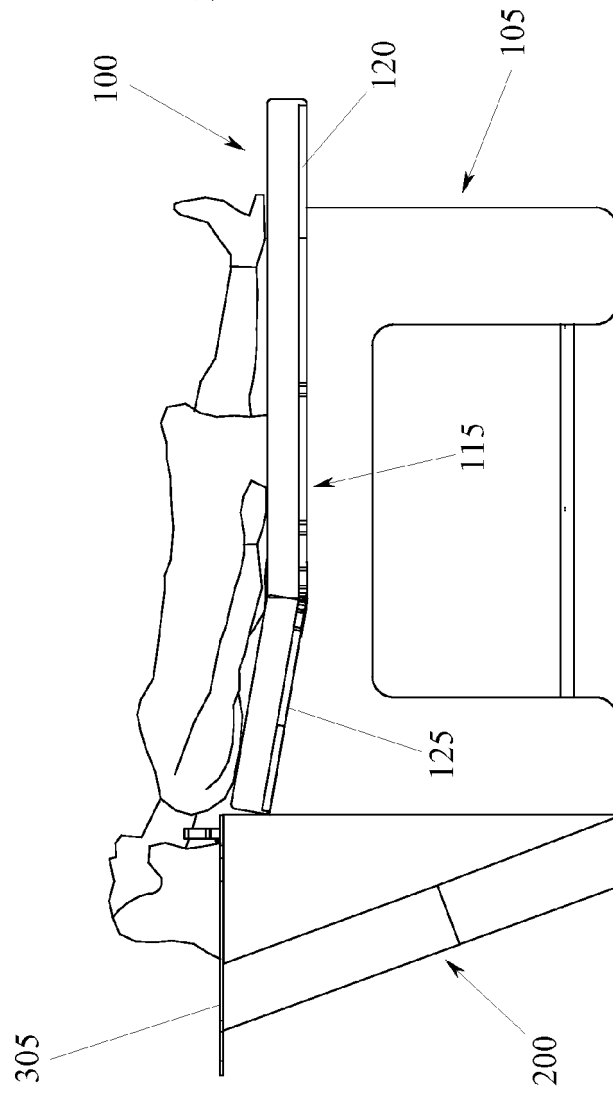


FIG. 4

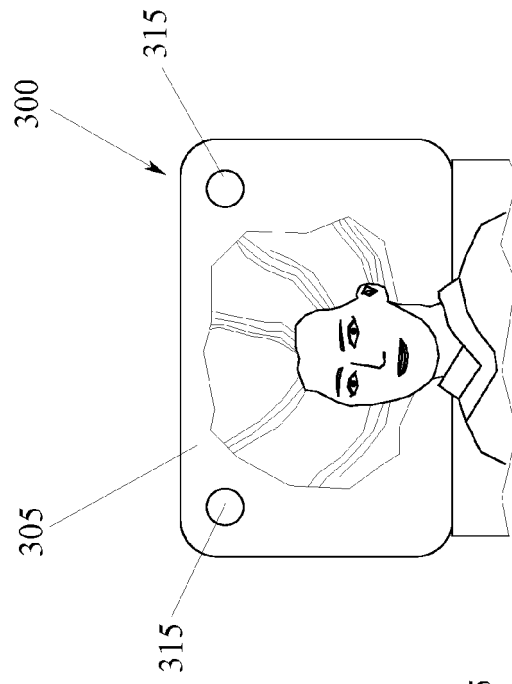


FIG. 5



EUROPEAN SEARCH REPORT

Application Number
EP 20 20 3564

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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	EP 1 654 953 A2 (ROLLER MECHES S R L [IT]) 10 May 2006 (2006-05-10)	1,3,4	INV. A45C1/10 A45D19/10 A45D44/02 A45D19/00
Y	* paragraph [0018] - paragraph [0049];	2,9	
A	figures 1-4 *	5	

X	US 2 507 630 A (GLEN GREEN ALEXANDER) 16 May 1950 (1950-05-16)	6	
Y	* column 2, line 33 - column 3, line 73; figures 1-4 *	7-9	TECHNICAL FIELDS SEARCHED (IPC) A45C A45F A45D

X	US 5 023 963 A (VOGEL NAOMI R [US]) 18 June 1991 (1991-06-18)	6	
* column 3, line 7 - column 5, line 5; figures 1-3 *			

X	FR 1 441 675 A (FELDMANN) 10 June 1966 (1966-06-10)	6	
* the whole document *			

Y	DE 295 02 015 U1 (DIETRICH NIELS DIPL DESIGNER [DE]) 30 March 1995 (1995-03-30)	2,7	
* the whole document *			

Y	US 5 239 711 A (TAFUR JOSE J [US]) 31 August 1993 (1993-08-31)	8	
* column 4, line 1 - column 6, line 44; figures 1-6 *			

The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 17 March 2021	Examiner Lehe, Jörn
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			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 20 20 3564

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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17-03-2021

10

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 1654953 A2	10-05-2006	AT 428324 T EP 1654953 A2	15-05-2009 10-05-2006
US 2507630 A	16-05-1950	NONE	
US 5023963 A	18-06-1991	NONE	
FR 1441675 A	10-06-1966	NONE	
DE 29502015 U1	30-03-1995	NONE	
US 5239711 A	31-08-1993	NONE	

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EPO FORM P0459

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