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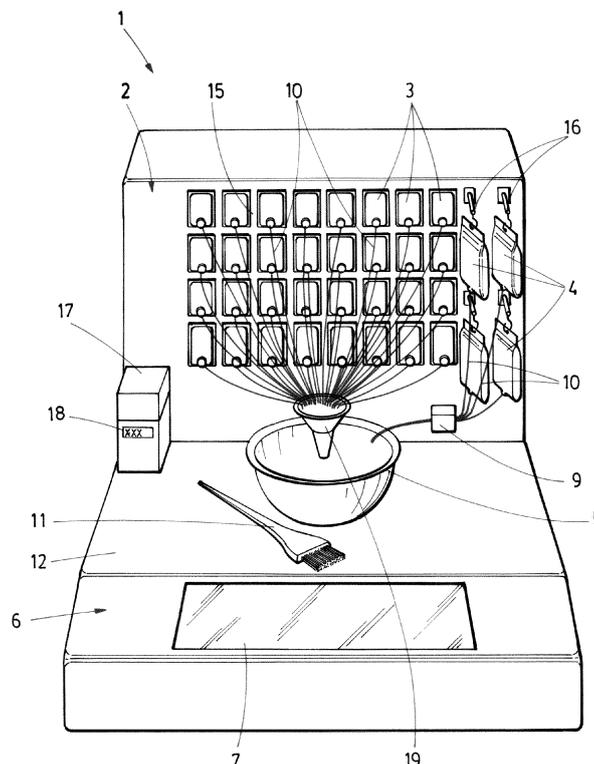
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(54) **EQUIPMENT FOR THE PERSONALIZED PREPARATION OF DYES AND COMPUTERIZED IMAGE MONITORING FOR HAIR SALONS**

(57) Equipment for the personalized preparation of dyes and computerized image monitoring for hair salons consisting on a structure (2) with capacity to incorporate a plurality of elements for dosing in an exact and controlled manner and for mixing the different products that are used to prepare an emulsion applicable as hair dye, which, in turn, consists of, at least, a plurality of colour

containers (3), one or more containers of peroxide (4) and a mixing recipient (5), and a computer (6) provided with specific software and database, with a touch screen (7) or screen and keyboard as user interface, that controls this dosage, at least in part automatically and, in addition, informs about it on the screen.



**FIG. 1**

## Description

### PURPOSE OF THE INVENTION

[0001] The invention, as expressed in the title of this descriptive report, refers to equipment for the personalized preparation of dyes and computerized image monitoring for hair salons that provides, according to the purpose for which it is intended, advantages and characteristics, described later in detail, which signify an outstanding novelty in the current state of the art.

[0002] More specifically, the purpose of the invention is focussed on equipment that, essentially, comprises a plurality of adjustable and repositionable elements to carry out mixtures of colour and peroxide for the preparation of different hair dyes in a recipient and a computer with touch screen or screen and keyboard with software and a specific database to permit the professionals of the hair salon to have, in addition to a register of the specific tones that each client usually uses, a control of the evolution of their hair over time in order to be able to apply the exact amount of dye on each occasion in order to maintain the same tone, also allowing carrying out studies on the trends of hair salons and, on the other hand, reduce the environmental impact by managing an important savings in the consumption of the products used as well as in the elimination of up to 75% of the production of plastic, metal and cardboard waste corresponding to the containers of these products that are used with the preparation system of traditional dye.

### INVENTION'S FIELD OF APPLICATION

[0003] The field of application of this invention is framed within the sector of the industry dedicated to the fabrication of equipment, devices and accessories for hair salons.

### BACKGROUND OF THE INVENTION

[0004] As it is well known, human hair undergoes an evolution. Over time grey hairs appear and to cover them it is necessary to adjust certain colour variants. Environmental conditions, personal taste, the amount and the quality of the hair must be borne in mind. To do this, it would be desirable for the hair salon professionals to be able to have computerized means to be able to evaluate the evolution of the hair of each of their clients, without having to do so by sight and without sufficient information.

[0005] In relation to the hair dyes, although they are considered cosmetic, they have a certain part of polluting material. Thus, each time they are applied, in addition to the waste produced by the containers of the different products that are applied, chemical waste is generated that goes directly down the drain, with the majority of it coming from the surplus of the mixture prepared, which, in turn, means a significant economic waste by the end of the year, both for the professionals as well as for the

clients.

[0006] In the warehouse, although time is dedicated to the inventory, there is not an exhaustive control; it is not known exactly how many dyes are really used, in relation to the number of clients and the necessary grams to use, discarding quite a bit of surplus material.

[0007] The mixtures are done based on the customs and not on the needs. A dye for short hair is not the same as that for long hair but it is difficult to establish the exact quantity in each case.

[0008] It is painstaking to have to take the product out of each container manually, since it usually consists of a metallic can in which usually remains material in the tube for preparing a mixture. Although in the tube it indicates that it has a capacity of 60 g, only 50 g are usually useable since the rest does not come out when pressing on the tube. When the hairdresser is not an expert or is in a hurry, excessive material is wasted and thrown into the trash or down the drain.

[0009] Furthermore, one of the strong points of a hair salon has to be trust. The clients' trust is lies in the hairdresser and not in the product or the company. To date, detailed mixtures are not used in hair salons; it is the hairdresser who, under his criterion of daily creativity, "invents" colours and, therefore, often makes mistakes.

[0010] In order to understand this, it is advisable to recall of what the dyes are composed. The dyes are composed, basically, of colour bases, tones, colour correctors and hydrogen peroxide, with the base colour being 80% of the final composition. Therefore, three figures are used for its name, where the first, between 1 and 12, indicates the depth or colour base, which as stated supposes 80% of the total, and the second, separated by a period or slash, indicates the tone, and the third the colour corrector.

[0011] Thus, for example, the colour 7/35, regardless of the brand that is used, indicates that the colour base, making up 80% of the mixture as stated, is "7", from a colour scale that goes from 1 to 10 and two of super-lightening, consisting of the following:

- 1 black
- 2 blue black
- 3 darkest brown
- 4 medium brown
- 5 light brown
- 6 dark blonde
- 7 medium blonde
- 8 light blonde
- 9 very light blonde
- 10 lightest blond
- 11 and 12 super-lighteners

[0012] The 20% remainder of the mixture is the part that goes behind the period or slash and that in the mentioned colour example, 7.35, is the "35" part where the first figure, that is, in this example, the "3" is the tone and it signifies 15%, and the second figure, the remaining

5%, which in the example is "5", makes up an added element that we would call the Pinch of Creativity that the professional incorporates and that many times changes the quality of the service.

**[0013]** In the cited 20% is found the tones and/or colour correctors that are classified as follows:

"0" natural  
 "1" ash  
 "2" beige  
 "3" gold  
 "4" copper  
 "5" red  
 "6" mahogany  
 "7" chocolate

**[0014]** All this is usually mixed with a percentage of 1 + 1 or 1 + 1½ which is usually described in "how to create the mixture" in all the colour charts with hydrogen peroxide, commonly called simply peroxide.

**[0015]** For hairdressers, the different and the difficulty is rooted in the shine, quality of the hair, the coverage of grey hair and the good selection of the changes of image requested by the client.

**[0016]** A colour chart of any brand can contain 30 to 90 colours. The professionals distinguish that, from 0%, 30% 60%, 90% in grey hair or in which changes in colour had been produced in the hair, provoke a change in the mixtures, in addition to the tendencies of the hair itself of eumelanin and pheomelanin in which we must modify the mixture of the colours on beige, ash, green, copper, gold.

**[0017]** This means that a professional of the hair salon can manage to prepare around an average of 1,200 different tones (the indicative figure that goes after the slash, according to the above explanation) which in turn will change throughout the history of a client. Only the professionals have these data thanks to their long careers, but they do not appear in a database. Not only is it not known generally, but also the hairdresser does not usually specify it in order to maintain his personal secrecy and to be able to take the client with him if he leaves a company.

**[0018]** The objective of this invention is, therefore, to provide in the market a tool that, using the new technologies and computer science, facilitates the work of preparing the dyes in hair salons, avoiding the cited problems and favouring both the clients and the professionals as well as the industry dedicated to the manufacturing of the products that intervene in these processes.

**[0019]** Furthermore, and in reference to the current state of the art, it can be pointed out that the existence is unknown, at least for the applicant, of any other equipment for the personalized preparation of dyes and monitoring of computerized image for hair salons or other invention of a similar application that presents identical or similar technical, structural and constitutive characteristics to those that are claimed herein.

## EXPLANATION OF THE INVENTION

**[0020]** The equipment for the personalized preparation of dyes and computerized image monitoring for hair salons proposed by the invention is configured, then, as a novelty within its field of application, since according to its implementation and in an exhaustive way, it satisfactorily reaches the previously indicated objectives, with the characterizing details that make it possible and appropriately distinguish it being included in the final claims that accompany this description.

**[0021]** More specifically, what the invention proposes, as noted earlier, is equipment that, comprising a plurality of elements to use in the preparation of hair dyes in a recipient through exact dosage, and a computer with a touch screen or a screen and keyboard with specific software and database in order, mainly, to permit the professionals of the hair salon to be able to have a register of the specific tones that each client normally uses in order to be able to prepare the cited dosage in each case, and, preferably, to be able also to have a control of the evolution of the hair over time, in order to be able to apply the exact amount of dye on each occasion and to continue maintaining the same tone, also allowing making studies of the trends of hair salons, all of which provides the advantage of reducing the environmental impact by achieving significant savings in the consumption of the products used, thanks to the exact dosage in preparing the mixture, as well as the elimination of up to 75% of the production of plastic, metal and cardboard waste from the containers of these products that are no longer used.

**[0022]** To do this, the equipment's computer will have the capacity to compile, in the aforementioned database, everything concerning the hair of each client and the customs and changes in the trends of the hairdressers. All this will be done through the entering of data by the hairdressers, both on the proportion of grey hair, type of hair, allergies or sensitivities, amounts to apply at the root, in the shaft or in the ends, in the lightening or darkening of it; as well as explicitly including that "pinch", those details that modify the colour of each client.

**[0023]** The software will provide the exact measurements for the dosage of each one of the chemical components of the mixture, tested in the databases.

**[0024]** On one hand, this can help the companies understand the public and the market trends better. On the other, and with respect to the client, with it the service and the trust is extrapolated towards the company and not only to the professional in question; for this reason, the public will feel that it is in much more specialized hands, since wherever they go, if there is the equipment of the invention, they will not have surprises with the result of their dye procedure.

**[0025]** In addition to the above, the use of the equipment is more respectful with the environment than the use of the traditional technique, by avoiding the pollution created with the dumping of waste that are clearly 75% contaminants.

**[0026]** The equipment preferably has the size of a desktop model, since it can then be shown to the public. The screen can be a touch type or with a keyboard. In any case, it has a space in which a recipient and a stirrer are included in order to make the mixture.

**[0027]** Preferably, the equipment is integrated in a support frame that has a depth that does not surpass 40 cm so that it fits in any space. Preferably it will be placed in view of the clients, therefore, it should be attractive but not too wide.

**[0028]** In the front part, optionally, will appear the brand of the company supplying the hair salon materials, since it deals with a universal design, with the numerations of each colour so that it can be placed before the client who can appreciate the new concept.

**[0029]** In any case, the equipment incorporates a number of containers of product placed frontally, in such a way that they are easily accessible so that the personnel can substitute them, putting in a new one when it is necessary. The equipment's computer will inform when little product remains of any of them in order to proceed to the replacement.

**[0030]** When a client suffers allergies or sensitivities, he will notify the professional and it will be entered in the database. In this way, the equipment will make it impossible to create dyes with ammonia or with any of the products that cause that client's intolerance.

**[0031]** With the correct entry of all the data, the equipment will function in such a way that, step by step, everything is tested. If there is no change, such as a change of tone of the hair itself or a greater number of grey hairs, the client will obtain a good result.

**[0032]** To do this, the equipment's computer has installed specific software and, preferably, it has an external hard disk and an uninterruptible power system (UPS). In this way, in view of an incident or the possibility that a power outage takes place, it has a battery with reserve time to save the data, which gives the equipment a plus in effectiveness.

**[0033]** Logically, the data will be stored in the area of the hard disk, and will not be available to anyone except the authorized personnel, being encrypted and under lock.

**[0034]** Preferably, the equipment's computer will have wireless connection, *bluetooth*, etc., to send a copy, only of the data of the final mixture, to a general computer program connected to the software of the computerized cash register, so that the client can pay after the service.

**[0035]** As for the product containers, preferably, at least in the case of those that contain the colour, they consist of a drum with a capacity of approximately 1,500 ml.

**[0036]** The traditional tubes of colour have an actual content of 55 mg-although they indicate 60 mg because this weight includes that of the metal container plus that which corresponds to the paint and printing. What is certain is that when the product is emptied manually, it usually loses another 5 g or more, since it is usually extracted

by pressing manually. Consequently the use of these drums suppose an important savings of the product.

**[0037]** In addition, preferably, the drums of colour are reusable, and rectangular with a conic form in the lower part with an outlet nozzle provided with a plunger that, by being placed in this site, allows the outlet of the product (the product should be liquid and upon joining with the hydrogen peroxide is converted into an emulsion).

**[0038]** Preferably, the inside of the container is of aluminium or other material that makes it opaque so that the product does not oxidize.

**[0039]** Preferably, each container has a solenoid valve or similar system associated to the plunger of the nozzle in order to get the product to come out, whose functioning is controlled by the computer in order to dose the amount that the software previously established. The flow of the product is produced through a tube, which goes from the nozzle of each container to the recipient in which the mixture is made. Preferably these tubes are also coated on the inside with aluminium.

**[0040]** Preferably, each one of the described colour containers has, in addition, a level sensor connected to the computer, so that it can control the amount of product that it contains and report the lack thereof in any of them in order to proceed to their substitution.

**[0041]** The equipment comprises, furthermore, anchoring means for the fastening of bags containing hydrogen peroxide, preferably located in the bottom part of the equipment, in any case, connected to a pump inserted in a circuit of tubes that takes their content to the mixing recipient, also controlled by the computer to dose the amounts. In this case, the tubes can be of thick plastic.

**[0042]** The aforementioned specific software that is implemented in the equipment's computer will be designed to provide the support to the needs as requested. For this, preferably, it will have the following configuration and features:

On the main screen:

- Search for the client by name, surnames, telephone or nickname should appear.
- The hairdresser's code.
- Last dyeing procedure with the corresponding dates.
- New dyeing procedure: dye, colour rinse, highlights of dye or highlights of bleaching.
- Incidents: if any. For example: allergies, sensitivities (to the application, to the cleaning product of excess dye or odours).
- In the case of new dye, grey hair is defined: 0%, 30%, 60%, 90%, the thickness, the amount the study of the incompatibilities of the colours with respect to the scalp and hair of the client, the amount of root to cover, the content of pheomelanins or eumelanins (tendency towards golds, coppers, beige, neutral of the hair).
- If it is for the roots, only or shaft and ends, since it modifies the type of hydrogen peroxide to use.
- If it is for the roots, if it is to lighten, darken or to cover

grey hair, the nomenclature of what is wanted would be indicated: that is, what colour is wanted and the proportion of dye plus the peroxide would be output. This is provided by the manufacturer. The company creating the dye knows what amount of base plus the tone is necessary for the coverage, although the hairdresser can also create his own mixture.

- In the case of bleaching, a counter of the amounts will have to exist that, depending on the proportion, will indicate the exact amount. Usually 1, 3 or 5/5 (one, three or five fifths) are differentiated which means the upper part and sides of the head or complete highlights which are 5/5, or 1% when only the upper part of the head is wanted.
- Record of the data of the exact mixture in the hard drive.

**[0043]** This database can remain for the company, or in case of being a franchise, the datum can be made universal so that any client, regardless of the country to which he goes, has the same service. Always according to the General Regulation of Protection of Data, which presupposes the signed acceptance of the client. For this, optionally, the equipment's computer will have a remote communication module, either of the Intranet type or else Internet.

**[0044]** The data of the service performed will be sent to the general computer program, (only the final mixture) so that each client can pay his corresponding bill at the cash register.

**[0045]** As indicated, there would be notices for the allergic persons, and/or those with different sensitivities so that a mistaken dye cannot be created.

**[0046]** With all this, the advantages that the equipment provides are noteworthy:  
For the hair salon itself:

- Reduction in the need for storage space;
- Complete use of the product;
- Effective cost control;
- Improvement of the economic management of the company;
- New work stations (apparently the hair salons would not be affected with regard to the personnel but it not true. The checking of the equipment generates parallel posts: periodic technical inspections, and that is without counting the position of the dye manufacturers to which we will refer later. Without doubt, excellence in the services is going to be offered.);
- Eco-sustainability: this procedure saves the dumping of many polluting tubes and residual waste.

**[0047]** As we can see, there are numerous dyes, and there are even manufacturers that have a larger number of tones. One of the essential advantages that the correct mixture of the components offers is that the same machine can prepare the emulsion that is required. What does this mean? A considerable savings in materials.

And a very probable reactivation of the industry by using less damaging and more sustainable materials.

**[0048]** For the industry:

- 5 - The way of creating the dyes would be modified, both in their format and in all that refers to the presentation to the consumer.
- They would have to invest in the equipment, but at the same time they would reduce the expense of materials by 75%.
- 10 - They would sell their product globally since they would not only sell the dyes but also, by modifying the format, they would in turn sell the hydrogen peroxide and the bleach.

**[0049]** For the hairdressing companies:

- Once adhered to the system, they can promote a greater benefit and the creation of trends, which would involve a boost in publicity and image.
- 20 - They would be differentiated from the other companies. The eco-sustainable profile would be created by avoiding unnecessary dumping.
- Exhaustive control of the expense and of the precise and not unavoidable percentages in order to then make a better offer.
- 25 - Absolute control of the personalization and taste of the clients.
- Universality of the franchises or interconnected companies since their clients would not be regular client of one hairdresser but rather of the company and of the new concept.
- 30 - Broad knowledge of the final client: from allergies, sensitivities, preferences, type of scalp, type of hair, length, thickness. A complete profile, in short.
- 35 - Study of behaviour, tastes, evolution of the hairdressers.

**[0050]** For the clients:

- 40 - Safety in the service.
- Universality since wherever you go the service is identical.
- Confidentiality of your data except for the professional attention to your hair. The use of your data in networks has to be authorized.
- 45 - Knowledge of the absence of toxins and of environmental preservation which is surging in these days. The client would know that thanks to this company the costs of dumping plastics to the ocean would be reduced and emissions also reduced.

**[0051]** For the environment:

- 55 - The equipment is an eco-sustainable, ecological option and reduces the production of dumped toxins to the utmost.

**[0052]** The described equipment for the personalized preparation of dyes and computerized image monitoring for hair salons represents, then, an innovation of structural and constitutive characteristics unknown up to now, reasons that together with its practical utility give it sufficient grounds for obtaining the privilege of exclusivity that is requested.

## DESCRIPTION OF THE DRAWINGS

**[0053]** In order to complement the description that is being made and for the purpose of aiding a better understanding of the characteristics of the invention, a set of drawings accompany this descriptive report, as an integral part thereof, including but not limited to the following:

Figure number 1 - It shows a schematic view in frontal perspective of an example of the equipment for the personalized preparation of dyes and computerized image monitoring for hair salons, the subject of the invention, indicating the main parts and elements that comprise it.

Figure number 2 - It shows a perspective view of an example of a colour container that the equipment has, according to the invention, schematically represented with the tube that takes the product to the mixing recipient and its connection to the computer.

## PREFERRED REALIZATION OF THE INVENTION

**[0054]** In view of the described figures, and in accordance with the adopted numeration, you can observe in them an example, but not limited to it, of the realization of the equipment or the personalized preparation of dyes and computerized image monitoring for hair salons of the invention, which comprises the parts and elements that are indicated and described in detail below.

**[0055]** Thus, as observed in these figures, especially in figure 1, the equipment (1) in question is configured, essentially, from a structure (2) with the capacity to incorporate a plurality of elements for giving the exact and controlled dose and for mixing the different products that are used to prepare an emulsion applicable as hair dye, on the one hand, comprising at least a plurality of colour containers (3), one or more peroxide containers (4) and a mixing recipient (5), and, on the other hand, a computer (6) that, provided with specific software and database and touch screen (7) or screen and keyboard as user interface, controls this dosage, at least in part automatically and, in addition, informs about this on the screen.

**[0056]** Preferably, the computer (6) controls automatically, by electronic means to which it is connected, such as electrovalves (8) and/or impulse pumps (9), at least, the dosage of the product contained in the colour containers (3) and in the peroxide containers (4), being sent through tubes (10) to the mixing recipient (5), while the mixture of them is done manually in the cited recipient

by means of a stirrer (11) provided for this purpose.

**[0057]** Preferably, the structure (2) with all its elements and the computer (6) with the touch screen (7) or user interface, form a compact set of a reduced size apt as a desktop element, where the colour containers (3), the peroxide containers (4) and the mixing recipient (5) are easily accessible in the front part, with all of them being extractable.

**[0058]** Preferably, the colour containers (3) and the peroxide containers (4) are situated above, the mixing recipient (5) is placed in a horizontal space (12) provided under these containers (3,4), and the computer (6) with the touch screen (7) is situated under this space (12).

**[0059]** Preferably, the computer (6) has an external hard disk and an uninterrupted power supply (UPS) as well as a wireless connection to the computerized cash register of the establishment in which the equipment is used and, optionally, with a remote connection module (elements not represented).

**[0060]** According to figure 2, you can observe how, preferably the colour containers (3) consist of an opaque drum, preferably reusable and, preferably, with a capacity of approximately 1,500 ml.

**[0061]** Preferably, all the colour containers (3) have an outlet nozzle (13) which doses the product, provided with a plunger associated to an electrovalve (8) connected electrically to the computer (6) and from which runs a tube (10) that takes the product to the mixing recipient (5); a tube that, preferably, is opaque. Optionally, in the final end of these tubes (10) fastened on the mixing recipient (5), you observe the incorporation of a funnel (19) collector of the product that falls by gravity into the recipient (5).

**[0062]** In addition, preferably, all the colour containers (3) and all the peroxide containers (4) incorporate a level sensor (14) also connected electrically to the computer (6) to control the product content level.

**[0063]** Preferably, the colour containers (3) are incorporated in the structure (2) of the equipment housed in compartments (15) provided for this purpose with the cited connections, where they are conveniently separated from each other to facilitate the placement and extraction.

**[0064]** For their part, the peroxide containers (4) consist of bags which are incorporated to the structure (2) of the equipment held by some anchoring means (16), and, in any case, connected through a tube (10) circuit, not necessarily opaque, with at least one impulse pump (9) that, connected electrically to the computer (6) for its controlled action, sends its content towards the mixing recipient.

**[0065]** Furthermore, the structure (2) of the equipment (1) of the invention also consists of, at least, one container of bleaching powder (17) which, preferably, is of manual dosage, and, preferably, it incorporates a dose counter (18).

**[0066]** In the preferred realization, the equipment (1) has, at least, the following containers: eleven colour containers (3), numbered 1 to 11, that contain the different

base colours with ammonia; eleven colour containers (3), that contain the different base colours without ammonia; eight colour containers (3), numbered 0 to 7, that contain the different tones with ammonia; eight colour containers (3), numbered 0 to 7, that contain the different tones without ammonia; four containers of peroxide that contain different types of hydrogen peroxide; and one container of bleaching powder (17).

**[0067]** With the nature of this invention having been described sufficiently, as well as the way of putting it into practice, it is not considered necessary to extend its explanation further as any expert in the subject may understand its scope and the advantages that are derived from it, expressly stating that, within its essentiality, it can be carried out in practice with other forms of realization that differ in detail from that indicated as an example, and to which the protection also extends, as long as its fundamental principle is not altered, changed or modified.

### Claims

1. EQUIPMENT FOR THE PERSONALIZED PREPARATION OF DYES AND COMPUTERIZED IMAGE MONITORING FOR HAIR SALONS **characterized by** consisting of a structure (2) with capacity to incorporate a plurality of elements for dosing in an exact and controlled manner and for mixing the different products that are used to prepare an emulsion applicable as hair dye, which, in turn, consists of, at least, a plurality of colour containers (3), one or more containers of peroxide (4) and a mixing recipient (5), and a computer (6) provided with specific software and database, with a touch screen (7) or screen and keyboard as user interface, that controls this dosage, at least in part automatically and, in addition, informs about it on the screen.
2. EQUIPMENT FOR THE PERSONALIZED PREPARATION OF DYES AND COMPUTERIZED IMAGE MONITORING FOR HAIR SALONS, according to claim 1, **characterized in that** it includes: electrovalves (8) and/or impulse pumps (9) connected to the computer (6) as means of electronic action for automatically controlling, at least, the dosing of the product contained in the colour containers (3) and in the peroxide containers (4); tubes (10) for sending this product to the mixing recipient (5); and a stirrer (11) to make the mixture of them manually in the cited recipient.
3. EQUIPMENT FOR THE PERSONALIZED PREPARATION OF DYES AND COMPUTERIZED IMAGE MONITORING FOR HAIR SALONS, according to claim 2, **characterized in that** the structure (2) with all its elements and the computer (6) with the touch screen (7) or user interface, form a small-sized compact set apt as a desktop element, where the colour

containers (3), the peroxide containers (4) and the mixing recipient (5) are easily accessible in its front part, with all of them being extractable.

4. EQUIPMENT FOR THE PERSONALIZED PREPARATION OF DYES AND COMPUTERIZED IMAGE MONITORING FOR HAIR SALONS, according to claim 3, **characterized in that** the colour containers (3) and the peroxide containers (4) are situated above, the fixing recipient (5) is situated in a horizontal space (12) provided under these containers (3,4), and the computer (6) with the touch screen (7) is situated below this space.
5. EQUIPMENT FOR THE PERSONALIZED PREPARATION OF DYES AND COMPUTERIZED IMAGE MONITORING FOR HAIR SALONS, according to any of the claims 1 to 4, **characterized in that** the computer (6) has
  - an external hard disk and
  - an uninterrupted power system (UPS).
  - a wireless connection with the computerized cash register of the establishment in which the equipment is used.
6. EQUIPMENT FOR THE PERSONALIZED PREPARATION OF DYES AND COMPUTERIZED IMAGE MONITORING FOR HAIR SALONS, according to any of the claims 1 to 6, **characterized in that** the computer (6) has a remote connection module.
7. EQUIPMENT FOR THE PERSONALIZED PREPARATION OF DYES AND COMPUTERIZED IMAGE MONITORING FOR HAIR SALONS, according to any of the claims 1 to 7, **characterized in that** the colour containers (3):
  - consist of opaque drums
  - are reusable.
  - have a capacity of approximately 1,500 ml.
8. EQUIPMENT FOR THE PERSONALIZED PREPARATION OF DYES AND COMPUTERIZED IMAGE MONITORING FOR HAIR SALONS, according to any of the claims 1 to 9, **characterized in that** the colour containers (3) have a capacity of approximately 1,500 ml.
9. EQUIPMENT FOR THE PERSONALIZED PREPARATION OF DYES AND COMPUTERIZED IMAGE MONITORING FOR HAIR SALONS, according to any of the claims 1 to 10, **characterized in that** the colour containers (3) have an outlet nozzle (13) that doses the product, provided with a plunger associated to an electrovalve (8) connected electrically to the computer (6) and from which runs a tube (10) that takes the product to the mixing recipient (5).

10. EQUIPMENT FOR THE PERSONALIZED PREPARATION OF DYES AND COMPUTERIZED IMAGE MONITORING FOR HAIR SALONS, according to claim 11, **characterized in that** the tubes that take the product from the colour containers (3) to the mixing recipient (5) are opaque. 5
11. EQUIPMENT FOR THE PERSONALIZED PREPARATION OF DYES AND COMPUTERIZED IMAGE MONITORING FOR HAIR SALONS, according to any of the claims 1 to 12, **characterized in that** the colour containers (3) and all the peroxide containers (4) incorporate a level sensor (14) connected electrically to the computer (6). 10  
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12. EQUIPMENT FOR THE PERSONALIZED PREPARATION OF DYES AND COMPUTERIZED IMAGE MONITORING FOR HAIR SALONS, according to any of the claims 1 to 9, **characterized in that** the colour containers (3) are incorporated in the structure (2) of the equipment, housed in compartments (15) provided for this purpose. 20
13. EQUIPMENT FOR THE PERSONALIZED PREPARATION OF DYES AND COMPUTERIZED IMAGE MONITORING FOR HAIR SALONS, according to any of the claims 1 to 15, **characterized in that** the peroxide containers (4) consist of bags that are incorporated in the structure (2) of the equipment, held by some anchoring means (16) and are connected, through a circuit of tubes (10), to at least one impulse pump (9) that, connected electrically to the computer (6) for its controlled drive, leads its content to the mixing recipient (5). 25  
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14. EQUIPMENT FOR THE PERSONALIZED PREPARATION OF DYES AND COMPUTERIZED IMAGE MONITORING FOR HAIR SALONS, according to any of the claims 1 to 16, **characterized in that** the structure (2) also includes, at least, one container of bleaching powder (17) that is of manual dosage and incorporates a dose counter (18). 40
15. EQUIPMENT FOR THE PERSONALIZED PREPARATION OF DYES AND COMPUTERIZED IMAGE MONITORING FOR HAIR SALONS, according to any of the claims 1 to 18, **characterized in that** it has eleven colour containers (3), numbered 1 to 11, that contain the different base colours with ammonia; eleven colour containers (3), that contain the different base colours without ammonia; eight colour containers (3), numbered 0 to 7, that contain the different tones with ammonia; eight colour containers (3), numbered 0 to 7, that contain the different tones without ammonia; four containers of peroxide that contain different types of hydrogen peroxide; and one container of bleaching powder (17). 45  
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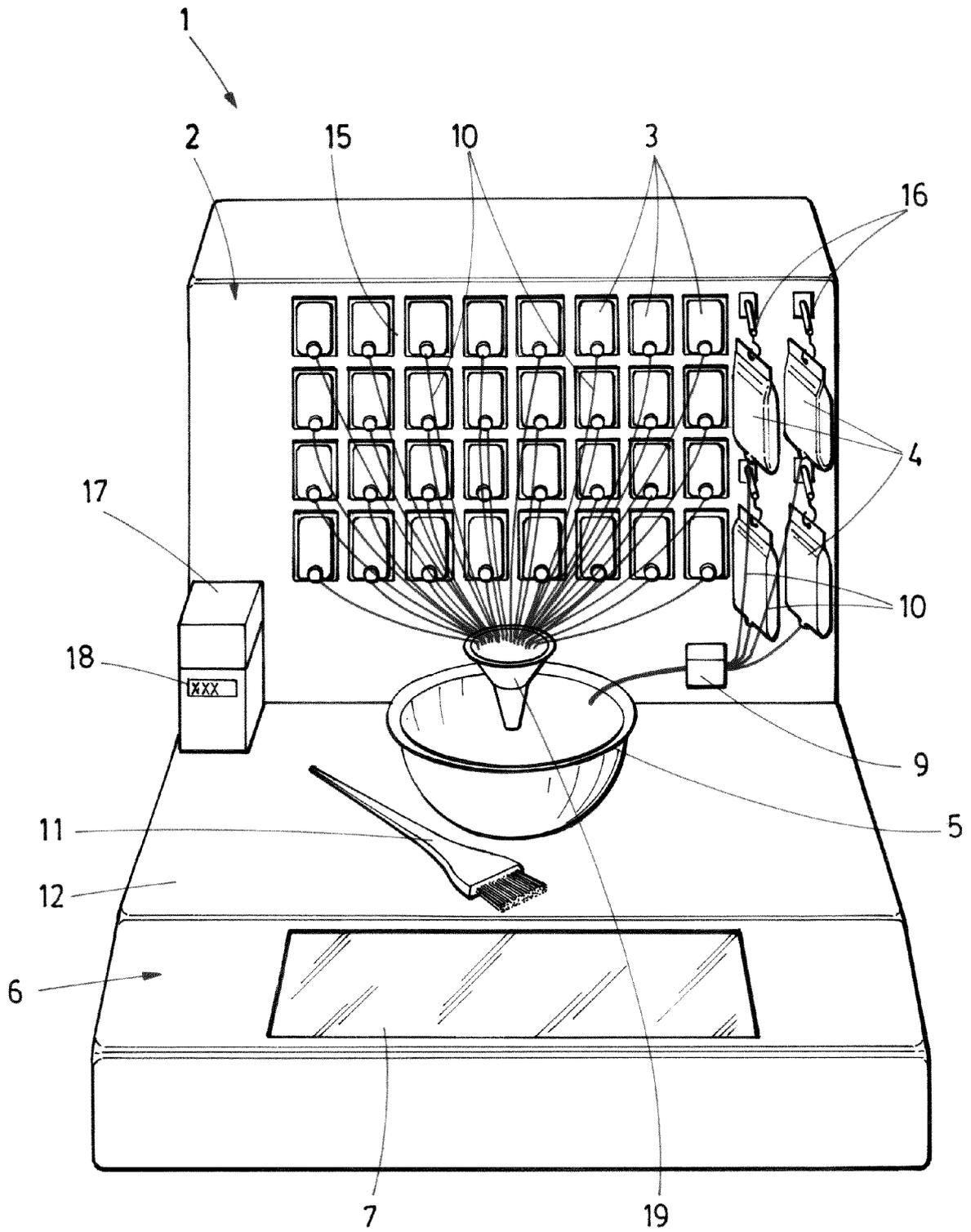


FIG. 1

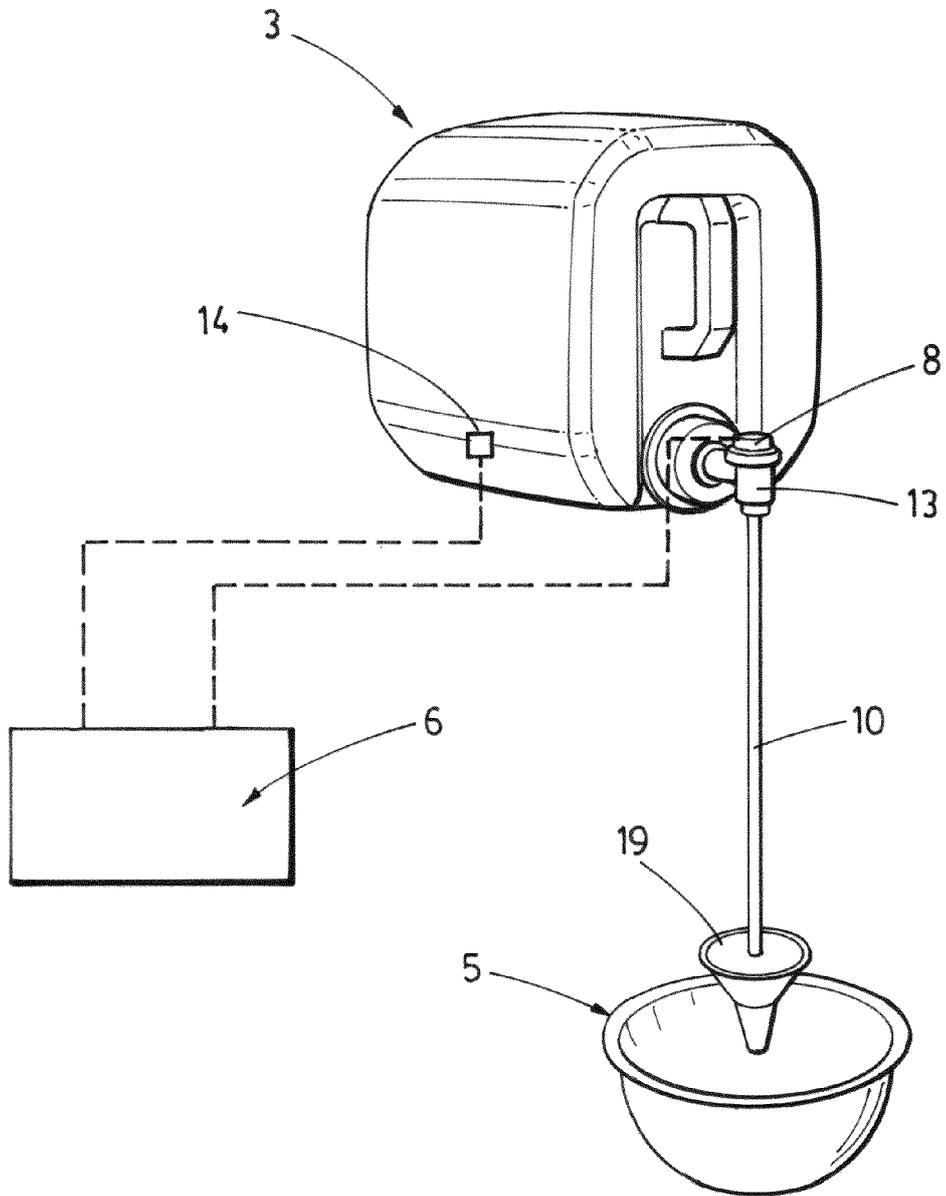


FIG.2



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Place of search The Hague		Date of completion of the search 15 November 2018	Examiner Fidalgo Marron, B
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