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

(11) **EP 1 238 643 B1**

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention of the grant of the patent:
02.07.2008 Bulletin 2008/27

(21) Application number: **00914191.2**

(22) Date of filing: **07.04.2000**

(51) Int Cl.:
A61H 15/00 *(2006.01)* ***A61H 9/00*** *(2006.01)*

(86) International application number:
PCT/ES2000/000128

(87) International publication number:
WO 2001/039717 (07.06.2001 Gazette 2001/23)

(54) **APPLICATION HEAD FOR AN APPARATUS USED IN COSMETIC SURGERY AND ELECTROMEDICINE**

AUFTRAGUNGSKOPF FÜR EINE IN DER KOSMETISCHEN CHIRURGIE UND ELEKTROMEDIZIN VERWENDETE VORRICHTUNG

TÊTE D'APPLICATION POUR APPAREIL UTILISÉ DANS LE DOMAINE DE L'ESTHÉTIQUE ET DE L'ÉLECTROMÉDECINE

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

(30) Priority: **01.12.1999 ES 9903069 U**

(43) Date of publication of application:
11.09.2002 Bulletin 2002/37

(73) Proprietor: **S.O.R. INTERNACIONAL, S.A.**
08192 Sant Quirze Del Vallès (ES)

(72) Inventor: **SANCHEZ SORIANO, Manuel**
E-08192 Sant Quirze Del Vallès (ES)

(74) Representative: **Manresa Val, Manuel et al**
Manresa & De Rafael, S.L.
Roger de Llúria n. 113, 4th floor
08037 Barcelona (ES)

(56) References cited:
WO-A1-91/14417
FR-A- 854 937
FR-A- 1 225 094
US-A- 2 043 114
US-A- 3 081 769

EP 1 238 643 B1

Description

[0001] Application head for an apparatus used in cosmetic surgery and electromedicine with a housing, which it has a cavity in his inner part and orifices for suction that in addition incorporates bearings which they are not fixed to a determined point of the application head, being able to move through this application head in any direction, between the inner cavity and the housing.

BACKGROUNDS OF THE INVENTION

[0002] Different mechanisms are known for producing massages in the skin, essentially they are devices that exclusively raise only the dead skins giving, sometimes, a small massage.

[0003] Thus the applicant is the owner of the utility model n° 9901705 which it protects a device with suction handle that incorporates application heads, with balls that they can roll in all directions, fixed said balls to a predetermined point.

[0004] European Patent n° 0521095, that designated initially Spain but later it did not enter in national phase, therefore it is public domain in our country, protects an apparatus for massaging with a camera for suction of the skin and a plurality of massage balls so that it provides an interstice for penetration in the skin between two balls.

[0005] The features of the preamble of claim 1 are known from the document US-A-3 081 769.

BRIEF DESCRIPTION OF THE PRESENT INVENTION

[0006] The present utility model solves one of the greatest problems of the apparatus used in cosmetic surgery and electromedicine, the cleaning and disinfection of the application heads.

[0007] When the application head gives a massage with the balls and suctions the skin, it drags skins and impurities of dermis, and a great part of them are going to the mentioned balls.

[0008] After each client the professionals must open the head, that it has screws by safety measures, to clean, to return to screw and to return to place this application head in the handle, and this process with every client, which in the long run it causes damages in the screws and low practicity, by its complexity.

[0009] With the present invention, the owner has solved the serious problem of the cleaning of instruments, through a new application head that with simple turnscrew as a handle can make leave from the mentioned application head all the balls without effort, and allows a much more detailed cleanliness of instruments.

[0010] Moreover no parts of the head are damaged, it means that the same one can be used an infinity of times without hardly wearing as a result of the cleanliness.

[0011] In addition it is necessary to point out the fact that all balls are free, only limited by the bearing track, which it allows that all of them can be moved in all directions, moreover they have associated a traslation movement in respect of the mentioned track of bearing, it improves the massage and the therapy made by the professional.

[0012] The previous application heads, all of them dismantled to facilitate their cleanliness, have a trunco - conical configuration and they use bearings by balls for taking the handle in all directions. One of said application heads incorporates in its central part a conicity in order to avoid haematomas because the skin will have three points of support in the application head. In the other two application heads the mentioned conicity does not exist because the edges of the application head are enough close to each other as to avoid any tension in the skin and, therefore, haematomas.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] With the purpose to facilitate the explanation two sheets of drawings are attached to the present description in which it has been shown a practical embodiment, which it is mentioned only for purpose of example, non limitative of the scope of the present invention.

[0014] In these sheets of drawings:

Figure 1 shows a lateral sight with a quarter section of a suction handle with an application head not in accordance with the present invention.

Figure 2 shows a sight of the first application head, from the bottom.

Figure 3 shows a detail of a section cut of an application head, in connection to a single ball and the procedure for its extraction from the application head.

Figure 4 shows a section cut of another application head not in accordance with the present invention.

Figure 5 shows a section cut of an application head, in accordance with the invention.

CONCRETE EMBODIMENT OF THE PRESENT INVENTION

[0015] Figure 1 shows a suction handle (8) for medical surgery and electromedicine apparatus, an application head (1), bearings in the form of balls (2), the outer housing (3) of the mentioned application head and a part of the inner cavity (4).

[0016] It can be seen the mentioned balls (2), the outer housing (3), the inner cavity (4), the orifice for suction (5) and one track of bearing (7), all of them in Figure 2.

[0017] In Figure 3 it is shown the ball (2), the outer housing (3), the inner cavity (4), the track of bearing (7) and a turnscrew (5).

[0018] In Figure 4 a section cut of an application head (1) can be observed, where the balls (2), the outer housing (3) of the application head, the cavity (4), an orifice for suction (5) and a filter (9) can be seen.

[0019] The balls (2), the outer housing (3), the cavity

(4), the orifices for suction (5) and one central ball (6) are shown in figure 5.

[0020] Thus, once the suction mechanism starts to work, the suction handle (8) with an application head (1) is located on the skin of the person to whom the treatment is given. Through the orifices (5) all skin impurities are sucking which they are collected in a filter (9) and avoid that the same ones are going to the mentioned suction handle (8), obturating it.

[0021] At the same time the application head (1) is moved in all directions, for giving a massage in all of the skin. The balls (2) while they are sliding over the skin, they turn in all directions and at the same time they move through all the track of bearing, in annulus form, in such a way that a concrete ball, at the end of the massage session can be located, within the mentioned track of bearing (/) in a different place from which it began.

[0022] The fact that the balls (2) are not located in a fixed point and can move throughout the track of bearing (7), it allows a better massage and at the same time it avoids that the ball can be blocked, and therefore, fixed, without movement, as a result of an impurity.

[0023] Also it has been thought the positioning of a ball (6) in the centre of the head, in such a way that in the case the application head, having as it bases the mentioned balls (2), is positioned on a horizontal plane, the mentioned ball (6) would not touch said horizontal plane.

[0024] This special configuration of the ball allows not to create tensions or breakings in the user's skin at the moment of the suction, because the ball (6), from one point of view, is a bearance of the skin, reducing the tension and at the same time gives a massage, when it rotates in all directions.

[0025] It has been thought, the use, inside said cavity, of more than one ball (6), positioned within a track of bearing (not illustrated in the drawings).

[0026] Once the massage is finished, the professional can clean the application head in a very easy way, because the housing of the head is formed by an elastic material and the inner part by an antiadherent material, for example Teflon, which it avoids erasures in the user's skin.

[0027] So with a simple instrument, for example a turnscrew (5), doing handle, it is possible to remove all the balls (2) from the inner part of the track of bearing (7), to be able to clean them one by one and later to introduce them within the mentioned track of bearing with a simple pressure of the fingers.

[0028] The present invention describes an application head for an apparatus used in cosmetic surgery and electromedicine. The examples mentioned here are not limitative ot the scope ot the present invention, tor that reason it will be able to have different applications and/or adaptations, all of them within the scope of the following claims.

Claims

1. Application head for an apparatus used in cosmetic surgery and electromedicine, including an outer housing (3), an inner cavity (4), orifices (5) for the suction, and bearings (2), said bearings (2) being positioned one next to and in contact with each other, said bearings (2) being placed in a ring-shaped area forming a track of bearing (7) between the inner cavity (4) and the outer housing (3) which is made of elastic material, said bearings (2) being able to move freely within and being kept in the said track of bearing (7), and said bearings (2) being easily removable from the application head via making leverage with an instrument (5), **characterized in that**:«

   a) said bearings (2) in the moment of the application come into contact with the skin of the patient ;
   b) at least one bearing (6) being positioned inside the inner cavity (4) and slightly over the rest of bearings (2), in such a way that, by positioning the application head on a horizontal plane, said bearings (2) would be in contact with and the at least one bearing (6) would not touch said horizontal plane.

2. Application head in accordance to the claim 1 **characterized in that** said bearings are balls (2).

3. Application head in accordance to the claim 2 **characterized in that** said balls (2) are included in at least one track of bearing (7).

4. Application head in accordance to the claim 3 **characterized in that** the most outer past of the track is the inner face of the outer housing (3) and the most inner past of the track is the outer face of the inner cavity (4).

5. Application head in accordance to the claims 1 or 4 **characterized in that** the inner cavity (4) is formed by an antiadherent material.

6. Application head in accordance to claim 5 **characterized in that** said antiadherent material is Teflon.

7. Application head in accordance to claim 1 **characterized in that** the inner cavity (4) comprises at least one track of bearing for more than the at least one bearings (6).

8. Application head in accordance to claim 1 **characterized in that** it comprises a filter (9).

Patentansprüche

1. Auftragskopf für eine bei Schönheitsoperationen und in der Elektromedizin verwendete Apparatur, mit einem Außengehäuse (3), einem Innenhohlraum (4), Öffnungen (5) zur Absaugung, sowie Lagerkörpern (2), die nebeneinander angeordnet sind und sich gegenseitig berühren, wobei die Lagerkörper (2) in einem ringförmigen Bereich angeordnet sind, der zwischen dem Innenhohlraum (4) und dem Außengehäuse (3) eine Laufspur (7) aus elastischen Werkstoff bildet, wobei die Lagerkörper (2) innerhalb der Laufspur (7) frei beweglich sind, in derselben gehalten werden und mit ein Instrument (5) vom Auftragskopf leicht ablösbar sind, **dadurch gekennzeichnet, dass**:

   a) die Lagerkörper (2) zum Auftragszeitpunkt mit der Haut des Patienten in Berührung kommen;
   b) zumindest ein Lagerkörper (6) innerhalb des Innenhohlraums (4) und geringfügig über den restlichen Lagerkörpern (2) angeordnet ist, so dass bei Aufsetzen des Auftragskopfes auf einer waagrechten Ebene die Lagerkörper (2) mit der waagrechten Ebene in Berührung treten würden, und dass zumindest ein Lagerkörper (6) die waagrechte Ebene nicht berühren würde.

2. Auftragskopf nach Anspruch 1, **dadurch gekennzeichnet, dass** es sich bei den genannten Lagerkörpern um Kugeln (2) handelt.

3. Auftragskopf nach Anspruch 2, **dadurch gekennzeichnet, dass** die Kugeln (2) in mindestens einer Laufspur (7) eingefasst sind.

4. Auftragskopf nach Anspruch 3, **dadurch gekennzeichnet, dass** der äußerste Teil der Laufspur die Innenfläche des Außengehäuses (3) und der innerste Teil der Laufspur die Außenfläche des Innenhohlraums (4) darstellen.

5. Auftragskopf nach Ansprüchen 1 bis 4, **dadurch gekennzeichnet, dass** der Innenhohlraum (4) aus einem nicht haftenden Werkstoff besteht.

6. Auftragskopf nach Anspruch 5, **dadurch gekennzeichnet, dass** es sich bei dem nicht haftenden Werkstoff um Teflon handelt.

7. Auftragskopf nach Anspruch 1, **dadurch gekennzeichnet, dass** der Innenhohlraum (4) zumindest eine Laufspur für mehr als den zum Mindesten einen Lagerkörper (6) aufweist.

8. Auftragskopf nach Anspruch 1, **dadurch gekennzeichnet, dass** er einen Filter (9) beinhaltet.

Revendications

1. Tête d'application pour appareil utilisé dans le domaine de l'esthétique et de l'électromédecine, qui comprend une cage externe (3), une cavité interne (4), des orifices (5) pour la succion, et un roulement à billes (2), les billes dudit roulement (2) étant insérées l'une près de l'autre et en contact l'une avec l'autre, ledit roulement (2) étant placé dans une zone en forme de bague formant un chemin de roulement (7), entre la cavité interne (4) et la cage externe (3), qui est fait d'un matériau élastique, et ledit roulement (2) pouvant bouger librement à l'intérieur et restant dans ledit chemin de roulement (7), et les billes dudit roulement (2) pouvant être retirées facilement de la tête d'application au moyen d'un instrument (5), et **caractérisée en ce que** :

   a) au moment de l'application, ledit roulement à billes (2) entre en contact avec la peau du patient ;
   b) au moins une bille du roulement (6) est positionnée à l'intérieur de la cavité interne (4) et légèrement au-dessus du reste des billes du roulement (2), de façon à ce que, en positionnant la tête d'application sur un plan horizontal, les billes dudit roulement (2) puissent entrer en contact avec le plan horizontal et qu'au moins une bille du roulement (6) ne puisse toucher ledit plan horizontal.

2. Tête d'application conforme à la revendication 1 et **caractérisée en ce que** lesdits roulements sont des roulements à billes (2).

3. Tête d'application conforme à la revendication 2 et **caractérisée en ce que** lesdites billes (2) sont insérées dans au moins un chemin de roulement (7).

4. Tête d'application conforme à la revendication 3 et **caractérisée en ce que** la plus grande partie extérieure du chemin de roulement est la surface interne de la cage externe (3) et que la plus grande partie intérieure du chemin de roulement est la surface externe de la cavité interne (4).

5. Tête d'application conforme à la revendication 1 ou 4 et **caractérisée en ce que** ladite cavité interne (4) est formée par un matériau antiadhérent.

6. Tête d'application conforme à la revendication 5 et **caractérisée en ce que** ledit matériau antiadhérent est du téflon.

7. Tête d'application conforme à la revendication 1 et **caractérisée en ce que** la cavité interne (4) comprend au moins un chemin de roulement pour au moins plus d'un roulement (6).

8. Tête d'application conforme à la revendication 1 et **caractérisée en ce qu'**elle comprend un filtre (9).

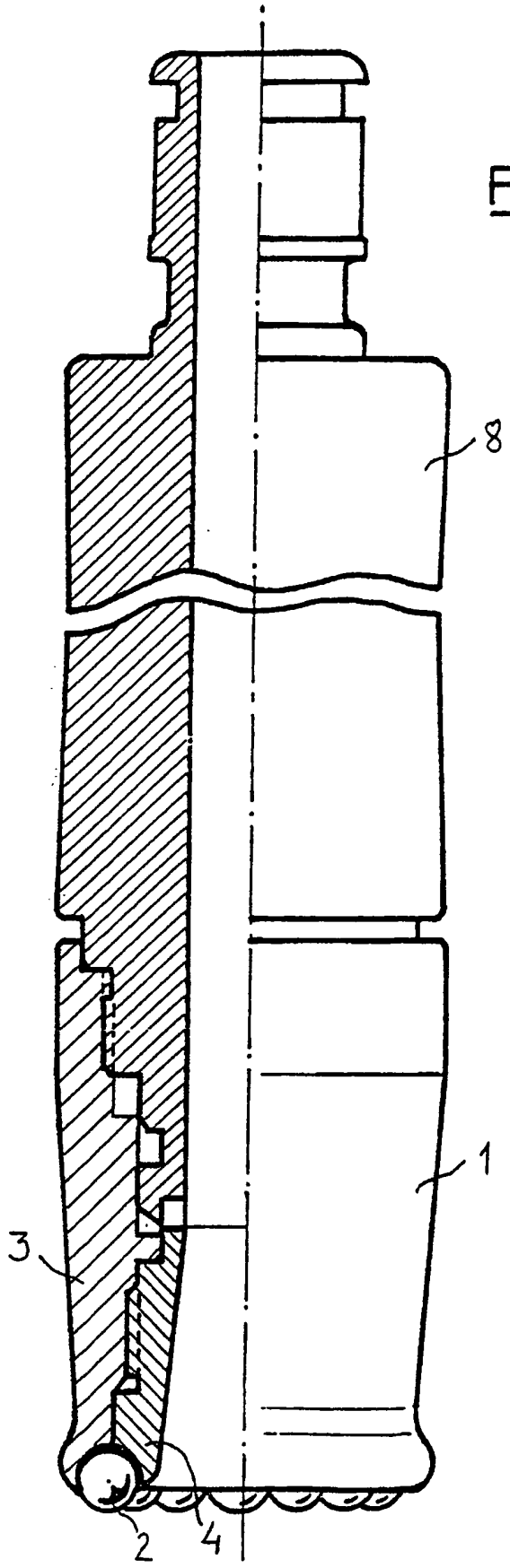

FIG. 1

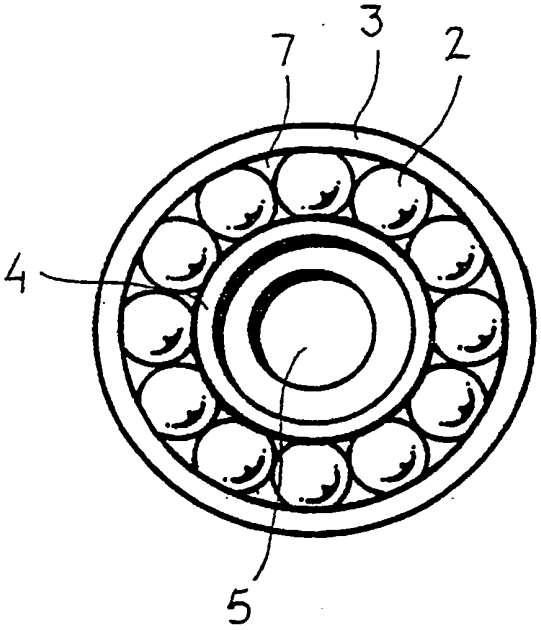

FIG. 2

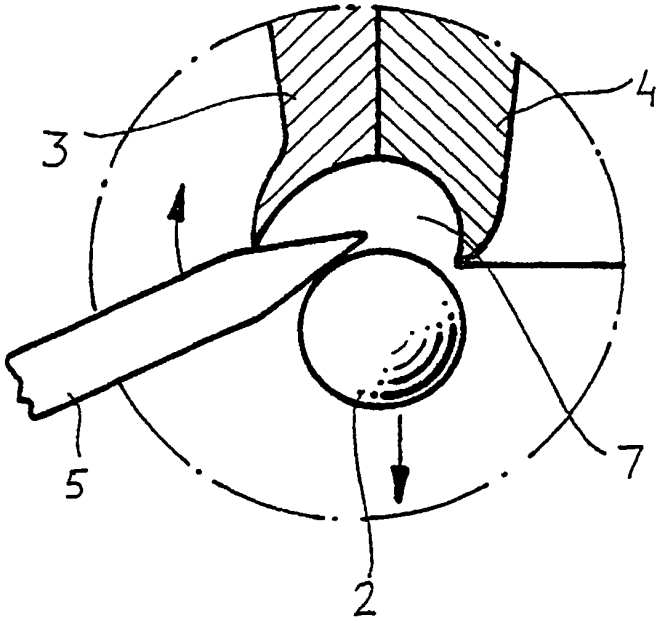

FIG. 3

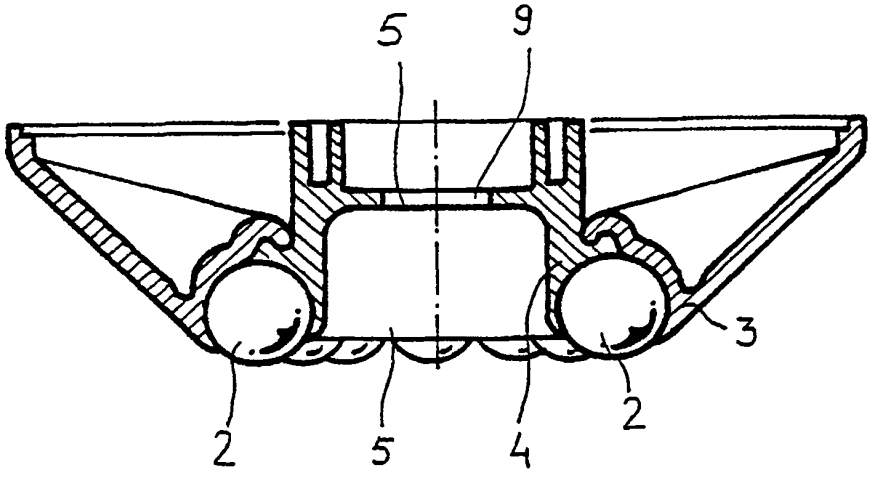

FIG. 4

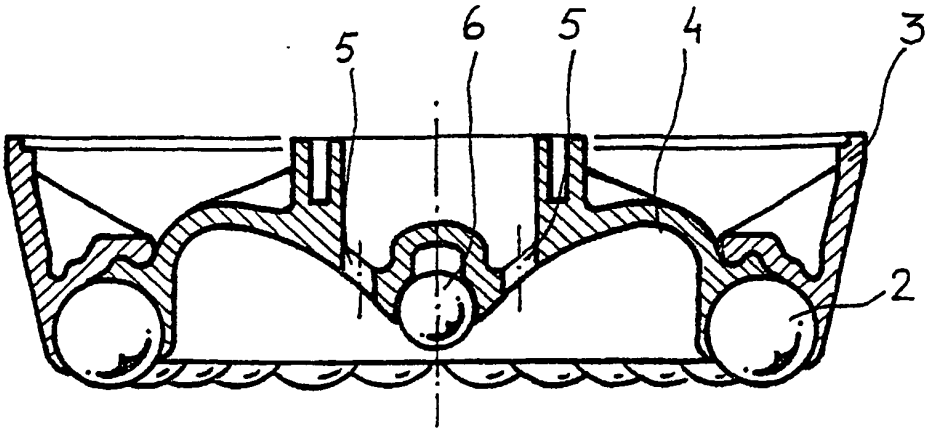

FIG. 5

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- EP 0521095 A **[0004]**
- US 3081769 A **[0005]**