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(54) **Apparatus for carrying out treatments on the human body for health and beauty purposes**

Gerät für die Anwendung vor Kosmetik- oder Wellness-Behandlungen des menschlichen Körpers

Appareillage pour l'exécution de traitements sur le corps humain à usage esthétique et pour le bien-être

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Description

[0001] The present finding concerns an apparatus for carrying out treatments on the human body for health and beauty purposes, according to the general part of claim 1.

[0002] For some time apparatuses have been known that are able to carry out localised massages for personal health and beauty purposes. As an example of a device capable of carrying out this operation we can quote American document US-B1-6258049.

[0003] However, the most significant documents of the state of the art consist of Italian patent application no. VI2006A000065, which gave rise to the European patent applications with publication EP1834621A, as well as the further Italian patent application no. VI2007A000254, which gave rise to a European patent application with publication EP2039337A. Such inventions were devised by the same inventor as the present application and both resulted in a corresponding European patent.

[0004] The first document describes a beauty treatment method, based substantially on the application of hot and cold, associated with localised massages on the human body. The second document substantially consists of a series of improvements to the device described in the first document.

[0005] In order to make it easier to understand the technical problem solved by the present finding, in the attached figures we also attach some relevant drawings relating to both of the patent applications quoted above.

[0006] The purpose of the present finding is to make an apparatus of the type described in said two patent documents, which is even more effective than the apparatuses described in them and that, at the same time, allows some drawbacks encountered with the use thereof to be avoided.

[0007] This is obtained, according to the finding, by foreseeing, in an apparatus of the type described in such two documents, that the means for producing hot fluids and cold fluids comprise two distinct devices, of which a first device for producing hot fluid is associated with a first massaging head, whereas a second device for producing cold fluid is associated with a second massaging head.

[0008] This and other characteristics of the finding will now be described in detail hereafter, with reference both to the most relevant documents of the state of the art, and to a particular embodiment, with the help of the attached tables of drawings, where:

- figs. 1 and 2 respectively illustrate a layout of the apparatus described in the first of the two documents quoted above and the outline of the main components of said apparatus;
- fig. 3 illustrates a plan view from above of the massaging head described in the second document quoted above;
- fig. 4 illustrates a diametral section view of said head;
- fig. 5 illustrates two massaging heads present in the apparatus according to the finding;
- fig. 6 schematically illustrates the way in which one of the massaging heads is used by an operator;
- fig. 7 illustrates a perspective view from below of the epidermal contact base of a massaging head used in the apparatus according to the finding.

[0009] Basically, the device described in document EP1834621A foresees the presence of a mobile container 1 of means for producing hot and cold water, as well as controlled circulation means suitable for placing such liquids in a closed circuit, conveying them, through the pipes 2, to a portable massaging head 3.

[0010] Vice-versa in fig. 2 it can be seen that inside the mobile container there is the boiler 11, with a thermoresistance 12 and with a thermostat 13 for controlling the temperature of the hot water. There is also a refrigerating apparatus 14, with a thermostat 15 for controlling the temperature of the cold water, as well as a device for exchanging the alternating circulation of hot and cold water, controlled by means of a programmable electronic apparatus contained in the panel 10 of the control unit according to fig. 1.

[0011] The aforementioned device for exchanging the alternating circulation of hot and cold water advantageously comprises an motor pump 16 with low flow rate and high head, as well as solenoid valves 17 controlled by timers and provided with microswitches to control the operation of said motor pump, as well as nonreturn valves 18.

[0012] Vice-versa document EP2039337A describes a massaging head, which can advantageously be associated with the device described earlier and comprises a cup-shaped container 6, an intermediate disc 7 and a lid 8. Such elements are held together by peripheral screws 9, as well as by a central screw 10. Between the cup-shaped container 6 and the intermediate disc 7 there is a first gasket 67, which ensures the upper hydraulic seal of the cup itself, in which the hot and cold water circulates. Similarly, between the intermediate disc and the lid 8 there is a second gasket 78 the respectively ensures both the hydraulic seal of the liquid entered through the inlet-outlet hole 31 of the lid 8, and the pneumatic seal of the compressed air passing through the passage holes 61.

[0013] In particular, there are pulsating elements 4, each of which comprises a cylindrical body 41, associated with an element 42, which is placed in contact with the skin of the body to be treated, said element 42 projecting with respect to the base 61 of the cup-shaped container 6.

[0014] It can also be seen that the container 6 foresees a plurality of sliding seats 62 inside it for the aforementioned pulsating elements 4; this occurs without the pulsating elements 4 themselves having any contact with the liquid present in the cup-shaped container, due to the presence of the hydraulic sealing gasket 67. Each group of pulsating elements is fed with the compressed air in-

jected from one of the injection holes 82, which cross the lid 8 and which communicate with a corresponding channel 83 formed at the base surface of the lid 8. Such a channel 83 extends according to a path that engages all of the pulsating elements that belong to one of such groups and communicates at the bottom with the passage holes 71 crossing the intermediate disc 7 and situated at the translation axis of the corresponding pulsating elements 4.

[0015] In this way, the compressed air will act, when being thrusted, on all of the pulsating elements of a single group and then, with decompression, it will allow the return springs 64 to take the same elements back into rest position.

[0016] The purpose of the electronic control of the apparatus, with which the aforementioned massaging head is associated, is to essentially establish the sequence with which the compressed air is sent to the single groups of pulsating elements.

[0017] A first limitation of the apparatus described in the first quoted document concerns the complexity of the structure of the means for producing hot and cold water (reference numeral 1 of fig. 1), as well as the complexity of the programmable electronic apparatus contained in the control panel 10 of fig. 1.

[0018] Other limitations of the apparatus concerns both the bulk of the portable massaging head 3, to which must flow the two distinct pipes 2 for supplying the hot and cold fluids coming, respectively, from the boiler 11 and from the cooling apparatus 14, and the bulk and the overall weight of the entire assembly.

[0019] A further limitation of the apparatuses described above consists of the substantial thermal inertia offered by the assembly of the massaging head and the relative pipes, said drawback being particularly bad when it is intended to carry out a rapid exchange in supply of hot and cold water (or vice-versa) to the same massaging head.

[0020] According to the finding it is foreseen that, instead of just one, a pair of massaging heads is foreseen, like those represented in fig. 5 (with reference numerals 3A and 3B). In particular each of the two heads advantageously has two distinct groups of pulsating elements 4 (fig. 7) indicated with X with regard to the first group and Y for the second group.

[0021] According to the finding, the compressed air is produced by a special electronically controlled compressor (not represented in the figures) that, at the operator's discretion, sends the compressed air, by means of the two products 20 connected to each massaging head, alternatively to the two groups of pulsating elements 4 indicated above.

[0022] In fact, the most important characteristic of the present finding concerns the presence of two individual massaging heads 3A, 3B, each fed, by means of two pipes 20 connected to each head, by a device for producing a single type of fluid, either hot or cold.

[0023] Such a constructive solution substantially simplified the structure of the system for heating and cooling the fluids to be sent to the massaging heads, as well as that of the control programme of the system itself, with respect to the initial solution described in the two patent documents quoted above, which foresee the presence of a single massaging head.

[0024] Through the solution described above, there is also the advantage of eliminating the thermal inertia present in the exchange of fluids from hot to cold or vice-versa, which was encountered with the known solution of using a single massaging head.

[0025] In this way, it is possible to carry out faster exchanges in the application of hot and cold to the human body, with consequent better results and better feeding of the apparatuses according to the finding.

[0026] Advantageously, the massaging heads 3A and 3B can be equipped with an upper handle 31, so that they can easily be manoeuvred by an operator with his hands.

[0027] In fact, the operator has the possibility of deciding, according to the patient's requirements and according to his own professional experience, to operate on the various parts of the body, both alternating the application of the hot massaging head with the cold one, and applying both of the massaging heads, possibly even at the same time, through mutual attachment means, along the directrix W for bring them together, as indicated in fig. 5. It is possible to connect together the two heads also with different means from those illustrated and described.

[0028] Thanks to the use of the apparatus described above it is possible to combine, when necessary, the massaging action on the human body produced by the vertical pressure of the pulsating elements indicated above, with the stimulating and regenerating action due to the alternating application of epidermal contacts with hot and cold.

[0029] It should also be specified that the finding also concerns the method for the treatment of the human body for health and beauty purposes that uses the device illustrated and described above.

[0030] In the step of making the apparatus described above it is possible to make necessary and suitable modifications to its constructive details, with regard to the massaging heads, and with regard to the devices for producing hot and cold to be sent to the heads themselves, as well as to the moving system for the pulsating movements that carry out the massage.

[0031] All of this will, in any case, respect the inventive concepts outlined and illustrated above, any variant embodiment of which must be considered to be covered by the scope of protection of the present finding.

Claims

1. APPARATUS FOR CARRYING OUT TREATMENTS ON THE HUMAN BODY FOR HEALTH AND BEAUTY PURPOSES, said apparatus com-

prising means for producing hot and cold fluids, epidermal contact means, designed to tap on the body through pulsating elements, means for moving the same pulsating elements, as well as electronic control means, said apparatus being **characterised in that** said means for producing hot and cold fluids comprise two distinct devices, of which a first device for producing hot fluid is associated with a first massaging head (3A) and a second device for producing cold fluid is associated with a second massaging head (3B).

2. APPARATUS FOR CARRYING OUT TREATMENTS ON THE HUMAN BODY FOR HEALTH AND BEAUTY PURPOSES, according to claim 1, wherein each of the massaging heads (3A, 3B) comprises pulsating elements (4) and a cup-shaped container (6) for circulating the relative fluid, said apparatus being **characterised in that** each of the massaging heads is equipped at the top with a handle (31), suitable for allowing it to be manoeuvred by an operator with a single hand.

3. APPARATUS FOR CARRYING OUT TREATMENTS ON THE HUMAN BODY FOR HEALTH AND BEAUTY PURPOSES, according to claims 1 or 2, **characterised in that** the two massaging heads (3A, 3B) have mutual attachment means suitable for connecting together said heads in the beauty treatment manoeuvres, according to the needs and wishes of the operator.

Patentansprüche

1. APPARAT ZUM AUSFÜHREN VON KÖRPERBEHANDLUNGEN ZU GESUNDHEITS- UND KOSMETIKZWECKEN, wobei der genannte Apparat Vorrichtungen zur Zubereitung von heißen und kalten Flüssigkeiten umfasst, für den Hautkontakt vorgesehene Vorrichtungen, die darauf ausgelegt sind, mittels pulsierenden Elementen auf den Körper zu klopfen, Vorrichtungen zum Bewegen dieser pulsierenden Elemente sowie elektronische Steuervorrichtungen, wobei der Apparat **dadurch gekennzeichnet ist, dass** die genannten Elemente zum Zubereiten von heißen und kalten Flüssigkeiten zwei getrennte Vorrichtungen umfassen, von denen eine erste Vorrichtung zur Zubereitung von heißer Flüssigkeit mit einem ersten Massagekopf (3A) und eine zweite Vorrichtung zur Zubereitung kalter Flüssigkeiten mit einem zweiten Massagekopf (3B) verbunden ist.

2. APPARAT ZUM AUSFÜHREN VON KÖRPERBEHANDLUNGEN ZU GESUNDHEITS- UND KOSMETIKZWECKEN nach Anspruch 1, bei dem jeder der Massageköpfe (3A, 3B) pulsierende Elemente (4) und einen tassenförmigen Behälter (6) zum Zirkulieren der jeweiligen Flüssigkeit umfasst, wobei der genannte Apparat **dadurch gekennzeichnet ist, dass** jeder der Massageköpfe oben mit einem Griff (31) ausgestattet ist, der geeignet ist, von einer Person mit nur einer Hand bedient zu werden.

3. APPARAT ZUM AUSFÜHREN VON KÖRPERBEHANDLUNGEN ZU GESUNDHEITS- UND KOSMETIKZWECKEN nach Anspruch 1 oder 2, **dadurch gekennzeichnet, dass** die beiden Massageköpfe (3A, 3B) über gegenseitige Verbindungsvorrichtungen verfügen, die geeignet sind, die genannten Köpfe bei den kosmetischen Behandlungsvorgängen je nach Bedarf des Bedieners miteinander zu verbinden.

Revendications

1. APPAREIL DESTINÉ À L'EXÉCUTION DE TRAITEMENTS SUR LE CORPS HUMAIN À DES FINS ESTHÉTIQUES ET SANITAIRES, ledit appareil comprenant des dispositifs pour produire des liquides chauds et froids, des dispositifs de contact épidermique conçus pour agir sur le corps au moyen d'éléments émettant des pulsions, des moyens de déplacer les éléments à pulsations susmentionnés, ainsi que des dispositifs de contrôle électronique ; l'appareil en question étant **caractérisé en ce que** ces dispositifs pour produire des liquides chauds et froids comprennent deux dispositifs différents, dont le premier, qui produit des liquides chauds, est associé à une première tête de massage (3A) et le second, qui produit des liquides froids, est associé à une deuxième tête de massage (3B).

2. APPAREIL DESTINÉ À L'EXÉCUTION DE TRAITEMENTS SUR LE CORPS HUMAIN À DES FINS ESTHÉTIQUES ET SANITAIRES, selon la revendication 1, dans lequel chacune des têtes de massage (3A, 3B) comprend des éléments à pulsations (4) et un conteneur en forme de coupe (6) pour la circulation du liquide associé, ledit appareil étant **caractérisé par** l'association de chacune des têtes de massage avec, au sommet, une poignée (31) qui en permet la manoeuvre par l'opérateur avec une seule main.

3. APPAREIL DESTINÉ À L'EXÉCUTION DE TRAITEMENT SUR LE CORPS HUMAIN À DES FINS ESTHÉTIQUES ET SANITAIRES, selon les revendications 1 et 2, **caractérisé par le fait que** les deux têtes de massage (3A, 3B) sont dotées de moyens communs de raccordement permettant de raccorder entre elles lesdites têtes dans les manoeuvres propres au traitement esthétique, selon les besoins et souhaits de l'opérateur.

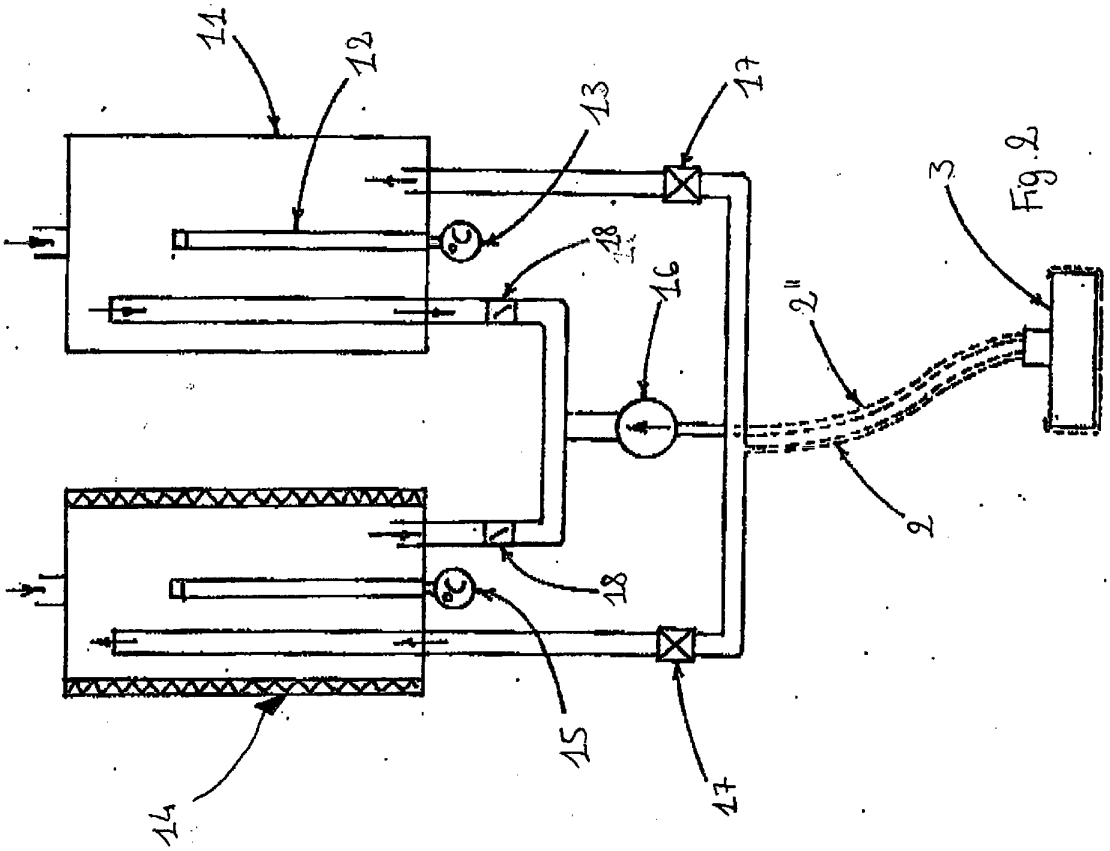


Fig.2

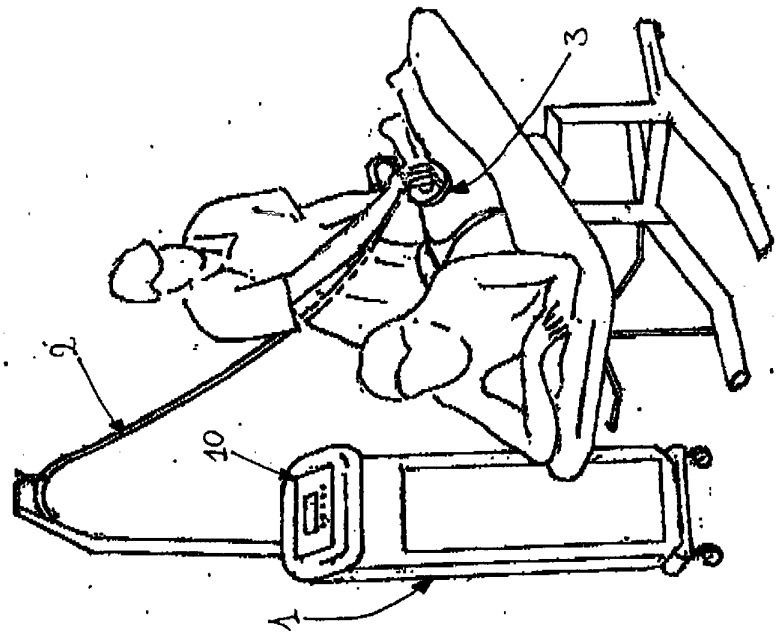


Fig.1

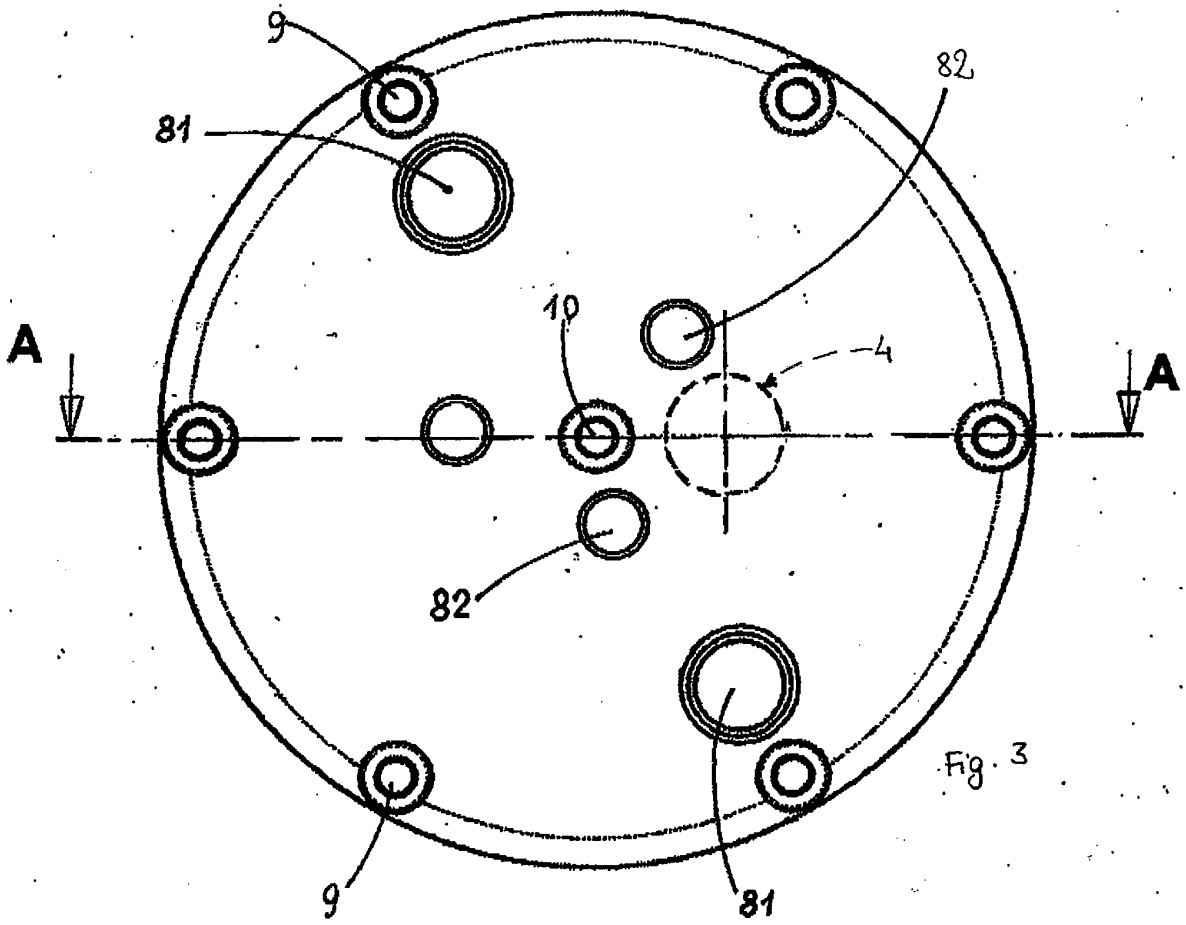

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Fig. 3

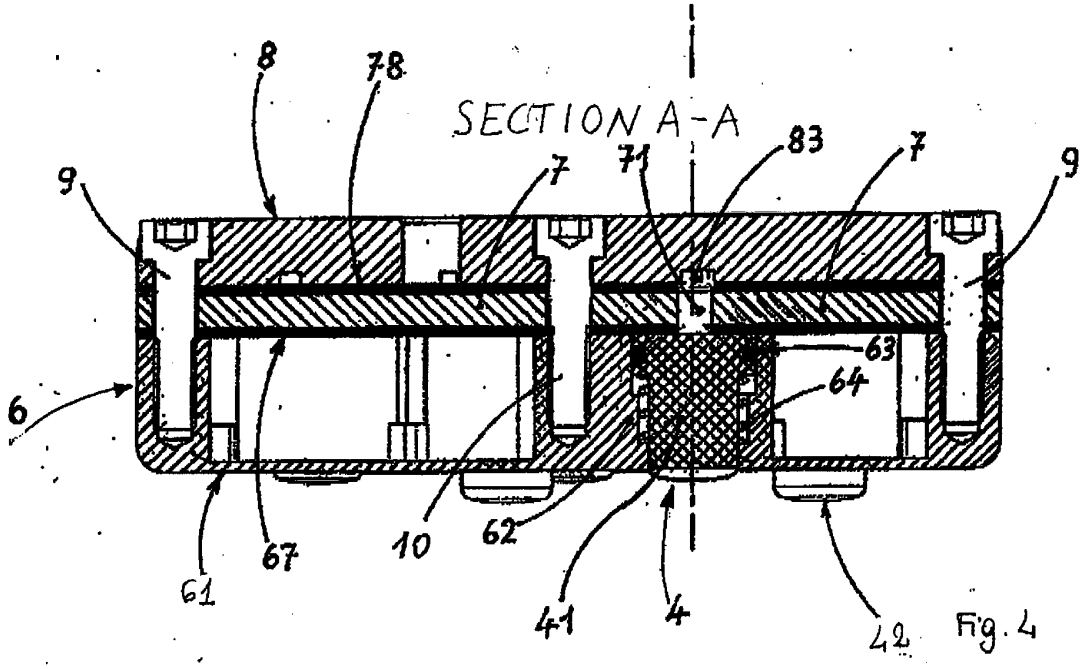

SECTION A-A
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Fig. 4

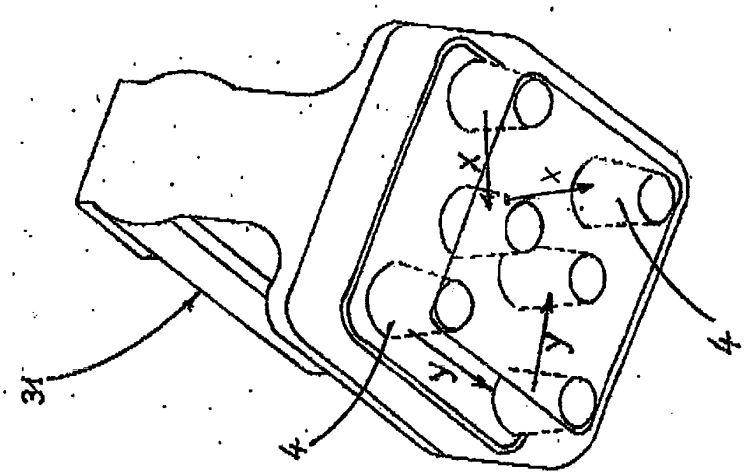


Fig. 7

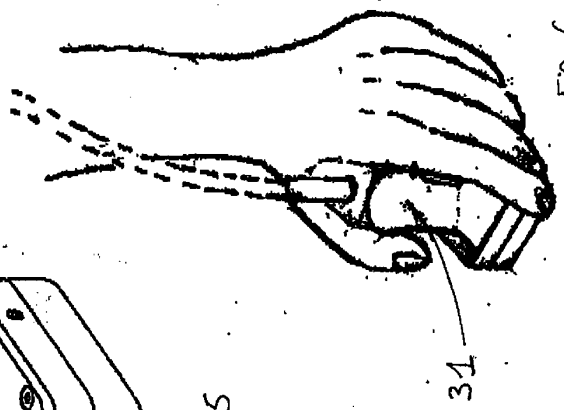


Fig. 6

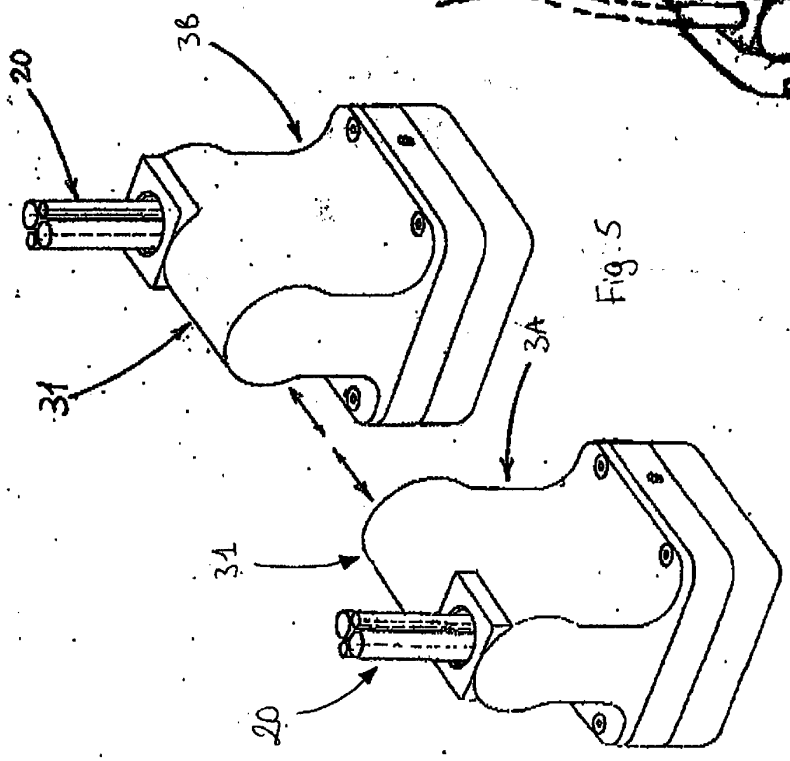


Fig. 5

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 6258049 B1 **[0002]**
- IT VI20060065 A **[0003]**
- EP 1834621 A **[0003] [0009]**
- IT VI20070254 A **[0003]**
- EP 2039337 A **[0003] [0012]**