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(54) **MULTI-POINT KNEADING VIBRATION MASSAGE DEVICE**

(57) A multi-point kneading vibration massage device (1) includes a hard inner housing (2), a soft outer housing (3) surrounding around the hard inner housing (2), a control driving mechanism received in the hard inner housing (3), and a massage mechanism connected with the control driving mechanism and including a curved massage shaft (4) controlled by the control driving mechanism to implement a rotation motion, and a vibration member (5) controlled by the control driving mechanism to implement a vibration motion, both the massage shaft (4) and the vibration member (5) extending out of an upper end (2a) of the hard inner housing (2), and the soft outer housing (3) including sleeves (30) respectively corresponding to the massage shaft (4) and the vibration member (5). The present disclosure can provide multi-point massage, and various massage modes so that the massage shaft and the vibration member are cooperated to produce a massage effect similar to pinching, kneading and vibration, to obtain better massage experiences.

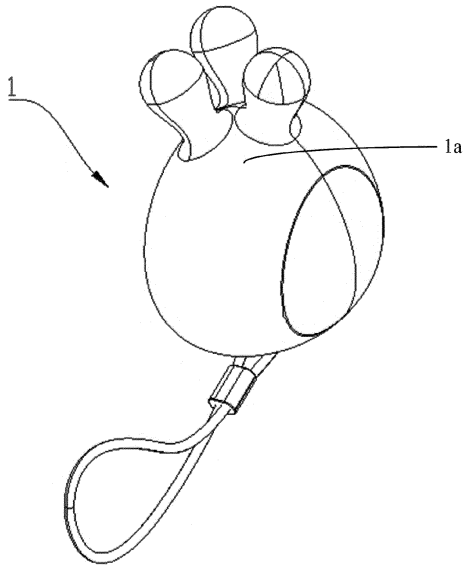

FIG. 1

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Description

BACKGROUND

1. Technical Field

[0001] The present disclosure generally relates to the field of daily necessities, and especially relates to a multi-point kneading vibration massage device.

2. Description of Related Art

[0002] Nowadays pace of life is faster and faster, and a time for leisure and exercise is greatly squeezed so that more and more people choose massage devices for leisure and relaxation. A conventional portable massage device is compact and easy to be operated, however, a massage mode of the conventional portable massage device is usually single, which brings limited massage experiences to users. Therefore, such conventional massage device needs to be improved.

SUMMARY

[0003] The technical problems to be solved: in view of the shortcomings of the related art, the present disclosure relates to an improved multi-point kneading vibration massage device.

[0004] The technical solution adopted for solving technical problems of the present disclosure is: a multi-point kneading vibration massage device includes a hard inner housing, a control driving mechanism received in the hard inner housing, a soft outer housing surrounding around the hard inner housing, a massage mechanism connected with the control driving mechanism and including a curved massage shaft and a vibration member, the massage shaft configured to be controlled by the control driving mechanism to implement a rotation motion, and the vibration member configured to be controlled by the control driving mechanism to implement a vibration motion; and wherein both the massage shaft and the vibration member extends out of an upper end of the hard inner housing, and the soft outer housing includes sleeves respectively corresponding to the massage shaft and the vibration member.

[0005] Wherein the control driving mechanism includes a control circuit board and a driving motor, the control circuit board connected with both the driving motor and the vibration member to send control instructions, and an output end of the driving motor connected with the massage shaft.

[0006] Wherein the hard inner housing includes a left housing and a right housing assembled with the left housing to form a main housing with a receiving room therebetween, the control driving mechanism received in the receiving room, a through-hole formed on the upper end of the main housing so that the massage shaft passes therethrough, and the through-hole configured to assembly the driving motor and the massage shaft, and the control circuit board and the vibration member.

[0007] Wherein a top cover is covered on the main housing, and includes a positioning cylinder connected with the massage shaft passing through the through-hole.

[0008] Wherein the massage device includes two massage shafts, and a main gear and two side gears are connected with the output end of the driving motor, the main gear passing through the through-hole and extending out of the main housing, the two side gears respectively meshing with two opposite sides of the main gear; the two massage shafts arranged in parallel and assembled with a corresponding side gear, respectively.

[0009] Wherein a boss is formed on a front side of the main housing, a buckle hole formed on the boss, and a limiting recess surrounding around the boss; the soft outer housing including a window corresponding to the boss, and the window including a flange formed on an edge thereof and corresponding to the limiting recess; an outer cover covered on the window and including a plurality of hooks locked with the buckle hole to fix the flange of the window in the limiting recess.

[0010] Wherein a battery is installed in the hard inner housing and equipped with a magnetic suction charging end thereof.

[0011] Wherein each of the hard inner housing and the soft outer housing is a suitable handle-shaped configuration, and the massage mechanism is arranged at one end of an integrated structure of the hard inner housing and the soft outer housing.

[0012] Wherein the hard inner housing is made of plastic material, and the soft outer housing is made of silica gel material.

[0013] Wherein the vibration member is a vibration motor.

[0014] The present disclosure provides the advantages as below: the multi-point kneading vibration massage device of the present disclosure is provided that the hard inner housing ensures stability and firmness of the whole structural assembly of the multi-point kneading vibration massage device, and the soft outer housing ensures the multi-point kneading vibration massage device comfortably contacts with the human body, so that the massage device contacts the human body synchronously through the massage shaft and the vibration member, to provide a richer massage mode by cooperating the massage shaft and the vibration member, which can effectively improve the user's massage experience.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] In order to more clearly understand the technical solution hereinafter in embodiments of the present disclosure, a brief description to the drawings used in detailed description of embodiments hereinafter is provided thereof. The same reference numerals in the accompanying drawings indicate the same or similar com-

ponents or parts, one of ordinary skill in the related art should understand that these drawings are not necessarily drawn to scale.

FIG. 1 is a schematic view of a multi-point kneading vibration massage device in accordance with a first embodiment of the present disclosure.

FIG. 2 is an exploded, schematic view of the multi-point kneading vibration massage device of FIG. 1.

FIG. 3 is an exploded, schematic view of a hard inner housing of the multi-point kneading vibration massage device of FIG. 1.

FIG. 4 is a partial inner schematic view of the multi-point kneading vibration massage device of FIG. 1.

FIG. 5 is a schematic view of an outer cover of the multi-point kneading vibration massage device of FIG. 1.

FIG. 6 is a schematic view of the multi-point kneading vibration massage device in accordance with a second embodiment of the present disclosure.

FIG. 7 is a partial schematic view of the multi-point kneading vibration massage device of FIG. 6.

[0016] The element labels according to the embodiment of the present disclosure shown as below:
1 multi-point kneading vibration massage device, 1a top portion, 2 hard inner housing, 2a upper end, 2b receiving room, 2c main housing, 2d through-hole, 20 left housing, 21 right housing, 22 top cover, 220 fixing cylinder, 23 boss, 24 limiting recess, 25 buckle hole, 26 outer cover, 260 hook, 3 soft outer housing, 30 sleeve, 31 window, 31a edge, 32 flange, 4 massaging shaft, 5 vibration member, 6 driving motor, 6a output end, 60 main gear, 61 side gear, 7 control circuit board, 8 battery, 9 magnetic suction charging end.

DETAILED DESCRIPTION

[0017] In order to more clearly understand the technical solution hereinafter in embodiments of the present disclosure, reference will now be made in detail to embodiments, examples of which are illustrated in the accompanying drawings. In the following detailed description, numerous specific details are set forth in order to provide a thorough understanding of the subject matter presented herein. Obviously, the implementation embodiment in the description is a part of the present disclosure implementation examples, rather than the implementation of all embodiments, examples.

[0018] According to the described exemplary embodiment of the present disclosure, all other embodiments obtained by one of ordinary skill in the related art without the need for a creative labor are within the protection scope of the present disclosure. Unless defined otherwise, the technical terms or scientific terms used for the present disclosure shall be a general meaning commonly understood by those having ordinary skill in the related art to which the present disclosure is applied.

[0019] In the description of the present disclosure, it needs to be understood that the terms mentioned below: the terms such as "first" and "second" shown in the specification are only used to describe, but not indicated that the elements of the present disclosure is important or represented the amount of the elements. That is, the features limited by the terms of "first" and "second" may explicitly or implicitly include one or more features. Similar, in the description of the present disclosure, the meaning of the term "one", "a" and "the" don't indicate a quantitative limit, but rather not less than two unless it is specifically illustrated. Furthermore, the terms such as "include", "including", "comprising" and "comprise" and the like means that elements or items in front of such term is intended to cover the elements or objects appeared the list behind the term and its equivalent, without excluding other elements or items. In the description of the present disclosure, except where specifically otherwise illustrated or limited, the terms "install", "connect", "link" and "fix" used herein should be understood in a broad perceive. Such as, the meaning may be tight connection, removable connection, or integrated connection. The meaning may also be mechanical connection, electrical connection, direct connection or indirect connection through intermediaries, or internal connection within two elements. The meaning of the terms used herein may be understood by one of ordinary skill in the related art according to specific conditions of the present disclosure. In addition, the terms such as "upper", "below", "left", and "right", etc, are shown in the specification of the present disclosure. The indicated orientation or position of the terms shown in the detailed description is based on the orientation or position shown in the figures of the accompanying drawings of the present disclosure, which is only to easily simplify the description of the present disclosure, but not indicated that the devices or elements of the present disclosure should have a particular orientation or should be designed and operated in a particular orientation. So the terms illustrated in the detail description are not by way of the limitation of the present disclosure.

[0020] Referring to FIGS. 1-7, a multi-point kneading vibration massage device 1 in accordance with a first embodiment of the present disclosure includes a hard inner housing 2, a control driving mechanism received in the hard inner housing 2, a soft outer housing 3 surrounding around the hard inner housing 2, a massage mechanism connected with the control driving mechanism and including a curved massage shaft 4 and a vibration member 5, the massage shaft 4 configured to be controlled by the control driving mechanism to implement a rotation motion, and the vibration member 5 configured to be controlled by the control driving mechanism to implement a vibration motion. Both the massage shaft 4 and the vibration member 5 extends out of an upper end 2a of the hard inner housing 2, and the soft outer housing 3 includes sleeves 30 respectively corresponding to the massage shaft 4 and the vibration member 5.

[0021] The hard inner housing 2 can be made of com-

mon plastic material, which has a certain hardness and a certain anti-collision protection ability, and is difficult to be deformation under applying a force thereon. In this way, the hard inner housing 2 can provide basic support for the massage device 1, while the soft outer housing 3 can be made of silica gel material, which is softer and feels more comfortable when contacting with the human body. The control driving mechanism is installed in the hard inner housing 2, to send instructions to the massage shaft 4 and the vibration member 5, so that both the massage shaft 4 and the vibration member 5 are controlled to work. Specifically, keys can be set to be fully exposed out of the hard inner housing 2 and the soft outer housing 3, or the keys can be exposed out of the hard inner housing 2, and then the soft outer housing 3 is marked accordingly for accurate pressing the keys. The massage shaft 4 is curved, and can be one or more than two. When the curved massage shaft 4 rotates, massage effect in a circle can be produced in a small skin area. The vibration member 5 can be one or more than two. Both the vibration member 5 and the massage shaft 4 are arranged at a top portion 1a of the massage device 1. The vibration member 5 can contact a skin area similar to that of the massage shaft 4 at the same time, so as to vibrate and massage the same skin area. Therefore, the massage shaft 4 and the vibration member 5 cooperate to produce similar kneading vibration massage effect, so as to obtain better massage experiences.

[0022] The control driving mechanism generally includes a control circuit board 7 and a driving motor 6, the control circuit board 7 connected with both the driving motor 6 and the vibration member 5 to send control instructions to the driving motor 6 and the vibration member 5, respectively, and an output end 6a of the driving motor 6 connected with the massage shaft 4. The vibration part 5 can be generally a common micro vibration motor. The hard inner housing 2 can include slots suitable for engaging with the control circuit board 7 and the driving motor 6, so that the control circuit board 7 and the driving motor 6 can be tightly embedded in the slots, respectively, or the control circuit board 7 and the driving motor 6 can be fixed through common brackets, screws and other structures. In addition, a circuit principle between the control circuit board 7, the driving motor 6 and the vibration motor belongs to the prior art, which will not be repeated herein.

[0023] In some embodiments of the present disclosure, the hard inner housing 2 includes a left housing 20 and a right housing 21 assembled with the left housing 20 to form a main housing 2c with a receiving room 2b therebetween, the control driving mechanism received in the receiving room 2d, a through-hole 2d formed on the upper end 2a of the main housing 2c so that the massage shaft 4 passes therethrough, and the through-hole 2d configured to assembly the driving motor 6 and the massage shaft 4, and the control circuit board 7 and the vibration member 5. The hard inner housing 2 is assembled by the left housing 20 and the right housing 21 to facilitate installation of the control driving mechanism in the receiving room 2a. For example, both the control circuit board 7 and the driving motor 6 are fixed with the left housing 20, and then the right housing 21 can be assembled accordingly. The driving motor 6 is connected with the exposed massage shaft 4 through the through-hole 2d, and the control circuit board 7 is electrically connected with the vibration member 5 through the through-hole 2d to send instructions. The through-hole 2d can be integral or can be set independently in conjunction with the massage shaft 4 and the vibration member 5 respectively/

[0024] In some embodiments of the present disclosure, a top cover 22 is covered on the main housing 2c, and includes a positioning cylinder 220 connected with the massage shaft 4 passing through the through-hole 2d. The massage shaft 4 has a certain length. After the massage shaft 4 passing through the positioning cylinder 220, the massage shaft 4 enters the corresponding sleeve 30, to obtain a more stable installation thereof.

[0025] In some embodiments of the present disclosure, a main gear 60 and two side gears 61 are connected with the output end 6a of the driving motor 6, the main gear 60 passing through the through-hole 2d and extending out of the main housing 2c, the two side gears 61 respectively meshing with two opposite sides of the main gear 60; the two massage shafts 4 arranged in parallel and assembled with a corresponding side gear 61, respectively. The two parallel massage shafts 4 rotate synchronously and reversely, which can produce a massage effect similar to pinch kneading. A double massage shaft scheme given in the embodiment of the present disclosure is relatively mature in the prior art, so that corresponding settings can be selected according to the number of different massage shafts 4, which can be implemented under the conventional principle, and will not repeat herein.

[0026] In some embodiments of the present disclosure, a boss 23 is formed on a front side of the main housing 2c, a buckle hole 25 formed on the boss 23, and a limiting recess 24 surrounding around the boss 23; the soft outer housing 3 includes a window 31 corresponding to the boss 23, and the window 31 including a flange 32 formed on an edge 31a thereof and corresponding to the limiting recess 24; an outer cover 26 is covered on the window 31 and includes a plurality of hooks 260 locked with the buckle 25 to fix the flange 32 of the window 31 in the limiting recess 24. The outer cover 26 can generally be made of hard plastic material and cooperates with the boss 23 and the limiting recess 24 of the main housing 2c to clamp and fasten the flange 32 of the soft outer housing 3, so as to relatively fix a position between the hard inner housing 2 and the soft outer housing 3 and avoid an offset therebetween.

[0027] Generally, a battery 8 is installed in the hard inner housing 2 of the massage device 1 to make the massage device portable. At the same time, a charging end, such as a magnetic suction charging end 9, is configured for the battery 8 to supply power for the battery

8 in time. A shape of the massage device 1 can be small and lovely, for example, the shape of the massage device 1 in the first embodiment of the present disclosure is similar to a head of a small animal, which is both lovely and easy to grasp with one hand; the massage device 1 can also be arranged in a shape with certain functions, for example, both the hard inner housing 2 and the soft outer housing 3 of the massage device 1 in the second embodiment of the present disclosure are in a suitable handle shape; furthermore, the massage mechanism is arranged at one end of an integrated structure of the hard inner housing 2 and the soft outer housing 3, and the handle shape of the massage device 1 can be convenient for manual operation.

[0028] In conclusion, the massage device of the present disclosure can provide multi-point massage, and various massage modes, which can effectively improves user's massage experience.

[0029] Although the features and elements of the present disclosure are described as embodiments in particular combinations, each feature or element can be used alone or in other various combinations within the principles of the present disclosure to the full extent indicated by the broad general meaning of the terms in which the appended claims are expressed.

Claims

1. A multi-point kneading vibration massage device (1) comprising:

   a hard inner housing (2);
   a control driving mechanism received in the hard inner housing (2);
   a soft outer housing (3) surrounding around the hard inner housing (2); and
   a massage mechanism connected with the control driving mechanism and
   comprising a curved massage shaft (4) and a vibration member (5), the massage shaft (4) configured to be controlled by the control driving mechanism to implement a rotation motion, and the vibration member (5) configured to be controlled by the control driving mechanism to implement a vibration motion;
   and wherein
   both the massage shaft (4) and the vibration member (5) extends out of an upper end (2a) of the hard inner housing (2), and the soft outer housing (3) comprises sleeves (30) respectively corresponding to the massage shaft (4) and the vibration member (5).

2. The multi-point kneading vibration massage device as claimed in claim 1, wherein the control driving mechanism comprises a control circuit board (7) and a driving motor (6), the control circuit board (7) connected with both the driving motor (6) and the vibration member (5) to send control instructions, and an output end (6a) of the driving motor (6) connected with the massage shaft (4).

3. The multi-point kneading vibration massage device as claimed in claim 2, wherein the hard inner housing (2) comprises a left housing (20) and a right housing (21) assembled with the left housing (20) to form a main housing (2c) with a receiving room (2b) therebetween, the control driving mechanism received in the receiving room (2b), a through-hole (2d) formed on the upper end of the main housing (2c) so that the massage shaft (4) passes therethrough, and the through-hole (2d) configured to assembly the driving motor (6) and the massage shaft (4), and the control circuit board (7) and the vibration member (5).

4. The multi-point kneading vibration massage device as claimed in claim 3, wherein a top cover (22) is covered on the main housing (2c), and comprises a positioning cylinder (220) connected with the massage shaft (4) passing through the through-hole (2d).

5. The multi-point kneading vibration massage device as claimed in claim 4, wherein the massage device (1) further comprises two massage shafts (4), and a main gear (60) and two side gears (61) are connected with the output end (6a) of the driving motor (6), the main gear (60) passing through the through-hole (2d) and extending out of the main housing (2c), the two side gears (61) respectively meshing with two opposite sides of the main gear (60); the two massage shafts (4) arranged in parallel and assembled with a corresponding side gear (61), respectively.

6. The multi-point kneading vibration massage device as claimed in claim 5, wherein a boss (23) is formed on a front side of the main housing (2c), a buckle hole (25) formed on the boss (23), and a limiting recess (24) surrounding around the boss (23); the soft outer housing (3) comprising a window (30) corresponding to the boss (23), and the window (30) comprising a flange (32) formed on an edge (31a) thereof and corresponding to the limiting recess (24); an outer cover (26) covered on the window (30) and comprising a plurality of hooks (260) locked with the buckle hole (25) to fix the flange (32) of the window (30) in the limiting recess (24).

7. The multi-point kneading vibration massage device as claimed in claim 6, wherein a battery (8) is installed in the hard inner housing (2) and equipped with a magnetic suction charging end (9) thereof.

8. The multi-point kneading vibration massage device as claimed in claim 1, wherein each of the hard inner housing (2) and the soft outer housing (3) is a suitable

handle-shaped configuration, and the massage mechanism is arranged at one end of an integrated structure of the hard inner housing (2) and the soft outer housing (3).

9. The multi-point kneading vibration massage device as claimed in claim 1, wherein the hard inner housing (2) is made of plastic material, and the soft outer housing (3) is made of silica gel material.

10. The multi-point kneading vibration massage device as claimed in claim 1, wherein the vibration member (5) is a vibration motor.

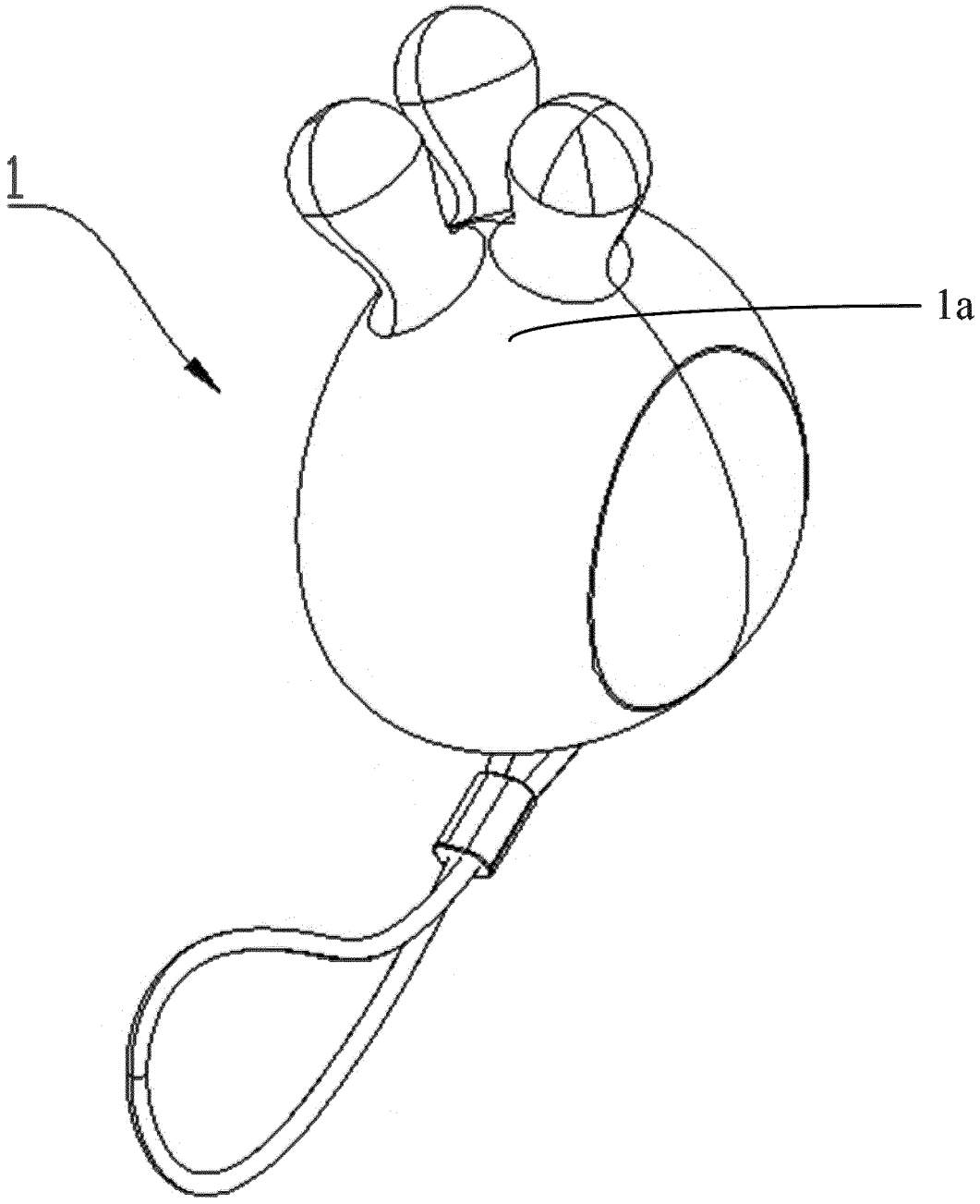

FIG. 1

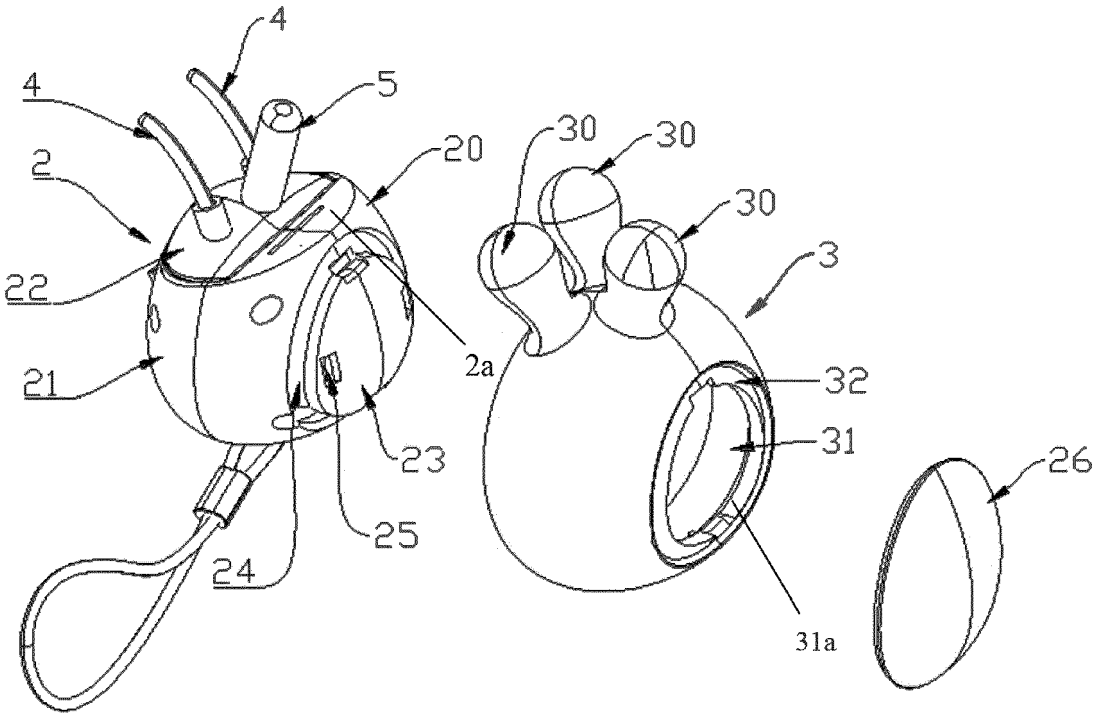

FIG. 2

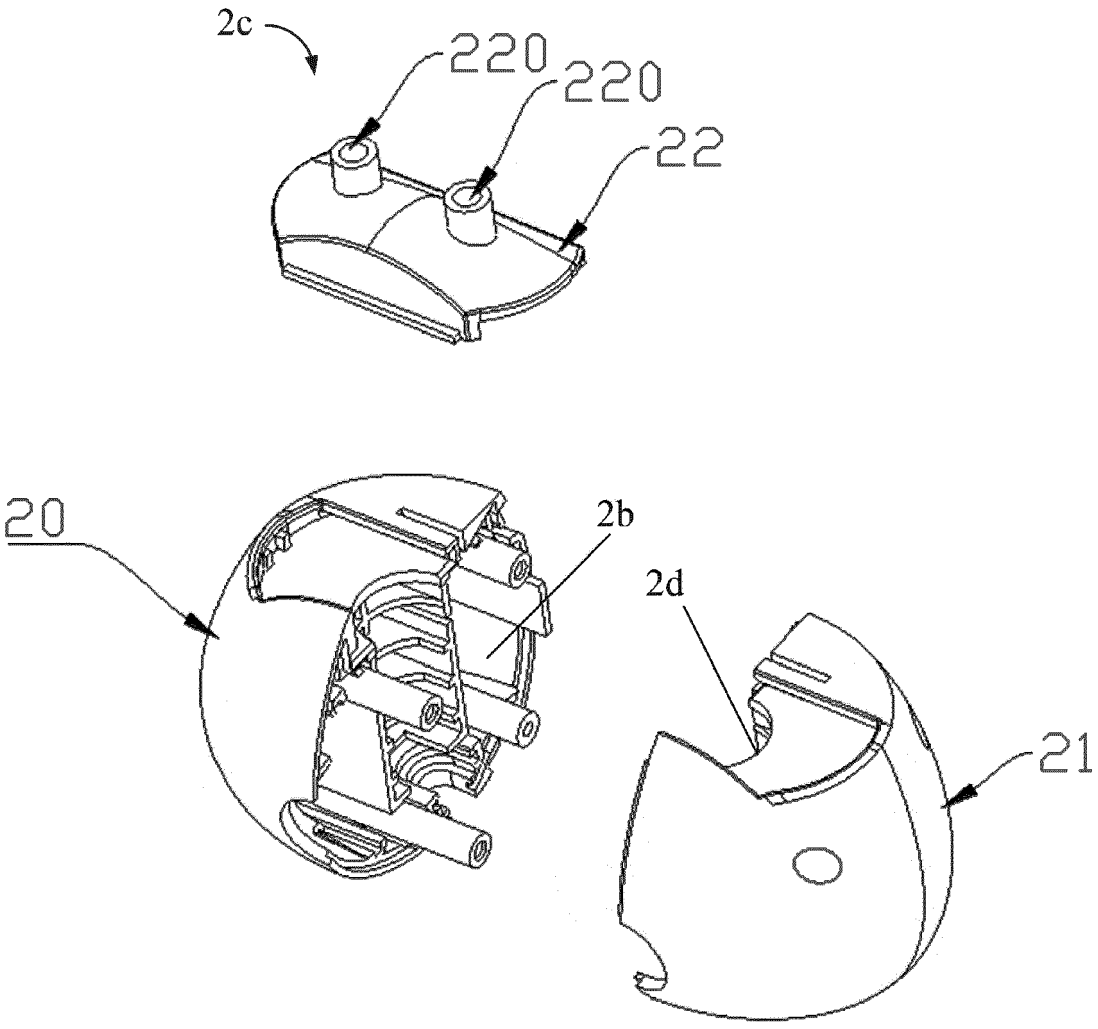

FIG. 3

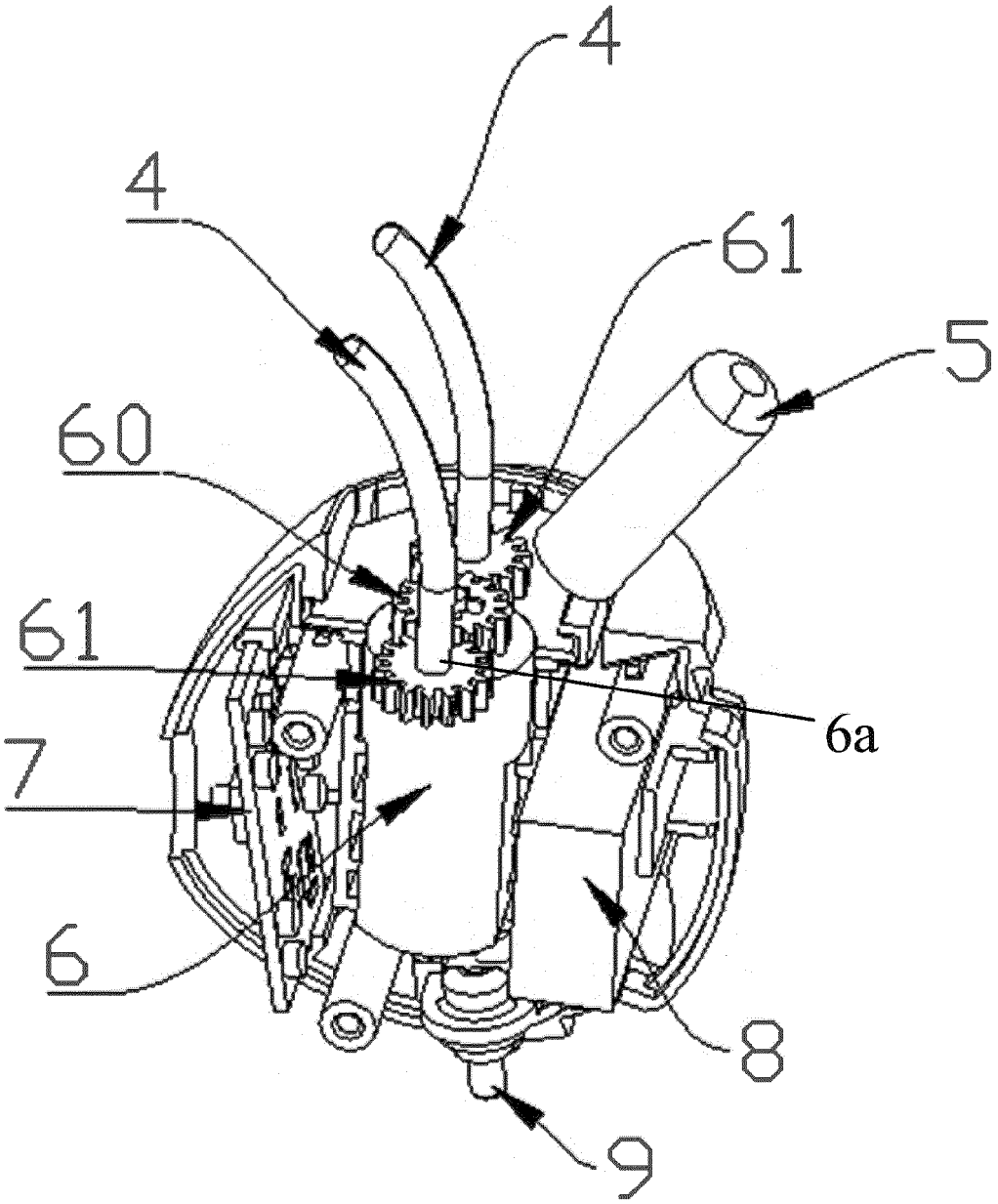

FIG. 4

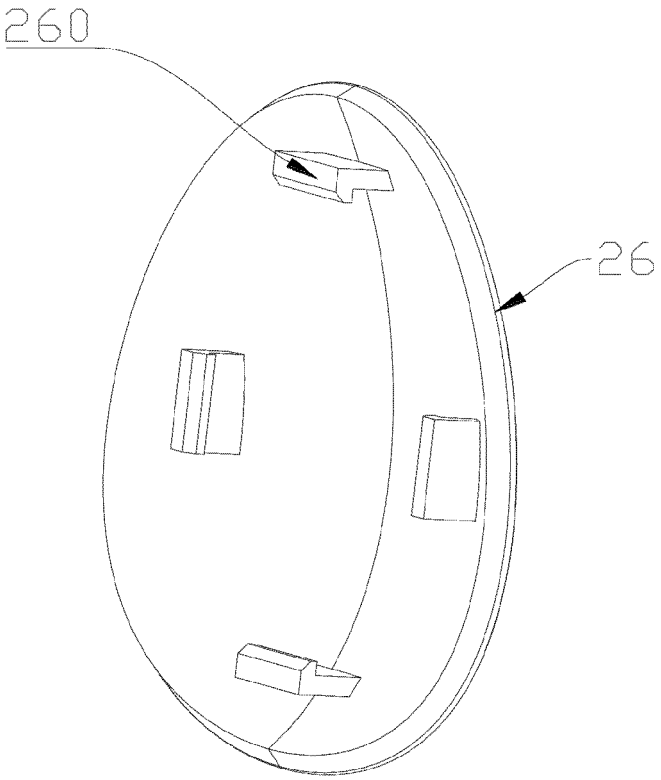

FIG. 5

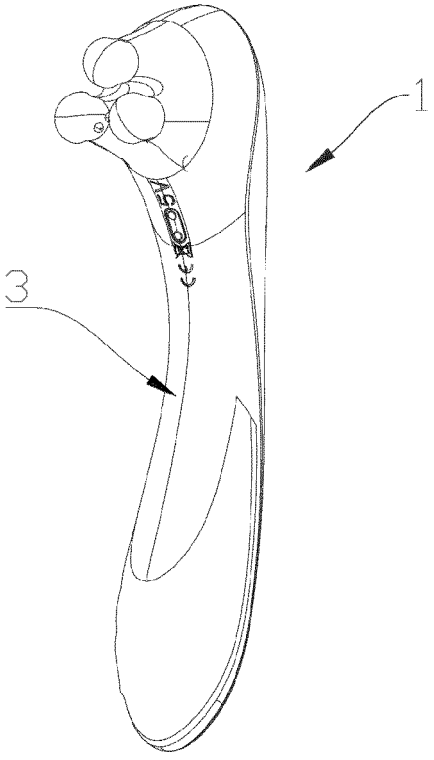

FIG. 6

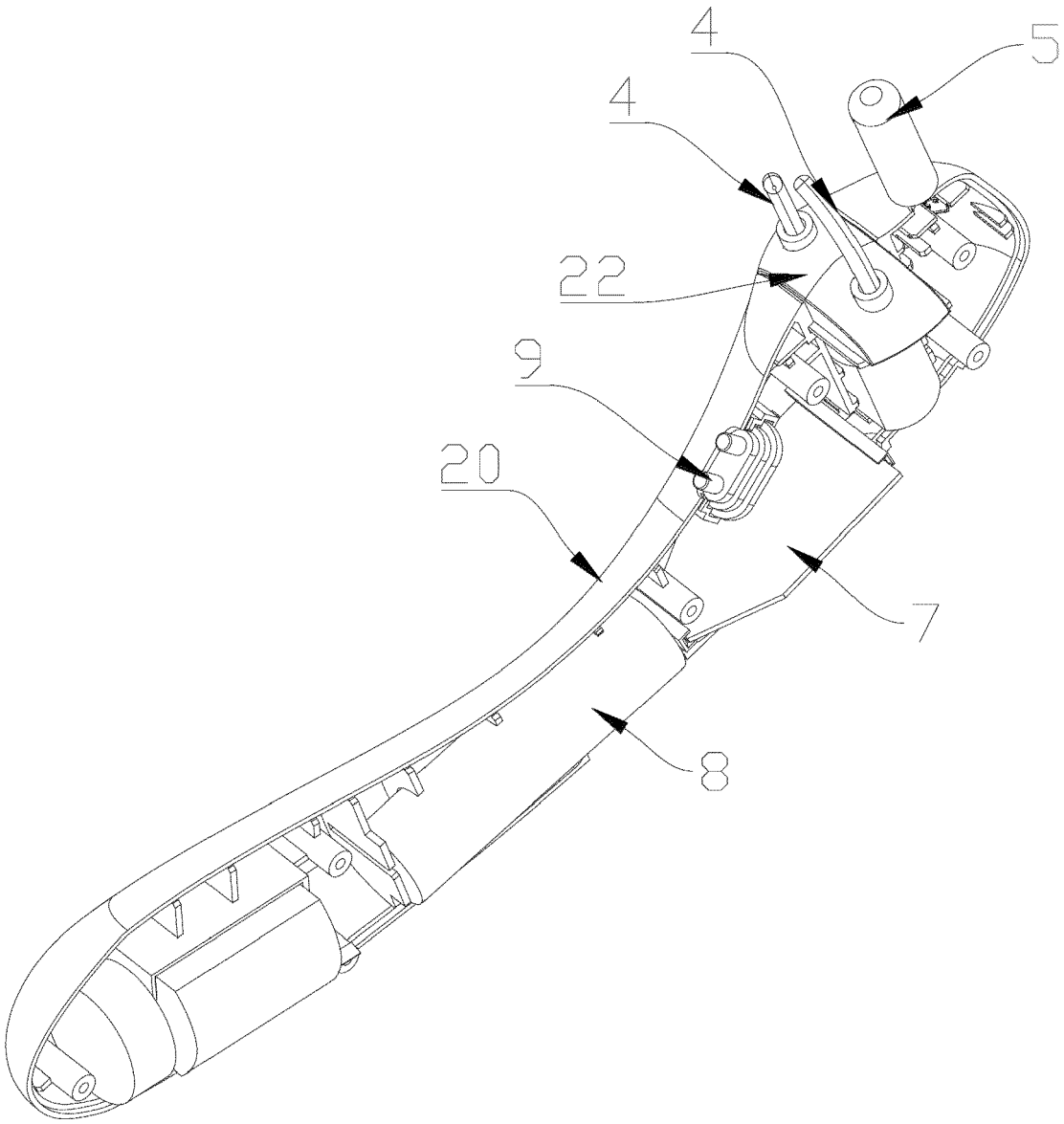

FIG. 7

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EUROPEAN SEARCH REPORT

Application Number
EP 21 21 5025

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 5 356 369 A (YAMASAKI YOSHIKIYO [JP] ET AL) 18 October 1994 (1994-10-18) * column 8, lines 31-31; figures *	1-10	INV. A61H7/007
Y	US 5 305 738 A (SHIMIZU NOBUZO [JP]) 26 April 1994 (1994-04-26) * column 2, line 59 - page 4, line 3; figures *	1-10	
Y	US 2011/098613 A1 (THOMAS JONATHAN [US] ET AL) 28 April 2011 (2011-04-28) * paragraph [0025] * * paragraph [0029]; figures * * paragraph [0032] - paragraph [0034] *	1-10	
X	US 5 984 883 A (ELNAR JOSEPH G [US]) 16 November 1999 (1999-11-16) * column 2, lines 28-62; figures *	1-10	
			TECHNICAL FIELDS SEARCHED (IPC) A61H

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	31 May 2022	Squeri, Michele

CATEGORY OF CITED DOCUMENTS

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31-05-2022

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