

DESCRIPTION

TITLE OF THE INVENTION: HEAD MESSAGE APPARATUS

Technical field

[0001] The present invention relates to a head massage apparatus for massaging the head of a person to be treated.

Background Art

[0002] A known example of head massage apparatuses of the type that is put on the head of a person to be treated for head massage treatment is disclosed in Patent Literature 1.

The head massage apparatus according to Patent Literature 1 has a helmet-like support member configured to surround the periphery of the head of a to-be-treated person. Inside the support member are disposed pad materials (cuff materials) that are situated in positions corresponding to the top of the head and the back of the head, respectively, of the to-be-treated person. The top and back of the head of the to-be-treated person can be subjected to a massage by pressing the support member against the head under the action of air pressure.

Prior Art Reference

Patent Literature

[0003] Patent Literature 1: Japanese Unexamined Patent Publication JP-A 2008-86529

Summary of the Invention

Problems to be solved by the Invention

[0004] The head massage apparatus according to Patent Literature 1 is, in addition to the helmet-like support member, provided with other members including an air bag and a belt for pressing the support member against the head of the to-be-treated person, and therefore the head massage apparatus looks massive and unattractive. With the apparatus having such an appearance, the to-be-treated person is unable to have a scalp (head) massage lightheartedly without feeling any constraint in the presence of others. After all, it is impossible for the to-be-treated person to enjoy a pleasurable massage in a comfortable atmosphere.

[0005] Furthermore, among persons who wish to wear the head massage apparatus for massage treatment, some are heavily-built, and others are slightly-built; that is, the persons to be treated have different head sizes. As a natural consequence whereof, the position of a massage section (pad material) varies according to head size, and therefore some to-be-treated persons will be unable to have a desired area for massage treatment massaged properly.

Accordingly, the present invention has been devised in view of the foregoing problems, and its object is to provide a head massage apparatus that allows to-be-treated persons to have a scalp (head) massage lightheartedly without feeling any constraint in the presence of others regardless of their physical size.

Means for solving the Problems

[0006] In order to accomplish the above object, the following technical means is adopted for the implementation of the present invention.

That is, the head massage apparatus pursuant to the present invention comprises a head cover body for covering the head of a to-be-treated person and a massage section disposed in the head cover body, for massaging the head of the to-be-treated person.

It is preferable that said head cover body comprises a cap-shaped outer cover and an inner cover disposed inside the outer cover, for covering the head of the to-be-treated person, and that said massage section is disposed between said outer cover and said inner cover.

[0007] Thus, by placing the massage section in the head cover body, especially in the inner cover disposed inside the cap-shaped outer cover, the massage section can be kept in an unexposed state. This allows the to-be-treated person to have a scalp (head) massage lightheartedly without feeling any constraint in the presence of others. Moreover, when the inner cover having the massage section is covered with the cap-shaped outer cover, since the inner cover conforms closely to the shape of the head of the to-be-treated person, it is possible for the to-be-treated persons to have a head massage properly regardless of their physical size.

[0008] It is preferable that said massage section is

attached to either of said outer cover and said inner cover.

It is preferable that a belt member which can be bent flexibly in conformity to the shape of the head of said to-be-treated person is provided, that the massage section is mounted in line with said belt member, and that each end of the belt member bearing said massage section is held firmly between an edge of said outer cover and an edge of said inner cover in sandwich style.

[0009] It is preferable that said head cover body comprises a cap-shaped outer cover, a first inner cover disposed inside the outer cover, for covering the head of the to-be-treated person, and a second inner cover disposed between said outer cover and said first inner cover, and that said massage section is disposed between said first inner cover and said second inner cover, or between said second inner cover and said outer cover.

It is preferable that the massage section is attached to any one of said outer cover, said first inner cover, and said second inner cover.

[0010] It is preferable that a belt member which can be bent flexibly in conformity to the shape of the head of said to-be-treated person is provided, that the massage section is mounted in line with said belt member, and that each end of the belt member bearing said massage section is held firmly between an edge of said first inner cover and an edge of said second inner cover in sandwich style.

It is preferable that said massage section includes a solenoid capable of producing magnetism and a massage body which is caused to advance and retract under the force of magnetism produced by the solenoid.

[0011] Such a massage mechanism as is based on a solenoid system (electromagnetic system) is lightweight and is nevertheless capable of providing comfortable massage effects, and is thus desirable for use especially in the head massage apparatus.

It is preferable that said massage section includes hitting-force control means capable of regulation of a hitting force which is produced by the massage section.

It is preferable that said hitting-force control means is constructed of a cushion member disposed in front of the massage body, seen in the direction of protrusion of the massage body.

[0012] Furthermore, the head massage apparatus pursuant to the present invention comprises a head cover body for covering the head of a to-be-treated person and a massage section disposed in the head cover body, for massaging the head of the to-be-treated person. More specifically, the head cover body comprises a cap-shaped outer cover and an inner cover disposed inside the outer cover, for covering the head of the to-be-treated person. Said massage section is disposed in the inner cover.

[0013] In this way, by placing the massage section in the head cover body, especially in the inner cover disposed inside

the cap-shaped outer cover, the massage section can be kept in an unexposed state. This allows the to-be-treated person to have a scalp (head) massage lightheartedly without feeling any constraint in the presence of others. Moreover, when the inner cover having the massage section is covered with the cap-shaped outer cover, since the inner cover conforms closely to the shape of the head of the to-be-treated person, it is possible for the to-be-treated persons to have a head massage properly regardless of their physical size.

[0014] It is preferable that said inner cover is provided with a belt member which can be bent flexibly in conformity to the shape of the head of the to-be-treated person. In this case, said massage section is preferably attached to the inner cover along the belt member.

Moreover, it is advisable to adopt, as said inner cover, an inner cap which is dome-shaped for the covering of the head of the to-be-treated person and is also made extendable in conformity to the shape of the head. In this case, said massage section is preferably attached to said inner cap.

[0015] It is also preferable that said massage section includes a solenoid capable of producing magnetism and a massage body which is caused to advance and retract under the force of magnetism produced by the solenoid. Such a massage mechanism as is based on a solenoid system (electromagnetic system) is lightweight and is nevertheless capable of offering comfortable

massage effects, and is thus particularly desirable for use in the head massage apparatus.

Advantageous effect of the Invention

[0016] According to the head massage apparatus pursuant to the present invention, it is possible to allow to-be-treated persons to have a scalp (head) massage lightheartedly without feeling any constraint in the presence of others regardless of their physical size.

Brief Description of Drawings

[0017][Figure 1] Fig. 1 is a view showing how a head massage apparatus according to a first embodiment is to be used, with Fig. 1(a) being a side view and Fig. 1(b) being a front view.

[Figure 2] Fig. 2 is a view showing the head massage apparatus according to the first embodiment with its outer cover removed.

[Figure 3] Fig. 3 is a view of the head massage apparatus according to the first embodiment as seen from a bottom side.

[Figure 4] Fig. 4 is a sectional view of the head massage apparatus taken along the line A-A of Fig. 3.

[Figure 5] Fig. 5 is a side view of the head massage apparatus (inner cover) according to a second embodiment.

[Figure 6] Fig. 6 is a view of the head massage apparatus according to the second embodiment as seen from a bottom side.

[Figure 7] Fig. 7 is a view of the head massage apparatus according to another embodiment.

[Figure 8] Fig. 8 is a side view showing the head massage apparatus according to a third embodiment.

[Figure 9] Fig. 9 is a perspective view showing the head massage apparatus according to a fourth embodiment.

Modes for Carrying out the Invention

[0018] [First embodiment]

Hereinafter, a head massage apparatus 1 in accordance with the first embodiment of the present invention will be described with reference to the drawings.

As shown in Fig. 1, the head massage apparatus 1 of the first embodiment comprises a head cover body 2 for covering the head of a to-be-treated person U (a person under massage treatment) and a power supply section (not represented graphically) for feeding external power to the head cover body 2. The power supply section is designed to deliver external power ranging from 100 to 240 V after a decrease to a level at approximately 12 V to a massage section 5 which will hereafter be described. Moreover, the head cover body 2 comprises a cap-shaped outer cover 3 and an inner cover 4 disposed inside the outer cover 3, for covering the head of the to-be-treated person U. The inner cover 4 is provided with the massage section 5 for massaging the head of the to-be-treated person U. In the head massage apparatus 1, power is supplied to the massage section 5 from the power supply section, whereby the massage section 5 can be operated to give a head massage to the to-be-treated

person U.

[0019] In the following description, a direction of from front to rear (or vice versa) of the head massage apparatus 1 as seen from the to-be-treated person U wearing the apparatus will be referred to as "the front-rear direction" used for explanation of the head massage apparatus 1, and a direction of from right to left (or vice versa) of the head massage apparatus 1 as seen from the to-be-treated person U will be referred to as "the horizontal direction" used for explanation of the head massage apparatus 1. In addition, a direction of from top to bottom (or vice versa) of the head massage apparatus 1 as seen from the to-be-treated person U wearing the apparatus will be referred to as "the vertical direction" used for explanation of the head massage apparatus 1.

As shown in Fig. 2, the head cover body 2 is configured to be put on the head of the to-be-treated person U, and comprises the inner cover 4 which lies just outside the head of the to-be-treated person U during wearing and the outer cover 3 which covers the inner cover 4 from without.

[0020] As shown in Figs. 2 and 3, the outer cover 3 is formed by sewing pieces of cloths or the like together substantially in the shape of an upwardly convex hemisphere. The head of the to-be-treated person U can be received in the outer cover 3. The outer cover 3 is given a cap-like appearance so that a third person looking at the outer cover 3 feels that this is just a

"cap" to see to it that the third person who glanced at the to-be-treated person U is unable to know that he/she is taking a head massage.

[0021] The outer cover 3 has a size larger to some extent than the size of the head of the to-be-treated person U so that a certain gap can be secured between the head of the to-be-treated person U and the outer cover 3 to cover the head of the to-be-treated person U comfortably. By forming the outer cover 3 somewhat larger in size than the head of the to-be-treated person U in that way, it is possible to interpose the inner cover 4 between the head of the to-be-treated person U and the outer cover 3, as well as to hide both the inner cover 4 and the massage section 5 attached thereto from sight under the outer cover 3.

[0022] As shown in Figs. 2 and 3, the inner cover 4 is disposed inside the outer cover 3 to cover the head of the to-be-treated person U. The inner cover 4 includes a belt member 6 made of a flexible material and the massage section 5 attached thereto along the belt member 6.

 The belt member 6 is formed in the shape of a strip by using a flexible material such as cloth or rubber, and can therefore be flexibly bent longitudinally and/or widthwisely. With the provision of such a flexible belt member 6, the inner cover 4 is allowed to change its shape in accordance with head shape to conform closely to the shape of the to-be-treated person U.

[0023] In the inner cover 4 of the first embodiment, there are provided two belt members 6. The belt members 6 overlap each other only at their longitudinal midportions in an orthogonal state (in the shape of a cross). The massage section 5 is disposed at each end of the belt member 6 and at a point of intersection of the two belt members 6.

That is, the head massage apparatus 1 pursuant to the present invention includes a plurality of massage sections 5. The head massage apparatus 1 of the first embodiment includes five massage sections 5, namely a top head massage section 5a situated at the intersection point of the belt members 6, a front head massage section 5b situated in front of the top head massage section 5a, a rear head massage section 5c situated behind the top head massage section 5a, a left head massage section 5d situated on the left of the top head massage section 5a, and a right head massage section 5e situated on the right of the top head massage section 5a. It is noted that the positioning of the massage sections 5 is not so limited, and the massage sections 5 may therefore be placed in given positions so long as desired head areas can be treated properly.

[0024] The massage sections 5a to 5e each employ an electromagnetic system to effect a massage by getting a massage body 7 in and out of a solenoid 8 under an electromagnetic force. For the interrelation among the massage sections 5, a wiring line is installed so as to extend from the rear head massage

section 5c to the top head massage section 5a, and from there to the front head massage section 5b, the left head massage section 5d, and the right head massage section 5e. In this way, a massage can be effected by each of the massage sections 5a to 5e by exploiting electric current supplied from the power supply section.

[0025] As shown in Fig. 4, the massage section 5 includes the solenoid 8 whose center is formed as a hollow part (an exciting coil with a conductor turn) and the massage body 7 (piston) which is coaxially inserted into the hollow part of the solenoid 8 and is free to get in and out of the hollow part. Moreover, the solenoid 8 has, on its surface at the side of the inner cover 4 (at the side of the to-be-treated person U), a spring 9 (strip-like spring or rubber belt) placed in contact with the front end of the massage body 7.

[0026] In the massage section 5 shown in Fig. 4(a), with electric current passed through the solenoid 8 of the massage section 5, the massage body 7, now in a state of being received in the hollow part, is moved to jut out from the solenoid 8 while stretching the spring 9 placed at the side of the inner cover 4 (at the lower side in the figure) under an electromagnetic force arising in the solenoid 8. Although the massage body 7 jutting out from the solenoid 8 is normally pressed back into position under a resilient force of the spring 9, during the passage of electric current through the solenoid 8, the massage

body 7 is kept in a jutting state against the pressing-back force of the spring.

[0027] By way of contrast, as shown in Fig. 4(b), following the interruption of current passage through the solenoid 8, only the pressing-back force of the spring 9 is exerted on the massage body 7, with the consequence that the massage body 7 is moved to return into the hollow part of the solenoid 8.

That is, in the massage section 5, upon the supply of electric current to the solenoid 8, part of the front end of the massage body 7 protrudes from the hollow part of the solenoid 8, and on the other hand, upon the shutoff of electric current, the massage body 7 returns to the hollow part situated centrally of the solenoid 8 under the resilient force of the spring 9. Therefore, by feeding electric current to the solenoid 8 in a manner to repeat a cycle of establishment of a current-ON state and establishment of a current-OFF state just like pulsed current, the massage body 7 is caused to advance and retract repeatedly, whereby a hitting massage (tapping massage) can be given to the scalp (head).

[0028] As described heretofore, in the massage section 5, the protrusion of the massage body 7 is effected by the electromagnetic force of the solenoid 8, whereas the retraction of the massage body 7 is effected by the action of the spring 9 (strip-like rubber belt) disposed on the front side of the solenoid 8. Accordingly the massage section 5 can be operated

under conditions of weightlessness without any problem.

Moreover, by virtue of the left head massage section 5d and the right head massage section 5e, a massage can be given also to a vertically-extending affected area of the head without fail.

[0029] It is noted that, following the interruption of current passage through the solenoid 8, the massage body 7 is moved to return into the hollow part of the solenoid 8 under a reaction force to the strong hitting force on the effected area. Therefore a repetition of advancing motion and retracting motion of the massage body 7 can be achieved even in the absence of the spring 9 disposed on the front side of the solenoid 8. In this regard the spring 9 is not an essential constituent element.

Such a massage section 5 of electromagnetic type (solenoid type) is lighter in weight than an electric motor-driven massage mechanism which employs an electric motor or the like.

Accordingly, even if the to-be-treated person U keeps on wearing the massage apparatus on the head for a long period of time, he/she will not be subjected to excessive fatigue. Moreover, in contrast to a massage mechanism of air-bag type that necessitates the provision of an air bag or an air pump, the massage section 5 is capable of performing a powerful massage on the scalp. Accordingly the electromagnetic massage mechanism is particularly desirable for use in the head massage apparatus 1.

[0030] In the head massage apparatus 1 thus far described, the inner cover 4 formed with the massage section 5 is covered with the cap-shaped outer cover 3, wherefore the massage section 5 is hidden from view externally. Accordingly the head massage apparatus 1 pursuant to the present invention allows the to-be-treated person U to have a scalp (head) massage lightheartedly without feeling any constraint in the presence of others and thus enjoy a pleasurable massage in a comfortable atmosphere.

Moreover, given that the massage apparatus is so designed that the massage section 5 is fixedly attached to a support member such as a helmet, if the position of the massage section 5 is deviated from a desired area for treatment, it would be quite difficult to adjust the massage position. However, in the head massage apparatus 1 of the present invention, since the inner cover 4 and the outer cover 3 are provided as separate components, it is possible to displace only the inner cover 4 relative to the outer cover 3. Accordingly the position of the massage section 5 can be located in the desired area for treatment without fail, wherefore a massage can be given to the head with a higher degree of effectiveness than ever.

[0031] Further, the inner cover 4 formed with the massage section 5 is configured to extend and contract flexibly to change its shape in conformity to the shape of the head of the to-be-treated person U. Therefore, even if the to-be-treated

persons U have different physical sizes, since the inner cover 4 extends and contracts flexibly in accordance with head size so that the massage sections 5a to 5e can conform closely to the shape of the head of any one of the to-be-treated persons U, it is possible to perform a head massage with a higher degree of effectiveness than ever.

[Second embodiment]

As shown in Figs. 5 and 6, the head massage apparatus 1 implemented by way of the second embodiment employs, as the inner cover 4, an inner cap 10 which is dome-shaped for the covering of the head of the to-be-treated person U and is also made extendable in conformity to the shape of the head. It is noted that the head massage apparatus of the second embodiment is identical with the head massage apparatus of the first embodiment in terms of the outer cover 3 and the massage section 5.

[0032] The inner cap 10 is, just like a swimming cap, dome-shaped and is downwardly opened for the covering of the head of the to-be-treated person U. The inner cap 10 is formed by sewing for example pieces of cloths made of elastic fibers together and is thus able to extend and contract flexibly in accordance with head size. Therefore, even if the inner cap is used by the to-be-treated persons U of different physical sizes, since it is configured to extend and contract flexibly with adaptability to varying head sizes, it follows that the head massage apparatus is available to the to-be-treated persons

U of different physical sizes. In the second embodiment, a plurality of massage sections 5 are attached to the surface of the inner cap 10 acting as the inner cover 4.

[0033] The massage section 5 is attached to each of the areas on the outer surface of the inner cap 10 that correspond to the top of the head, the front of the head, the back of the head, the right side of the head, and the left side of the head, respectively. The mounting positions of those massage sections 5 coincide with the top head massage section 5a, the front head massage section 5b, the rear head massage section 5c, the left head massage section 5d, and the right head massage section 5e, respectively, of the first embodiment. For the interrelation among the massage sections 5, a wiring line is installed for the supply of electric current from the power supply section. In the head massage apparatus 1 of the second embodiment, the wiring line is composed of three lines, namely the one extending from the rear head massage section 5c to the top head massage section 5a and from there to the front head massage section 5b, the one extending from the rear head massage section 5c to the left head massage section 5d, and the one extending from the rear head massage section 5c to the right head massage section 5e.

[0034] In the head massage apparatus 1 of the second embodiment, the inner cap 10 which extends and contracts flexibly in accordance with the shape of the head of the to-be-treated

person U is used as the inner cover 4, and, just like the first embodiment, the inner cover 4 is provided independently of the outer cover 3. Accordingly, as is the case with the first embodiment, the position of the massage section 5 can be located in the desired area for treatment without fail, wherefore the head massage apparatus is available to the to-be-treated persons U of different physical sizes.

[0035] Moreover, in the head massage apparatus 1 of the second embodiment, the inner cover 4 in itself acts to press the massage section 5 firmly against the head of the to-be-treated person U, wherefore an effective massage can be performed on the scalp. This makes it possible to use, as the outer cover 3, a cap such as a knitted cap made of a soft material. Accordingly the degree of freedom in the design of the outer cover 3 can be increased, wherefore a more stylish head massage apparatus can be provided.

[0036] It is to be understood that the present invention is not limited to the embodiments described hereinabove and is therefore susceptible of various changes and modifications in terms of shape, structure, and material of constituent members, combined use of members, and so forth without departing from the spirit and scope of the present invention.

The above description about the head massage apparatus 1 pursuant to the present invention deals with the embodiments in which the outer cover 3 takes on the shape of "a knitted cap.

with a brim". However, the shape of the outer cover 3 mounted in the head massage apparatus 1 of the present invention is not limited to "the knitted cap with a brim". For example, the outer cover 3 may be configured either as "a brimless knitted cap" as shown in Fig. 7(a) or "a brimless cap" as shown in Fig. 7(b). In another alternative, although not represented graphically, the outer cover 3 may take on the shapes of "a cloth cap (tweed cap)", "a beret", "a baseball cap", "a ushanka (traditional Russian fur cap)", "a straw hat", and so forth.

[0037] Moreover, the above description about the head massage apparatus 1 pursuant to the present invention deals with the embodiments in which the massage section 5 is disposed in each of the five areas that correspond to the top of the head, the front of the head, the back of the head, the right side of the head, and the left side of the head, respectively, of the head of the to-be-treated person U. However, the placement positions of the massage section 5 provided in the head massage apparatus 1 of the present invention are not so limited, and also the number of the massage sections 5 to be placed is not limited to five. For example, it is possible to dispose an extra massage section 5 in another position other than the five areas in expectation of attainment of scalp massage effects, as well as to dispose an additional massage section 5 in a position in great demand for a massage.

[0038] Further, the above description about the head

massage apparatus 1 pursuant to the present invention deals with the embodiments in which there is provided the power supply section designed to deliver external power ranging from 100 to 240 V after a decrease to a level at approximately 12 V to the massage section 5. However, the power supply section adopted in the head massage apparatus 1 of the present invention is not limited to the type that employs external power supply. For example, the power supply section may be constructed either of a replaceable power source such as a dry cell or a mountable rechargeable type battery.

[0039] It is noted that, in the head massage apparatus 1 of the present invention, although not explained in the above description of the embodiments, as to the operation of a plurality of the massage sections 5, it is possible to actuate only part of the massage sections 5, as well as to make changes to the strength of massage, the interval of massage (rhythm), and the time duration of massage set for each massage section 5.

Moreover, when the outer cover 3 is made of a soft cloth or the like, it is possible to interpose a collar member between the outer cover 3 and the inner cover 4 so that the head massage apparatus 1 can be kept in shape in the form of a cap.

[0040] It is noted that, in addition to being provided as massage applying means for massaging head, the massage section 5 may be provided also as impulse applying means for simply imparting an impulse to head and scalp. Moreover, when the

message section 5 serves as the impulse applying means, an impulse which is to be applied to scalp is not limited to "the tapping (hitting) action" as described previously. For example, the message section 5 acting as the impulse applying means may be designed to impart vibration to scalp or give a gentle touch or stroking to scalp as an impulse.

[Third embodiment]

Next, the head massage apparatus 1 in accordance with a third embodiment of the present invention will be described.

[0041] As shown in Fig. 8, the head massage apparatus 1 of the third embodiment comprises a cap-shaped outer cover 3 and an inner cover 4 disposed inside the outer cover 3, for covering the head of a to-be-treated person U. A message section 5 is disposed between the outer cover 3 and the inner cover 4.

Specifically, there is provided a belt member 6 which can be bent flexibly in conformity to the shape of the head of the to-be-treated person U. The message section 5 is mounted in line with the belt member 6. More specifically, in substantially the same fashion as the first embodiment, the belt member 6 made of a flexible material (such as flat rubber) is sewn in place in the shape of a cross, and a plurality of message sections 5 are mounted in line with the belt member 6.

[0042] The belt member 6 bearing the message section 5 is sewn at its ends, each end being held between an edge of the outer cover 3 and an edge of the inner cover 4 in sandwich and

overlap style. The fixing of the belt member 6 may be made by an adhesive instead of sewing operation. In this way, the outer cover 3 and the inner cover 4 become integral to constitute a head cover body 2, and the massage section 5 is located between the outer cover 3 and the inner cover 4. In other words, the belt member 6 is fixed to both the outer cover 3 and the inner cover 4.

[0043] In the head massage apparatus 1 thereby constructed, the massage section 5 is covered with the cap-shaped outer cover 3 and is thus hidden from view externally. Accordingly, the head massage apparatus 1 of the present invention allows the to-be-treated person U to have a scalp (head) massage lightheartedly without feeling any constraint in the presence of others and enjoy a pleasurable massage in a comfortable atmosphere.

Alternatively, the massage section 5 may be attached directly to the outer cover 3 without using the belt member 6.

[0044] The constituents and functional effects other than those described hereinabove of the third embodiment are substantially the same as those of the first embodiment, and therefore the description thereof will be omitted.

[Fourth embodiment]

Next, the head massage apparatus 1 in accordance with a fourth embodiment of the present invention will be described.

As shown in Fig. 9, the head massage apparatus 1 of the

fourth embodiment comprises a cap-shaped outer cover 3, a first inner cover 41 disposed inside the outer cover 3, for covering the head of a to-be-treated person U, and a second inner cover 42 disposed between the outer cover 3 and the first inner cover 41. In this construction, a massage section 5 is disposed between the first inner cover 41 and the second inner cover 42, or between the second inner cover 42 and the outer cover 3.

[0045] Specifically, the outer cover 3 is formed by sewing pieces of cloths or the like together substantially in the shape of an upwardly convex hemisphere. The head of the to-be-treated person U can be received in the outer cover 3. The outer cover 3 is given a cap-like appearance so that a third person looking at the outer cover 3 feels that this is just a "cap". The outer cover 3 has a size larger to some extent than the size of the head of the to-be-treated person U so that a certain gap can be secured between the head of the to-be-treated person U and the outer cover 3 to cover the head of the to-be-treated person U comfortably.

[0046] The first inner cover 41 is disposed inside the outer cover 3 for direct covering of the head of the to-be-treated person U. The first inner cover 41 is formed by sewing for example pieces of cloths made of elastic fibers together, and is thus able to extend and contract flexibly in conformity to head size.

The second inner cover 42, which is so disposed as to cover the first inner cover 41, is substantially identical in shape

with the first inner cover 41 and is formed by sewing pieces of cloths or the like together.

[0047] The second inner cover 42 is conformably bonded to the outer cover 3 interiorly thereof, whereafter the first inner cover 41 is conformably bonded to the second inner cover 42 interiorly thereof. Then, the covers 3, 41, and 42 are sewn together edge to edge thereby to constitute the head cover body 2 (the step of forming the head cover body 2). That is, the headmassage apparatus 1 of this embodiment has a triple structure (three-layer structure) consisting of the outer cover 3, the second inner cover 42, and the first inner cover 41.

[0048] Meanwhile, the head massage apparatus 1 of the present invention includes a plurality of massage sections 5 attached to the belt member 6. The belt member 6 is formed of a combination of two flat rubbers that overlap each other at their longitudinal midportions in an orthogonal state (in the shape of a cross). The massage section 5 is disposed at each of the end parts of the belt member 6 and a location near the intersection of the flat rubbers.

[0049] The massage section 5 has substantially the same structure as that of the first embodiment (refer to Fig. 4). That is, the massage section 5 includes a solenoid 8 whose center is formed as a hollow part and a massage body 7 which is coaxially inserted into the hollow part of the solenoid 8 and is free to get in and out of the hollow part. The massage section 5 is

housed in a cubic pouch body 11 made of a cloth or the like, and the cubic pouch body 11 with the massage section 5 placed in it and the belt member 6 are sewn together. In this way, the massage section 5 can be attached to the belt member 6.

[0050] In the massage section housed in the pouch body 11, a cushion member 12 made of a material such as cloth or sponge is disposed in front of the massage body 7, seen in the direction of protrusion of the massage body 7. The cushion member 12 helps reduce the hitting force produced by the massage section 5, thereby allowing application of a massage force ideally suited for the to-be-treated person U. In other words, the cushion member 12 serves as hitting-force control means capable of regulation of a hitting force produced by the massage section 5.

[0051] It is noted that the spring 9 placed in contact with the front end of the massage body 7 as shown in Fig. 4 (as well as a spring placed at the rear end) can also be deemed to be hitting-force control means. Moreover, in a case where a control section is provided to weaken electric current passing through the solenoid 8, this control section serves as hitting-force control means.

The belt member 6, to which is attached the massage section 5 as described above, is housed in a hollow housing pouch body 13 which is similar in shape to the belt member 6 (cross-shaped) but is slightly larger in size than the belt member 6. The housing

pouch body 13 has formed in its lateral part an opening 14 for insertion and withdrawal of the belt member 6 and a fastener 15 for closing the opening 14.

[0052] In the step of forming the head cover body 2 described previously, the housing pouch body 13 with the belt member 6 placed in it is sewn at its ends (four ends), each end being held between an edge of the first inner cover 41 and an edge of the second inner cover 42 in sandwich and overlap style. In this way, the massage section 5 becomes free to move in the space between the first inner cover 41 and the second inner cover 42. Accordingly the to-be-treated person U is able to move the massage section 5 freely to any given location corresponding to a desired part of his/her head and enjoy a pleasurable massage in a comfortable atmosphere.

[0053] It is noted that the housing pouch body 13 may be entirely sewn on the first inner cover 41 or the second inner cover 42 instead of being sewn only at its ends. Moreover, the belt member 6 does not necessarily have to be placed in the housing pouch body 13. In this case, the belt member 6 is sewn at its ends, each end being held between an edge of the second inner cover 42 and an edge of the outer cover 3 in sandwich and integral style. It is also possible to sew the belt member 6 in itself on the first inner cover 41 or the second inner cover 42. Further, the massage section 5 may be attached directly to the first inner cover 41 or the second inner cover 42 without using the belt

member 6.

[0054] With the adoption of the belt-member 6 mounting method thus far described, it never occurs that bumps appear on the outer surface of the outer cover 3 because of the seams of the belt member. This makes it possible to keep the head massage apparatus 1 in shape neatly in the form of a cap. Moreover, since the belt member 6, or the massage section 5 is free to move in the space between the first inner cover 41 and the second inner cover 42, it is possible for the to-be-treated person U to move the massage section 5 to any given location corresponding to a desired part of his/her head and enjoy a pleasurable massage in a comfortable atmosphere.

[0055] Also in the head massage apparatus 1 of the fourth embodiment thus far described, the massage section 5 is covered with the cap-shaped outer cover 3 and is thus hidden from view externally. Accordingly, the head massage apparatus 1 of the present invention allows the to-be-treated person U to have a scalp (head) massage lightheartedly without feeling any constraint in the presence of others and enjoy a pleasurable massage in a comfortable atmosphere.

The massage section 5 may be attached directly to the second inner cover 42 (the inner surface or the outer surface of the cover, either will do) without using the belt member 6.

[0056] The constituents and functional effects other than those described hereinabove of the fourth embodiment are

substantially the same as those of the first embodiment, and therefore the description thereof will be omitted.

It is noted that, in the third embodiment, the belt member 6 may be entirely sewn on the inner cover 4 or the outer cover 3 instead of being sewn only at its ends. Moreover, in the fourth embodiment, the belt member 6 as a whole may be sewn on or bonded to at least one or more of the first inner cover 41, the second inner cover 42, and the outer cover 3.

Explanation of reference numerals and symbols

[0052]	1	head massage apparatus
	2	head cover body
	3	outer cover
	4	inner cover
	5	massage section
	5a	top head massage section
	5b	front head massage section
	5c	rear head massage section
	5d	left head massage section
	5e	right head massage section
	6	belt member
	7	massage body
	8	solenoid
	9	spring
	10	inner cap
	11	pouch body

- 12 cushion member (hitting-force control means)
- 13 housing pouch body
- 14 opening
- 15 fastener
- 41 first inner cover
- 42 second inner cover
- U to-be-treated person

CLAIMS

1. A head massage apparatus comprising:
a head cover body for covering the head of a to-be-treated person; and
a massage section disposed in the head cover body, for massaging the head of the to-be-treated person.
2. The head massage apparatus according to Claim 1,
wherein said head cover body comprises a cap-shaped outer cover and an inner cover disposed inside the outer cover, for covering the head of the to-be-treated person,
and wherein the massage section is disposed between said outer cover and said inner cover.
3. The head massage apparatus according to Claim 2,
wherein said massage section is attached to one of said outer cover and said inner cover.
4. The head massage apparatus according to Claim 2,
wherein a belt member is provided that can be bent flexibly in conformity to the shape of the head of said to-be-treated person, and the massage section is mounted in line with said belt member,
and wherein each end of the belt member bearing said massage section is held firmly between an edge of said outer cover and

an edge of said inner cover in sandwich style.

5. The head massage apparatus according to Claim 1,
wherein said head cover body comprises a cap-shaped outer cover, a first inner cover disposed inside the outer cover, for covering the head of the to-be-treated person, and a second inner cover disposed between said outer cover and said first inner cover,

and wherein the massage section is disposed between said first inner cover and said second inner cover, or between said second inner cover and said outer cover.

6. The head massage apparatus according to Claim 5,
wherein the massage section is attached to one of said outer cover, said first inner cover, and said second inner cover.

7. The head massage apparatus according to Claim 5,
wherein a belt member is provided that can be bent flexibly in conformity to the shape of the head of said to-be-treated person, and the massage section is mounted in line with said belt member,

and wherein each end of the belt member bearing said massage section is held firmly between an edge of said first inner cover and an edge of said second inner cover in sandwich style.

8. The head massage apparatus according to one of Claims 1 to 7,

wherein said massage section includes a solenoid capable of producing magnetism and a massage body which is caused to advance and retract under a force of magnetism produced by the solenoid.

9. The head massage apparatus according to Claim 8,

wherein said massage section includes hitting-force control means capable of regulation of a hitting force which is produced by the massage section.

10. The head massage apparatus according to Claim 9,

wherein said hitting-force control means is constructed of a cushion member disposed in front of the massage body, seen in the direction of protrusion of the massage body.

11. The head massage apparatus according to Claim 1,

wherein said head cover body comprises a cap-shaped outer cover and an inner cover disposed inside the outer cover, for covering the head of the to-be-treated person,

and wherein said massage section is disposed in the inner cover.

12. The head massage apparatus according to Claim 11,

wherein said inner cover is provided with a belt member which can be bent flexibly in conformity to the shape of the head of said to-be-treated person,

and wherein said massage section is attached to the inner cover along said belt member.

13. The head massage apparatus according to Claim 11,

wherein said inner cover comprises an inner cap which is dome-shaped for covering of the head of said to-be-treated person and is made extendable in conformity to the shape of the head,

and wherein said massage section is attached to said inner cap.

14. The head massage apparatus according to one of Claims 11 to 13,

wherein said massage section includes a solenoid capable of producing magnetism and a massage body which is caused to advance and retract under a force of magnetism produced by the solenoid.