

DESCRIPTION

TITLE OF THE INVENTION:

CHAIR-TYPE MESSAGE APPARATUS AND AIR BAG STRUCTURE FOR FOREARM
MESSAGE

Technical field

[0001] The present invention relates to a chair-type
massage apparatus having an arm massage section (forearm massage
section) disposed at its armrest, and an air bag structure for
forearm massage mounted in the chair-type massage apparatus.

Background Art

~~[0002] As is widely known, in the field of chair-type massage~~
apparatus technology, apparatuses equipped with an arm massage
section capable of massaging the arm of a user have already been
developed.

For example, in Patent Literature 1, there is disclosed
a chair-type massage apparatus having an arm massage section
capable of massaging the arm of a user disposed on an upper part
of the armrest thereof. The arm massage section is provided
with a massage portion constructed of an air bag placed inside
a semi-cylindrically shaped casing whose axis is pointing in
a direction along the armrest. By inflating and deflating the
air bag-type massage portion, it is possible to massage the arm
of a user inserted in the casing.

Prior Art Reference

Patent Literature

[0003] Patent Literature 1: Japanese Unexamined Patent Publication JP-A 2004-216120 (Fig. 1)

Summary of the Invention

Problems to be solved by the Invention

[0004] All persons who use a chair-type massage apparatus for massage purposes do not wish to have an arm massage. For example, some users wish to have a shoulder or waist massage rather than an arm massage. In this case, the user has a massage with his/her arm rested on the armrest, as a matter of course.

However, as is the case with the chair-type massage apparatus disclosed in Patent Literature 1, the arm massage section fixedly attached to the upper part of the armrest gets in the way of resting an arm on the armrest and stretching the arm placed thereon, with the consequence that the user cannot take a relaxed position.

[0005] Furthermore, in the chair-type massage apparatus disclosed in Patent Literature 1, since the complex and massive air bag-type arm massage section is disposed on the upper part of the armrest, it follows that the massage apparatus as a whole has a large size, with the consequence that the look of the massage apparatus makes a bad impression on users.

In addition, with consideration given to a case where a user who wishes to have an arm massage uses the arm massage section disclosed in Patent Literature 1 for arm massage purposes, the

following problems come to the surface.

[0006] That is, in the chair-type massage apparatus disclosed in Patent Literature 1, in order to have an arm massage, a user has to insert his/her to-be-massaged arms into the arm massage section, with each arm turned inward so that the inside of the arm faces the top of the armrest (arm placement position). The user taking such an arm position could put an unwanted stress on his/her shoulder or side, and is therefore unable to have a massage in a relaxed condition to his/her heart's content.

[0007] Most of chair-type massage apparatuses that are currently on the market are so designed that, in order to effect ~~an arm massage, an arm has to be set in an arm massage section~~ in an inwardly-turned state as described above. There is thus great uncertainty about the ability of such an apparatus to allow a user to have a massage in a relaxed condition to his/her heart's content.

In view of the foregoing problems, an object of the present invention is to provide a chair-type massage apparatus characterized by having an arm massage section which is capable of massaging the arms of a user properly and stays unobtrusively when in an unoperated state, and by offering a good impression with its appearance as a massage apparatus on users.

[0008] In view of the foregoing problems, another object of the present invention is to provide a chair-type massage apparatus equipped with an arm massage section (forearm massage

section) which is capable of massaging the hands and arms of a user properly while allowing the user to take a relaxed position.

Means for solving the Problems

[0009] In order to accomplish the above objects, the following technical means is adopted for the implementation of the present invention.

That is, the chair-type massage apparatus pursuant to the present invention comprises: a seat; an armrest disposed on both sides of the seat in a horizontal direction so as to extend in a front-rear direction; and a backrest disposed at the rear of the seat. In this construction, the armrest is provided with ~~an arm massage section having an opening which is opened toward~~ the rear of the armrest, for effecting a massage on an arm inserted therein forwardly through the opening. The arm massage section is configured for free vertical movement between a housed position where it is housed in the armrest and thus insertion of an arm through the opening is inhibited and a massage position where it protrudes above the armrest and thus insertion of an arm through the opening is permitted.

[0010] It is preferable that the arm massage section has a lateral opening which is opened horizontally inwardly, for permitting insertion of an arm from the seat side, and that the lateral opening is in a closed state when the arm massage section assumes the housed position, and is in an opened state when the arm massage section assumes the massage position.

Moreover, it is advisable that the arm massage section has formed at its front side a pivot portion for pivotally supporting the rear part of the arm massage section for free vertical rocking motion with respect to the armrest, and also has positioning means for locating the rocking position of the arm massage section in the massage position, and that the positioning means is so designed that, upon the arm massage section being rockably moved upward to the massage position, downward rocking motion of the arm massage section is temporarily restrained in the massage position, and, upon the arm massage section being rockably moved upward even further beyond the massage position, downward rocking motion of the arm massage section toward the housed position is permitted.

[0011] An adoptable example of such positioning means comprises: a fan-shaped member which is pivotally supported for free rotation about a horizontal axis with respect to the armrest situated below the arm massage section, and has the shape of a sector whose center coincides with its pivoted point; a long arm member which has its one end pivotally supported on a lower part of the arm massage section for free rocking motion about a horizontal axis, and has the other end pivotally supported at the outer edge of the fan-shaped member for free rocking motion about the horizontal axis; and a claw member which has its base end pivotally supported for free rocking motion about the horizontal axis with respect to the armrest side, and has its

tip biased toward the fan-shaped member. The fan-shaped member has formed at its outer edge a positioning concavity to receive the tip of the claw member. As the fan-shaped member is rocked upward in response to the rocking motion of the arm massage section, the tip of the claw member is fitted in the positioning concavity of the fan-shaped member. In this way, the arm massage section is restrained from downward rocking motion in the massage position by the positioning means.

[0012] Another adoptable example of the positioning means includes a pressing-back piece disposed in the fan-shaped member, for pressing the tip of the claw member back in a direction away from the outer edge of the fan-shaped member. Upon the arm massage section being rockably moved upward even further beyond the massage position, the tip of the claw member is pressed back in a direction away from the outer edge of the fan-shaped member by the pressing-back piece. In this way, the positioning means permits the downward rocking motion of the arm massage section toward the housed position.

[0013] In order to accomplish the above objects, the following technical means is adopted for the implementation of the present invention.

The air bag structure pursuant to the present invention is an air bag structure for forearm massage mounted in a chair-type massage apparatus comprising a seat, an armrest disposed on both sides of the seat in a horizontal direction so as to extend in

a front-rear direction, and a backrest disposed at the rear of the seat. The armrest is provided with an arm massage section having a housing portion capable of accommodating the arm of a user, and, at the front end of the housing portion is disposed a bottomed cylindrical first air bag for press-massaging the inserted hands of the user. The first air bag has a slot-like opening for insertion of the hands of the user. The opening is so formed as to face rearward along the armrest, with a line connecting longitudinal one end of the slot-like opening with the other substantially aligned with the vertical direction.

[0014] It is preferable that the first air bag is disposed ~~inclined, with the line connecting longitudinal one end of the~~ slot-like opening with the other tilted toward the seat.

In a natural state, the inner part of the arm and the palm of a human being is facing toward his/her body. Given that the arm can be moved simply forward into the arm massage section in this state, the user is able to have a hand or arm massage in a relaxed condition without putting an unwanted stress on his/her arm, shoulder continuous with the arm, and side.

[0015] According to this means, at the front end of the housing portion of the arm massage section is disposed the bottomed cylindrical first air bag for press-massaging the inserted hands of the user. This makes it possible to ensure a proper press-massage for the hands of the user by exploiting airpressure. Moreover, the first air bag has a slot-like opening

for insertion of the hands of the user, and is so disposed that the line connecting longitudinal one end of the opening with the other is substantially aligned with the vertical direction and is tilted toward the seat in the widthwise direction. This enables the user to put his/her arm into the arm massage section in a natural state without turning the arm, wherefore the user is able to have an arm massage in a relaxed condition without putting an unwanted stress on his/her arm, shoulder continuous with the arm, and side.

[0016] Moreover, it is advisable that a second air bag is disposed partway along the housing portion for press-massaging the arms of the user.

Further, it is advisable that the arm massage section has an opening which is opened toward the rear of the armrest or a lateral opening which is opened horizontally inwardly for insertion of the arm of the user from the seat side.

Advantageous effect of the Invention

[0017] According to the chair-type massage apparatus pursuant to the present invention, there is provided an arm massage section which is capable of massaging the arms of a user properly and stays unobtrusively when in an unoperated state, and it is possible to offer a good impression with appearance as a massage apparatus on users.

Moreover, according to the air bag structure for forearm massage mounted in the chair-type massage apparatus pursuant

to the present invention, the user is able to have a forearm massage in a relaxed position without fail.

Brief Description of Drawings

[0018][Fig. 1] Figure 1 is a perspective view of the chair-type massage apparatus pursuant to the present invention. Fig. 1(a) is a perspective view showing the chair-type massage apparatus, with its arm massage section situated in the housed position. Fig. 1(b) is a perspective view showing the chair-type massage apparatus, with its arm massage section situated in the massage position.

[Fig. 2] Figure 2 is a view showing how an arm massage is to be effected by the chair-type massage apparatus.

[Fig. 3] Figure 3 is an internal view of the armrest as seen when the arm massage section assumes the housed position.

[Fig. 4] Figure 4 is an internal view of the armrest as seen when the arm massage section assumes the massage position.

[Fig. 5] Figure 5 is an internal view of the armrest as seen when the arm massage section is rocked upward beyond the massage position.

[Fig. 6] Figure 6 is a view showing the details of an air bag.

Modes for Carrying out the Invention

[0019] [Embodiment 1]

Hereinafter, a chair-type massage apparatus 1 in accordance with the embodiment 1 of the present invention will

be described with reference to the drawings.

As shown in Fig. 1, the chair-type massage apparatus 1 comprises a seat 2, an armrest 3 disposed on both sides of the seat 2 in a right-left direction so as to extend in a front-rear direction, and a backrest 4 disposed at the rear of the seat 2. Moreover, the armrest 3 is provided with an arm massage section 5 capable of effecting an arm massage. The arm massage section 5 is made free to move in a top-bottom direction relative to the armrest 3.

[0020] In the following description, as shown in Fig. 1(a), a direction of from front to rear (or vice versa) of the apparatus as seen from a user U (a person under massage operation) sitting in the chair-type massage apparatus 1 will be referred to as the "front-rear direction" used for explanation of the chair-type massage apparatus 1, and a direction of from right to left (or vice versa) of the apparatus as seen from the user U will be referred to as the "horizontal direction (widthwise direction)" used for explanation of the chair-type massage apparatus 1. In addition, a direction of from top to bottom (or vice versa) of the apparatus as seen from the user U sitting in the chair-type massage apparatus 1 will be referred to as the "vertical direction" used for explanation of the chair-type massage apparatus 1.

[0021] The seat 2 is a member which is rectangular-shaped when viewed planarly, for allowing seating of the user U. The

seat 2 is mounted so as to be spaced upwardly away from a floor with its seating face horizontal. The seat 2 has a non-illustrated built-in frame member for supporting the weight of the user U. Moreover, a cushion member is disposed at the top of the seat 2 for allowing the user U to sit comfortably on the seat 2. The armrest 3 is disposed on each of the right side and the left side of the seat 2. Moreover, under the seat 2 is formed a space for accommodating a non-illustrated foot massage section and so forth.

[0022] The armrest 3, which is a platy member standing upright perpendicularly to the floor, is disposed on each of the right side and the left side of the seat 2 adjacently to

the seat 2. That is, the armrest 3 consists of a left-hand armrest 3L disposed at the left of the seat 2 and a right-hand armrest 3R disposed at the right of the seat 2 that are spaced from each other. The left-hand armrest 3L and the right-hand armrest 3R are each so disposed as to extend in the front-rear direction. Moreover, the top surface of each armrest has a breadth wide enough for user's arm to be stretched out unhindered while being rested thereon, and slopes gently in the front-rear direction.

[0023] A support frame 6 standing upright in the vertical direction is attached to the armrest 3 interiorly thereof. The support frame 6 is fixedly coupled orthogonally to the frame member of the seat 2, for supporting the weight of the user U applied to the seat 2 via the frame member of the seat 2.

At the rear of the seat 2 is disposed the backrest 4 against which the user U is able to lean. The backrest 4 is pivotally supported for free rocking motion about a horizontal axis pointing in the horizontal direction with respect to the support frame 6 situated at the rear of the seat 2. In this way, the backrest 4 is configured for free backward fall movement to change between an upright position along the vertical direction and a substantially horizontal reclined position.

[0024] As shown in Figs. 1 and 2, the chair-type massage apparatus 1 pursuant to the present invention is provided with the arm massage section 5 (forearm massage section) which is capable of massaging the hands and arms (forearms) of the user U properly and can be housed in the armrest 3 unobtrusively when in an unoperated state.

The arm massage section 5 is a long member elongated along the front-rear direction, which is disposed at the top of each of the left-hand armrest 3L and the right-hand armrest 3R. The arm massage section 5 has formed at its rear end face an opening 7 which is opened toward the rear of the armrest 3 and also has formed at its side surface facing horizontally inwardly a lateral opening 8 which is opened horizontally inwardly. User's arm can be inserted into the arm massage section forwardly through the opening 7, and can also be inserted therein through the lateral opening 8 from the seat 2 side.

[0025] Within the arm massage section 5 is formed a housing

portion 9 capable of accommodating a forearm inserted thereinto through the opening 7 or the lateral opening 8. The constituent surface parts of the housing portion 9, except for the rear surface formed with the opening 7 and the horizontally inner side surface formed with the lateral opening 8 (upper surface, lower surface, front surface, and widthwise outer side surface) are all made as a wall surface. That is, the housing portion 9 is surrounded by those wall surface parts. A second air bag 10 is disposed at each of an upper surface part and a lower surface part of the housing portion 9 that extend from some midportion to the rear thereof, for massaging the arms of the user U between the elbow and wrist regions inserted in the housing portion 9. In addition, a first air bag 11 is disposed at the front of the housing portion 9, for massaging the hands of the user U between the wrist and fingertip regions inserted in the housing portion 9.

[0026] The arm massage section 5 is configured for free vertical movement between a "housed position" where it is housed in the armrest 3 and a "massage position" where it protrudes upward from the armrest 3 to effect an arm massage. In this construction, the opening 7 and the lateral opening 8 become available for a massage following the shift of the arm massage section 5 to the massage position.

More specifically, the arm massage section 5 is, at its front side, pivotally supported on the armrest 3, so that the

rear side thereof can be rocked vertically with respect to the front side pivoted on the armrest 3. In this way, the arm massage section 5 pursuant to the present invention is allowed to move between the housed position and the massage position by exploiting the vertical rocking motion of its rear side with respect to its front side.

[0027] Next, a description will be given below as to a mechanism for moving the arm massage section 5 rockably between the "housed position" and the "massage position".

The arm massage section 5 is provided with a pivot portion 12 for pivotally supporting the arm massage section 5 with respect to the armrest 3 and positioning means 13 for locating the rocking position of the arm massage section 5 in the massage position.

[0028] The pivot portion 12 includes a pivot pin 14 disposed at the upper front side of the armrest 3 so as to pass horizontally through the interior of the armrest 3 and a receiving portion 15 disposed at the front of the arm massage section 5 for rotatable engagement with the pivot pin 14. In the pivot portion 12, as the pivot pin 14 of the armrest 3 is rotated relative to the receiving portion 15 of the arm massage section 5, the rear part of the arm massage section 5 is rocked about an axis pointing in the horizontal direction with respect to the front part thereof pivoted on the armrest 3.

[0029] Upon the arm massage section 5 being rockably moved upward to the massage position, the positioning means 13 restrains

the downward rocking motion of the arm massage section 5 temporarily in the massage position. Upon the arm massage section 5 being rockably moved upward even further beyond the massage position, the positioning means 13 permits the downward rocking motion of the arm massage section 5 toward the housed position.

More specifically, the positioning means 13 comprises a fan-shaped member 16 pivotally supported for free rocking motion with respect to the armrest 3, a long arm member 17 for providing coupling between the fan-shaped member 16 and the arm massage section 5 in such a way that the fan-shaped member 16 can be ~~rocked in response to the movement of the arm massage section~~ 5, and a claw member 18 for restraining the rocking motion of the fan-shaped member 16 by engaging with the outer edge of the fan-shaped member 16.

[0030] To begin with, the fan-shaped member 16, which is a platy member having the cross-sectional shape of an arc (sector) when viewed laterally, is rotatably supported pivotally on the support frame 6 disposed inside the armrest 3. A pivot shaft 19 for pivotally supporting the fan-shaped member 16 is situated at the center of the arc defining the lateral cross-sectional profile of the fan-shaped member 16 (the center of the sector). The pivot shaft 19 is disposed along the horizontal direction to pivotally support the fan-shaped member 16 for free vertical rocking motion.

[0031] On one radial side of the fan-shaped member 16 (an upper-situated radial side along the outer periphery of the fan-shaped member 16), a projection 20 is formed so as to protrude radially outwardly from the outer edge of the fan-shaped member 16. The other end of the aforementioned arm member 17 is rotatably coupled to the projection 20.

On the other radial side of the fan-shaped member 16 (a lower-situated radial side along the outer periphery of the fan-shaped member 16), a pressing-back piece 21 is formed on a surface of the fan-shaped member 16 so as to extend radially outwardly from the pivot shaft 19. The pressing-back piece 21 is attached to the surface of the fan-shaped member 16 opposite to the surface thereof facing in the direction of upward rocking motion of the fan-shaped member 16. The pressing-back piece 21 has formed at its radially outer end a pressing-back face 22 for setting free the positioning means 13. The pressing-back face 22 is so formed as to point tangentially with respect to the pivot shaft 19 of the fan-shaped member 16.

[0032] The fan-shaped member 16 has formed at its outer edge a positioning concavity 23 dented radially inwardly (toward the pivot shaft 19). The positioning concavity 23 is formed in a position adjacent to an upper part (one radial side) of the fan-shaped member 16 along the outer edge beyond the pressing-back piece 21. The tip of the claw member 18 which will hereafter be described is engageable in the positioning

concavity 23.

Moreover, on the surface of one radial side of the fan-shaped member 16 is disposed a hook-like locking member 24 having a bend at its tip.

[0033] The arm member 17 is a long platy member whose plate plane is pointing in the horizontal direction. The arm member 17 has its one end (at the side of the arm massage section 5) pivotally supported on a lower part of the arm massage section 5 for free rocking motion about a horizontal axis, and has the other end (at the side of the fan-shaped member 16) pivotally supported on the projection 20 of the fan-shaped member 16 for free rocking motion about the horizontal axis. By the action of the arm member 17, the fan-shaped member 16 can be rocked in response to the rocking motion of the arm massage section 5.

[0034] The claw member 18 is a member whose base end is pivotally supported on the support frame 6 disposed inside the armrest 3. The tip of the claw member 18 is made free to rock about an axis pointing in the horizontal direction with respect to the base end pivotally supported on the support frame 6. Moreover, the tip of the claw member 18 is biased toward the fan-shaped member 16 so as to be pressed against the outer edge of the fan-shaped member 16 under a certain force.

[0035] The claw member 18, which is shaped like a hook having a bend at its tip, is caught in the tip of the aforementioned

locking member 24 under a weak biasing force, thereby restraining the upward rocking motion of the fan-shaped member 16. In this way, the arm massage section 5 can be locked in position so that it is no longer moved upward.

Next, the operations of a mechanism for rocking the arm massage section 5 and the positioning means 13 will be described.

In Fig. 3, there is shown the section of the armrest 3 in the case where the arm massage section 5 assumes the housed position.

[0036] As shown in Fig. 3, when in the housed position, the arm massage section 5 is placed inside the armrest 3. At this time, the top surface of the arm massage section 5 is flush with the top surface of the armrest 3. This allows the user to rest his/her arm on the armrest 3, as well as to stretch out the arm resting thereon, easily.

Moreover, the arm massage section 5 is in a state of having been rocked utmost to the lower limit about the pivot portion 12, and correspondingly the fan-shaped member 16 coupled via the arm member 17 to the arm massage section 5 is in a state of having been rocked into a lowermost position. Under this condition, the pressing-back piece 21 and the positioning concavity 23 formed adjacent to the pressing-back piece 21 are spaced away from the claw member 18. That is, it never occurs that the claw member 18 engages with the positioning concavity 23 and the pressing-back piece 21 as well.

[0037] Moreover, the locking member 24 attached to the surface of the fan-shaped member 16 is kept in engagement with the tip of the claw member 18, thereby restraining the upward rocking motion of the fan-shaped member 16. Therefore the arm massage section 5 is never moved from the housed position. However, for example, when the arm massage section 5 is lifted upward under a force above a certain level, the coupling between the locking member 24 and the claw member 18 is disengaged, thereby permitting the fan-shaped member 16 to rock in the upward direction (the clockwise direction in the illustrated example).

[0038] Upon holding the arm massage section 5 and causing it to rock upward, the fan-shaped member 16 coupled via the arm member 17 to the arm massage section 5 is rocked upward about the pivot shaft 19, and whereupon the arm massage section 5 is moved to the massage position shown in Fig. 4.

In the housed position, the lateral opening 8 of the arm massage section 5 is kept in a closed state by a lateral plate 25 (cover plate) formed on the widthwise inner side of the armrest 3, and thus lacks communication with the outside.

[0039] As shown in Fig. 4, in the massage position, since the positioning concavity 23 formed at the outer edge of the fan-shaped member 16 takes the same position as the claw member 18 as the result of the upward rotation of the fan-shaped member 16 about the pivot shaft 19, it follows that the tip of the claw member 18 in a biased state with respect to its base end is fitted

in the positioning concavity 23, thereby restraining the downward rocking motion of the fan-shaped member 16. Therefore it never occurs that the arm massage section 5 is rockably moved downward from the massage position. In this way, the rocking position of the arm massage section 5 can be located in the massage position for a time.

[0040] In the massage position, the lateral opening 8 of the arm massage section 5 is situated above the lateral plate 25 formed on the widthwise inner side of the armrest 3. The user U is therefore able to insert his/her arm into the arm massage section through the lateral opening 8 or the opening 7 (rear opening 7). As shown in Fig. 5, upon holding the arm massage section 5 and causing it to rock further upward beyond the massage position, the fan-shaped member 16 is rotated further upward about the pivot shaft 19, and whereupon the tip of the claw member 18 takes the same position as the pressing-back piece 21. Then, the pressing-back face 22 of the pressing-back piece 21 is brought into contact with the tip of the claw member 18, thereby pressing the tip of the claw member 18 back in a direction reverse to the biasing direction. In consequence the coupling between the tip of the claw member 18 and the positioning concavity 23 is disengaged, thereby permitting the downward rocking motion of the fan-shaped member 16 once again. In this way, the arm massage section 5 can be moved downward to return to the housed position.

[0041] It is noted that the tip of the claw member 18 is

moved away from the positioning concavity 23 after the pressing-back face 22 makes contact with the tip of the claw member 18 to press the tip of the claw member 18 back. Therefore, even if the fan-shaped member 16 is rocked downward, it never occurs that the tip of the claw member 18 is fitted into the positioning concavity 23. This makes it possible to move the arm massage section 5 downward from the position to which it has been rockably moved beyond the massage position (release position) back to the housed position at a stroke.

[0042] The chair-type massage apparatus 1 pursuant to the present invention is not limited to the foregoing embodiment.

~~The explanation of the embodiment deals with the chair-type~~
massage apparatus 1 in which the arm massage section 5 can be rocked upward by being held and lifted upward by way of example. Alternatively, the chair-type massage apparatus 1 pursuant to the present invention may be so designed that the arm massage section 5 is raised and lowered by means of an actuator or otherwise.

[Embodiment 2]

Hereinafter, the chair-type massage apparatus 1 in accordance with the embodiment 2 of the present invention will be described with reference to the drawings.

[0043] The chair-type massage apparatus 1 of the embodiment 2 has substantially the same structure as the massage apparatus of the embodiment 1. Major differences between them are the

form and configuration of the air bag provided in the arm massage section 5 for massage purposes.

More specifically, as shown in Fig. 6, at the front end of the housing portion 9 of the arm massage section 5 is disposed a bottomed cylindrical first air bag 11 for massaging the hands (fingertips and palm) of the user U inserted therein by exploiting air pressure.

[0044] The first air bag 11, which is formed of a rectangular air bag elongated in the front-rear direction, is constructed by folding the air bag on, as a fold line, a longitudinal midpoint thereof so that the front edge and the rear edge of the air bag overlap each other (bottomed cylindrical structure). The

overlapping areas of the front edge and the rear edge of the air bag are, only at their widthwise extremities, bonded to each other (sewn together) thereby to form a slot-like opening 30 into which the hands of the user U is inserted from the rear.

[0045] The opening 30 of the first air bag 11 is so formed as to face rearward along the armrest 3, with a line L connecting longitudinal one end of the slot-like opening 30 with the other substantially aligned with the vertical direction. Moreover, the first air bag 11 is disposed inclined, with the line L connecting longitudinal one end of the slot-like opening 30 with the other tilted toward the seat 2. The provision of such a structure affords the following advantages.

[0046] In a natural state, the inner part of the arm and

the palm of a human being is facing toward his/her body. Given that the arm can be moved simply forward into the arm massage section 5 in this state, the user is able to have a hand or arm massage in a relaxed condition without putting an unwanted stress on his/her arm, shoulder continuous with the arm, and side.

According to this embodiment, at the front end of the housing portion 9 of the arm massage section 5 is disposed the bottomed cylindrical first air bag 11 for press-massaging the hands of the user inserted therein. This makes it possible to press-massaging the hands of the user U properly by exploiting air pressure. Moreover, the first air bag 11 is so disposed that the slot-like opening 30 (straight line L) extends

substantially along the vertical direction and is tilted toward the seat 2 in the widthwise direction. This enables the user U to insert his/her arm into the arm massage section 5 in a natural state without turning the arm, wherefore the user is able to have an arm massage in a relaxed condition without putting an unwanted stress on his/her arm, shoulder continuous with the arm, and side.

[0047] In constructing the second air bag 10 disposed at each of the upper surface part and the lower surface part of the housing portion 9 extending from the midportion to the rear thereof, various configurations can be adopted for use so long as the second air bag 10 becomes capable of press-massaging the arm of the user U properly by exploiting air pressure.

It is noted that, instead of the first air bag 11 and the second air bag 10, it is possible to adopt a "tapping force producing mechanism" that exploits electromagnetic power produced by a solenoid, and a "pinch pressing mechanism" for holding a forearm by elastic platy members in sandwich style as well.

[0048] Incidentally, the arm massage section 5 of this embodiment is configured for free vertical movement between the "housed position" where it is housed in the armrest 3 and the "massage position" where it protrudes upward from the armrest 3 to effect an arm massage. In this construction, the opening 7 and the lateral opening 8 become available for a massage following the shift of the arm massage section 5 to the massage position.

[0049] More specifically, the arm massage section 5 is, at its front side, pivotally supported on the armrest 3, so that the rear side thereof can be rocked vertically with respect to the front side pivoted on the armrest 3. In this way, the arm massage section 5 pursuant to the present invention is allowed to move between the housed position and the massage position by exploiting the vertical rocking motion of the rear side with respect to the front side thereof.

[0050] It is noted that the mechanism for causing the arm massage section 5 to move rockably between the "housed position" and the "massage position" is not limited to the foregoing

mechanism. For example, the arm massage section 5 may be rocked by means of an electric motor or a hydraulic actuator.

As described heretofore, according to the air bag structure of the arm massage section mounted in the chair-type massage apparatus pursuant to the present invention, the user is able to have an arm massage in a relaxed position without fail.

[0051] It is noted that the chair-type massage apparatus pursuant to the present invention is not limited to the embodiments described hereinabove.

Explanation of reference numerals and symbols

[0052]	1	chair-type massage apparatus
	2	seat
	3	armrest
	3L	left-hand armrest
	3R	right-hand armrest
	4	backrest
	5	arm massage section
	6	support frame
	7	opening
	8	lateral opening
	9	housing portion
	10	second air bag
	11	first air bag
	12	pivot portion
	13	positioning means

14	pivot pin
15	receiving portion
16	fan-shaped member
17	arm member
18	claw member
19	pivot shaft
20	projection
21	pressing-back piece
22	pressing-back face
23	positioning concavity
24	locking member
25	lateral plate
30	slot-like opening
L	line connecting longitudinal one end of opening with the other
U	user

CLAIMS

1. A chair-type massage apparatus comprising:

a seat;

an armrest disposed on both sides of the seat in a horizontal direction so as to extend in a front-rear direction; and

a backrest disposed on a rear side of the seat,

said armrest being provided with an arm massage section having an opening which is opened toward a rear of the armrest, for effecting a massage on an arm inserted therein forwardly through the opening,

said arm massage section being configured for free vertical movement between a housed position where it is housed in the armrest and thus insertion of an arm through the opening is inhibited and a massage position where it protrudes above said armrest and thus insertion of an arm through the opening is permitted.

2. The chair-type massage apparatus according to Claim 1, wherein said arm massage section has a lateral opening which is opened horizontally inwardly, for permitting insertion of an arm from a seat side,

and wherein said lateral opening is in a closed state when said arm massage section assumes the housed position, and is in an opened state when the arm massage section assumes the massage position.

3. The chair-type massage apparatus according to Claim 1 or 2,

wherein said arm massage section has formed at its front side a pivot portion for pivotally supporting a rear part of said arm massage section for free vertical rocking motion with respect to the armrest, and also has positioning means for locating a rocking position of said arm massage section in the massage position,

and wherein said positioning means is so designed that, upon said arm massage section being rockably moved upward to the massage position, downward rocking motion of the arm massage section is temporarily restrained in said massage position, and, upon the arm massage section being rockably moved further upward beyond said massage position, downward rocking motion of the arm massage section toward the housed position is permitted.

4. The chair-type massage apparatus according to Claim 3, wherein said positioning means comprises:

a fan-shaped member which is pivotally supported for free rotation about a horizontal axis with respect to the armrest situated below said arm massage section, and has the shape of a sector whose center coincides with its pivoted point;

a long arm member which has its one end pivotally supported on a lower part of said arm massage section for free rocking

motion about a horizontal axis, and has the other end pivotally supported at an outer edge of the fan-shaped member for free rocking motion about the horizontal axis; and

a claw member which has its base end pivotally supported for free rocking motion about the horizontal axis with respect to said armrest, and has its tip biased toward said fan-shaped member,

wherein said fan-shaped member has formed at its outer edge a positioning concavity to receive the tip of the claw member,

and wherein, as the fan-shaped member is rocked upward in response to a rocking motion of said arm massage section, ~~the tip of said claw member is fitted in the positioning concavity~~

of the fan-shaped member, whereby said positioning means restrains downward rocking motion of the arm massage section in the massage position.

5. The chair-type massage apparatus according to Claim 4, wherein said positioning means includes a pressing-back piece disposed in the fan-shaped member, for pressing the tip of said claw member back in a direction away from the outer edge of the fan-shaped member,

and wherein, upon said arm massage section being rockably moved further upward beyond the massage position, said pressing-back piece presses the tip of the claw member back in the direction away from the outer edge of the fan-shaped member,

whereby said positioning means permits downward rocking motion of the arm massage section toward the housed position.

6. An air bag structure for forearm massage mounted in a chair-type massage apparatus comprising a seat, an armrest disposed on both sides of the seat in a horizontal direction so as to extend in a front-rear direction, and a backrest disposed on a rear side of the seat,

said armrest being provided with an arm massage section having a housing portion capable of accommodating the arm of a user,

wherein, at a front end of said housing portion is disposed a bottomed cylindrical first air bag for press-massaging the inserted hand of the user, said first air bag having a slot-like opening for insertion of the hand of the user, said opening being so formed as to face rearward along the armrest, with a line connecting longitudinal one end of said slot-like opening with the other substantially aligned with a vertical direction.

7. The air bag structure for forearm massage according to Claim 6,

wherein said first air bag is disposed inclined, with the line connecting longitudinal one end of the slot-like opening with the other tilted toward the seat.

8. The air bag structure for forearm massage according to Claim 6 or 7,

wherein a second air bag is disposed partway along said housing portion for press-massaging the arm of the user.

9. The air bag structure for forearm massage according to one of Claims 6 to 8,

wherein said arm massage section has an opening which is opened toward the rear of the armrest or a lateral opening which is opened horizontally inwardly for insertion of the arm of the user from the seat side.
