

SPECIFICATION

TITLE OF THE INVENTION

CHAIR-TYPE MASSAGING MACHINE

TECHNICAL FIELD

[0001]

The present invention relates to a chair-type massaging machine.

BACKGROUND ART

[0002]

As a chair-type massaging machine, there is known one having a backrest part provided at a rear portion of a seat and a massaging mechanism for massaging a back part of a user provided on the backrest part. There has been suggested a chair-type massaging machine equipped with a side region massaging device, wherein this kind of the chair-type massaging machine is provided with airbags oppositely disposed at both right and left sides of the backrest part so as to be able to massage both shoulders and both arms of a user sitting on the seat from both right and left outsides thereof (for example, Patent Literature 1).

[0003]

In this chair-type massaging machine equipped with a side region massaging device, the side region massaging device has been fixed to the backrest part. Therefore, when sitting down on the seat or standing up, a part of a body such as a shoulder may likely have got snagged on the side region massaging device. Also, when this chair-type massaging machine is used as a usual sitting chair (reclining chair), the side region massaging device becomes not only an obstacle but also a cause of deteriorating an appearance.

[0004]

Therefore, there has been suggested a chair-type massaging machine capable of freely switching, by a position switching mechanism, a pair of massaging means for use as a side region massaging device between a use state in which the paired massaging means are projected forward from the backrest part and a storage state in which the paired massaging means are retracted backward from this use state (Patent Literature 2).

PRIOR ART DOCUMENT

PATENT LITERATURE

[0005]

Patent Literature 1: Japanese Unexamined Patent

Publication JPA 2006-255156

Patent Literature 2: Japanese Unexamined Patent
Publication JPA 2010-167154

DISCLOSURE OF THE INVENTION

PROBLEM TO BE SOLVED BY THE INVENTION

[0006]

In the chair-type massaging machine suggested in Patent Literature 2, a pair of massaging means can be switched between a forward use state and a backward storage state as mentioned above. Therefore, in the case where the paired massaging means are kept in the storage state, each massaging means does not hinder a user from sitting down on the seat or standing up from the seat. In addition, since the paired massaging means adopts a configuration also capable of adjusting a position in a lateral direction according to a body type of a user, there has been an advantage of being able to prevent a finger pressure force from being excessively strong or excessively weak contrarily.

[0007]

However, there has been a case where the paired massaging means are largely projected backward from the backrest part (backward from the massaging chair) when the paired massaging means are kept in the storage state.

Therefore, in the case where this chair-type massaging machine is placed in close proximity to a wall, there has been merely a slight fear that the paired massaging means and the wall interfere in contact. Also, even in the case where the chair-type massaging machine is not placed in close proximity to a wall, when a person passes by a rear of the backrest part, there has been a fear that the paired massaging means projected backward may become an eyesore or may come into contact with a person in some cases.

[0008]

Therefore, in consideration of the above problems, the present invention has an object to provide a chair-type massaging machine equipped with means for massaging side regions of a user sitting on a seat, wherein the massaging means is kept from projecting backward from a backrest part so that the massaging machine can be placed in close proximity to a wall and does not hinder a person from passing by a rear of the backrest part while having a good outer appearance for the person.

MEANS ADAPTED TO SOLVE THE PROBLEMS

[0009]

In order to accomplish the object mentioned above,

the following technical means is taken in the present invention. A chair-type massaging machine of the present invention includes a seat and a backrest part provided at a rear portion of the seat, wherein a pair of massaging means are disposed as opposing to each other on both right and left sides of the backrest part and projecting forward from the backrest part in order to massage side regions of a body of a user, wherein the paired massaging means are attached to the backrest part via a width switching mechanism freely switching between a mutually separated state and a mutually proximal state while being kept in a state of projecting forward from the backrest part.

[0010]

Preferably, the massaging means is provided with a swinging fulcrum with a shaft core thereof oriented in a vertical direction at a proximal edge side thereof so that the massaging means is configured to swing about the swinging fulcrum.

Further preferably, the width switching mechanism includes a ratchet part enabling to retain an opposing distance between both the paired massaging means while being narrowed stepwise at the time of switching the paired massaging means from the mutually separated state to the mutually proximal state, wherein the ratchet part

includes a pawl part that moves as interlocking with a swing about a swinging shaft core of the massaging means and a rack member formed with a plurality of feed teeth fixedly provided on the backrest part and engaged with the pawl part, and wherein the rack member is provided with a reset mechanism moving the corresponding pawl part from one of the feed teeth engaged with the pawl part to the other feed tooth, thereby returning the paired massaging means from the mutually proximal state to the mutually separated state.

[0011]

Moreover, inside in the widthwise direction of the massaging means, there is preferably provided an airbag capable of pressurizing a shoulder region or a side part of an arm region of a user.

EFFECT OF THE INVENTION

[0012]

According to the chair-type massaging machine in relation to the present invention, the massaging means for massaging side regions of a user sitting on the seat is kept from projecting backward from the backrest part thereby enabling the massaging machine to be placed in close proximity to a wall and does not substantially hinder a person from passing by a rear of the backrest part while keeping an outer appearance for the person

as well.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013]

Fig. 1 is a cross-sectional view along a line A-A in Fig. 7 (in a mutually separated state).

Fig. 2 is a cross-sectional view along a line A-A in Fig. 7 (in a state of operating one step from the mutually separated state toward a narrow width direction).

Fig. 3 is a cross-sectional view along a line A-A in Fig. 7 (in a mutually proximal state).

Fig. 4 is a cross-sectional view along a line A-A in Fig. 7 (in a state immediately after starting a reset from the mutually proximal state).

Fig. 5 is a cross-sectional view along a line A-A in Fig. 7 (in a state during a reset from the mutually proximal state to the mutually separated state).

Fig. 6 is an enlarged view of a main part in Fig. 5.

Fig. 7 is a perspective view showing a chair-type massaging machine according to the present invention.

BEST MODE FOR CARRYING OUT THE INVENTION

[0014]

The following describes an embodiment of the

present invention with reference to the drawings.

Figs. 1 to 7 show one embodiment of a chair-type massaging machine 1 equipped with a shoulder massaging device according to the present invention.

As shown in Fig. 7, this chair-type massaging machine 1 includes a seat 2 having an ample area to support a hip of a user from a lower portion and a backrest part 3 provided at a rear portion of the seat 2, wherein side region massaging devices 4 are provided at both sides of the backrest part 3. These side region massaging devices 4 are equipped with massaging means 17 for massaging side regions of both arms or both shoulders of a user, as to be described later.

[0015]

A leg body 6 for installing the chair-type massaging machine 1 on a floor surface is provided at a lower portion of the seat 2 so that the seat 2 is supported at a prescribed height by the leg body 6.

It is noted that, in the following description, a back-and-forth direction and a right-and-left direction (i.e., lateral or widthwise direction) in a practical device are referred to based on arrow marks showing back-and-forth and lateral directions added as riders in Fig. 7. These directions correspond to those viewed by a user sitting on the chair-type massaging machine

1.

[0016]

The backrest part 3 is held in a state of being freely swung back and forth with its lower end portion pivoted with respect to a rear part of the seat 2 or a rear part of the leg body 6. This backrest part 3 is capable of reclining by a reclining mechanism such as a linear actuator mechanism arranged within the leg body 6. Also, within the backrest part 3, a back region massaging mechanism performing a massage operation such as massaging, patting or vibrating (showing only a storage space of the back region massaging mechanism in an exemplified drawing) is provided in a manner of being freely movable vertically.

[0017]

In addition, the chair-type massaging machine 1 of the present embodiment is configured such that a footrest (ottoman) 5 capable of supporting lower limbs of a user sitting on the seat 2 is provided in a manner that it is projectable forward with respect to the seat 2 and can be horizontally held, movably backward and can be stored beneath the seat 2. In this footrest 5, a leg massaging mechanism (not shown) is built in so as to be able to massage lower limbs of a user by vertically reversing at the time of projecting forward or by

reversing back and forth in the storage state.

[0018]

In addition, the chair-type massaging machine 1 of the present embodiment is provided with armrest parts 7 at both right and left sides of the seat 2. On mutually opposed inside surfaces of these armrest parts 7 (i.e., a right side surface of the left side armrest part 7 and a left side surface of the right side armrest part 7), there is provided a thigh/hip massaging mechanism (showing only a storage space of the thigh/hip massaging mechanism in the exemplified drawing) such as an airbag type performing a massaging operation.

[0019]

Every one of these back region massaging mechanism, reclining mechanism, footrest 5 and leg massaging mechanism, armrest part 7, thigh/hip massaging mechanism and the like is one example of equipment in the chair-type massaging machine 1, and the presence or absence and detailed structure thereof are not limited.

As shown in Figs. 1 to 5, in the chair-type massaging machine 1 according to the present invention, the side region massaging devices 4 provided at both sides of the backrest part 3 include massaging means supporting parts 15 that become in a state of projecting forward with respect to the backrest part 3. These massaging means

supporting parts 15 are formed in case-like shapes having their mutually opposing inner surface sides as concave portions, and massaging means 17 using the airbags and so forth. as driving sources are respectively provided within the cases in a state of being stored.

[0020]

That is, there exist a pair of right and left massaging means 17 that are arranged as mutually opposing in the lateral direction across a front face of the backrest part 3, and when a user leans back against the backrest part 3, the right and left massaging means 17 are rendered to sandwich the positions of both shoulders and both arms of the user from both right and left sides thereof.

In the case of using the airbags as the driving sources, these right and left massaging means 17 are configured to take advantage of a movement that the airbags are inflated by supplying air to the airbags from such as a pump while the airbags are deflated by exhausting air from the airbags so that the inflations and deflations are made repetitive at a prescribed rhythm, whereby a pulsing operation is generated. That is, by this pulsing operation, such as shoulders of a user can be massaged in a manner of rhythmically pressurizing (finger pressurizing) from both right and left sides.

[0021]

It is noted that, although the side region massaging device 4 in the present embodiment is configured such that the right and left massaging means 17 composed of the airbags and air supplying/exhausting system are stored in the right and left massaging means supporting parts 15 as described above, the massaging means 17 should not be limited to airbag types.

As shown in Figs. 1 to 5, the right and left massaging means supporting parts 15 equipped with the right and left massaging means 17 are attached to the backrest part 3 via a width switching mechanism 20 which freely switches between "a mutually separated state" as shown in Fig. 1 and "a mutually proximal state" inwardly made narrower in the lateral direction than the mutually separated state as shown in Fig. 4.

[0022]

The width switching mechanism 20 in the present embodiment is configured to be a stepwise switching type capable of stopping at a plurality of intermediate positions as shown in Figs. 2 and 3 during the switching of the right and left massaging means supporting parts 15 from the mutually separated state to the mutually proximal state.

When the right and left massaging means supporting

parts 15 are in the mutually separated state shown in Fig. 1, it is in a wide width state where it does not contact with shoulder regions of a user, and when in otherwise (Figs. 2 to 5), there is kept a width distance as it contacts with a shoulder length of a user having a standard body form at a front surface of the backrest part 3.

[0023]

The width switching mechanism 20 is configured to have a swinging mechanism 21 and a ratchet part 22. The following mainly describes the width switching mechanism 20 based on Fig. 6 which is an enlarged view of a main part in Fig. 5.

The swinging mechanism 21 includes a pivotally supporting base 25 provided in a state of being unmovable with respect to the side portion of the backrest part 3 and a swinging base 27 provided on this pivotally supporting base 25 in a state of being movable via a swinging fulcrum 26. It is structured that this swinging base 27 is integrally coupled to a fundamental portion of the massaging means supporting parts 15 (the specific coupled structure being omitted in the drawings).

[0024]

The swinging fulcrum 26 coupling the pivotally supporting base 25 and the swinging base 27 is placed

respectively near to the rear portions in the pivotally supporting base 25 and the swinging base 27 and is also provided with its shaft core oriented in the vertical direction (in a height direction along the front surface of the backrest part 3). In other words, the massaging means 17 is provided with the swinging fulcrum 26 at the base end side thereof with its shaft core oriented in the vertical direction so that the massaging means 17 is so configured as to swing about this swinging fulcrum 26. Therefore, the swinging base 27 is held in a manner of its front end portion being swung in the lateral direction, and hence the front end portions of the massaging means supporting parts 15 equipped with the massaging means 17 can be also swung in the lateral direction (in a X, Y direction in Fig. 6).

[0025]

The ratchet part 22 includes a pawl part 32 provided near to the front portion of the swinging base 27 and a rack member 33 engaged with this pawl part 32. The pawl part 32 is held in a manner of being freely swingable with respect to the swinging base 27 via a pawl pivotally supporting part 35 provided with its shaft core oriented in the vertical direction (in a height direction along the front surface of the backrest part 3). Contrarily to this, the rack member 33 is provided in a state of

being fixed to the front end portion of the pivotally supporting base 25. A specific arrangement of the rack member 33 has been determined in a manner of guiding along a moving locus of the pawl part 32 performs an arc-shaped movement together with the swinging base 27 about the swinging fulcrum 26 as a fulcrum at the time of swinging the swinging base 27.

[0026]

Herein, there is shown a configuration that the pawl part 32 of the present embodiment is provided with a toe 32a and an auxiliary toe 32b accompanying this in a bifurcated shape and a pawl-furcate part 32c is formed mutually between both these toes 32a and 32b.

The pawl part 32 is formed such that, the toes 32a and 32b are oriented backward of the moving direction with respect to the arc-shaped moving direction of the pawl part 32 when the massaging means supporting parts 15 move toward the mutually proximal direction (see X direction in Fig. 6).

[0027]

In addition, this pawl part 32 is provided with a spring 36 forcibly advancing the toes 32a and 32b toward the rack member 33 all the time with the pawl pivotally supporting part 35 as a pivotal fulcrum.

Contrarily to this, the rack member 33 includes a

plurality of feed teeth 37 projecting in an arrangement as arranging tooth tips following the arc-shaped movement locus of the pawl part 32. A plurality of feed teeth 37 are provided in the arrangement without a gap. Therefore, a tooth valley 38 is formed mutually between the feed teeth 37. Thus, multi-stepwise stop and retention (i.e., multi-stepwise retention of a width distance) at the time of switching the massaging means supporting parts 15 in position to the mutually proximal direction can be performed closely over the multiple steps.

[0028]

Each of the feed teeth 37 is formed such that the tooth tips are oriented to a movement tip ahead with respect to the arc-shaped movement direction of the pawl part 32 when the massaging means supporting parts 15 are moved toward the mutually proximal direction (see X direction in Fig. 6).

With these matters, referring to the ratchet part 22 arranged at the left side of the backrest part 3, when the pawl part 32 performs an arc-shaped movement toward the X direction in Fig. 6 with the swinging fulcrum 26 as a fulcrum, the pawl part 32 repeats riding on and riding over each of the feed teeth 37 with ease so as to be moved while accompanying swings about the pawl pivotally supporting part 35 as a fulcrum so that the pawl part

32 is to be transferred from the other feed tooth 37 (outer side feed tooth 37 in the width direction) to one feed tooth 37 (inner side feed tooth 37 in the width direction). The direction allowing the pawl part 32 to move in an arc-shape as described above is referred to as a "forward direction".

[0029]

However, contrarily to this, in the case where the pawl part 32 is rendered to perform an arc-shaped movement in the Y direction in Fig. 6, the pawl part 32 (toes 32a, 32b and pawl-furcate part 32c) is engaged with the feed tooth 37 and tooth valley 38 that encounters with the pawl part 32 for the first time so as to be fixed in a state that the pawl part 32 does not cause a swing about the pawl pivotally supporting part 35 as a fulcrum any more. Therefore, the pawl part 32 cannot ride over any one of the feed teeth 37, and hence the pawl part 32 does not perform an arc-shaped movement toward the Y direction in Fig. 6. The direction preventing the pawl part 32 from arc-shaped movement like this is referred to as a "reverse direction".

[0030]

The direction allowing the pawl part 32 to perform the arc-shaped movement with respect to the rack member 33 like this is restricted to only one direction (only

forward direction) in principle.

This rack member 33 is provided with a reset mechanism 42 for allowing the pawl part 32 to return back in the reverse direction (return the pawl part 32 from one feed tooth 37Z engaged with the pawl part 32 to the other feed tooth 37) after the pawl part 32 is forwarded to the feed tooth 37Z (shown in only Fig. 4; referred to as a "trailing edge feed tooth 37Z" hereinafter) positioning at the most trailing edge side in the forward direction allowing the pawl part 32 to perform the arc-shaped movement.

[0031]

This reset mechanism 42 includes: a release lever 43 provided in a manner of being freely swingable on the rack member 33 making use of the swinging fulcrum 26 of the swinging mechanism 21; a leading edge stopper 45 regulating a swinging range of this release lever 43 at a leading edge position side; and a trailing edge stopper 46 regulating the swinging range of the release lever 43 at a trailing edge position side.

The release lever 43 is provided in an arrangement as preceding the pawl part 32 in the forward direction allowing the pawl part 32 to perform the arc-shaped movement. Also, a lever end portion (an arc-shaped end surface farthest away from the swinging fulcrum 26 in

a radial direction) of the release lever 43 is provided such that it crosses over the tooth valley 38 of the rack member 33 so as to be in a height substantially the same as or slightly higher than a tooth tip of the feed tooth 37. Therefore, when the pawl part 32 is rendered to perform an arc-shaped movement in the forward direction, this release lever 43 is engaged with the auxiliary toe 32b of the pawl part 32 and is being pushed to the forward side of the arc-shaped movement so as to move with the pawl part 32.

[0032]

The trailing edge stopper 46 is provided for stopping by abutment the release lever 43 moving by being pushed by the pawl part 32 when the pawl part 32 is forwarded to the trailing edge feed tooth 37Z (see Fig. 3) of the rack member 33, and it is formed by making use of a side wall that couples the pivotally supporting base 25 to the backrest part 3.

Therefore, even though a force is continuously applied to this pawl part 32 so as to move in the forward direction after the pawl part 32 is forwarded to the trailing edge feed tooth 37Z, since the release lever 43 retains a state of being stopped by abutment to the trailing edge stopper 46, the auxiliary toe 32b of the pawl part 32 becomes in a state of riding on the lever

end portion of the release lever 43 (see Fig. 4). Thus, the state of the pawl part 32 (toes 32a, 32b and pawl-furcate part 32c) being engaged with the feed tooth 37 and tooth valley 38 is released.

[0033]

On the other hand, in the case where the pawl part 32 is rendered to perform an arc-shaped movement in the reverse direction from a state of the pawl part 32 riding on the release lever 43 (a state of the engagement with the feed teeth 37 being released), the release lever 43 becomes in a state of accompanying the pawl part 32 by an engagement frictional force arising in a state of riding on the pawl part 32 so that the release lever 43 is to be swung about the swinging fulcrum 26 as a fulcrum as shown in Fig. 5.

The leading edge stopper 45 is provided for the pawl part 32 to be disengaged from the release lever 43 at a timing immediately before when the pawl part 32 is to be engaged with the feed tooth 37A (shown only in Fig. 5; referred to as a "leading edge feed tooth 37A" hereinafter) to be positioned at the most leading edge in the forward direction of the pawl part 32 in the rack member 33, and it is formed by making use of a boss part projecting toward a swinging region of the release lever 43 from the pivotally supporting base 25.

[0034]

Therefore, when the pawl part 32 is returned back toward the leading edge feed tooth 37A, the release lever 43 is to be stopped by abutment to the leading edge stopper 45. Thus, the pawl part 32 (toes 32a and 32b) is detached (dismount) from the release lever 43 so as to be in a state of being steadily engaged with the leading edge feed tooth 37A of the rack member 33 (see Fig. 5 to Fig. 1).

It is noted that, although the release lever 43 has a structure of being freely pivotable about the swinging fulcrum 26 as a fulcrum, there may be provided a spring (not shown in a figure) forcibly urging the release lever 43 to proceed toward the trailing edge stopper 46 all the time about the corresponding swinging fulcrum 26 as a fulcrum. With provision of the forcibly urging spring like this, at the same time the release lever 43 is stopped by abutment to the leading edge stopper 45 so that the pawl part 32 is detached from the release lever 43, the release lever 43 can be steadily returned to a standby state of the release lever 43 being proximal or abutting to the leading edge stopper 45 immediately.

[0035]

The swinging mechanisms 21 and ratchet parts 22 in the width switching mechanisms 20 described above are

similarly provided in bilateral symmetry with respect to both the right and left sides (i.e., right and left massaging means supporting parts 15) across the backrest part 3.

Next, the following describes a situation of setting the massaging means supporting parts 15 in "a mutually separated state (a wide-width treatment state or an open state)" or contrarily "a mutually proximal state (a narrow-width treatment state)" by the width switching mechanism 20 adopted in the present embodiment.

[0036]

Now, it is assumed that the massaging means supporting parts 15 are set in the mutually separated state with respect to the backrest part 3 (in a state in Fig. 1). In this state, the right and left massaging means supporting parts 15 as well as the right and left massaging means 17 never project backward from the backrest part 3.

Therefore, the chair-type massaging machine 1 under this situation can be placed in close proximal to a wall. Also, even in the case where a person passes by the backward of the backrest part 3 in the case where the chair-type massaging machine 1 is not placed in close proximal to the wall, there exists substantially no obstacle (projected member) in view of outer appearance,

and there occurs no harmful effect.

[0037]

In addition, since the right and left massaging means 17 are mutually separated, the front surface of the backrest part 3 is in a fully opened state so that the right and left massaging means 17 do not hinder a person from sitting on the seat 2 or standing up therefrom. Therefore, particularly when this chair-type massaging machine 1 is used as a mere chair, it is very preferable. At this time, the pawl part 32 is situated in a state of being engaged with the leading edge feed tooth 37A of the rack member 32.

[0038]

In the case where a user puts user's hands on the massaging means supporting parts 15 so as to be mutually proximal from such a mutually separated state, the swinging base 27 swings toward the X direction of the arrow mark in Fig. 6 about the swinging fulcrum 26 as a fulcrum. Thus, the pawl part 32 performs an arc-shaped movement in the forward direction about the swinging fulcrum 26 as a fulcrum. Therefore, the pawl part 32 is rendered to ride over the leading edge feed tooth 37A as described before.

[0039]

And as shown in Fig. 2, the pawl part 32 is brought

into engagement with the feed tooth 37 which is next encountered (the second feed tooth 37 from the outside). In the case where the user moves user's hands off the massaging means supporting parts 15 in this state, the engagement state between the pawl part 32 and the feed tooth 37 is kept. That is, in the case where the right and left massaging means supporting parts 15, 15 are situated in the same state, the distance between the right and left massaging means 17 and 17 is narrowed by one step so as to be in a proximal state.

[0040]

Herein, the pawl part 32 never performs an arc-shaped movement in the reverse direction in this situation. This results in that the position of the massaging means 17 is steadily kept also when the massaging means 17 is actuated (when air is supplied from a pump etc. so as to perform a massaging operation including an inflation in the case of using airbags as a driving source).

In the case where the massaging means supporting parts 15 are further moved inward in the lateral direction from the state that the pawl part 32 is engaged with the feed tooth 37, the pawl part 32 rides over the feed tooth 37 which has been in the engagement state until then and is brought into engagement with the feed tooth 37 which

is next encountered. By performing like this, the distance between the right and left massaging means supporting parts 15 and 15 (right and left massaging means 17 and 17) is to be narrowed stepwise. This operation can be repeated until the pawl part 32 is engaged with the trailing edge feed tooth 37Z.

[0041]

As shown in Fig. 3, when the pawl part 32 is engaged with the trailing edge feed tooth 37Z, the distance between the right and left massaging means supporting parts 15 and 15 (the right and left massaging means 17 and 17) becomes in the most proximal state (narrow width treatment state). Herein, by increasing the number of the feed teeth 37 to be formed, the width can be adjusted further multi-stepwise. Moreover, by extending the formation region of the feed teeth 37, the mutually proximal distance and mutually separated distance can be extended.

[0042]

As shown in Fig. 4, in the case where the massaging means supporting parts 15 are slightly moved (slightly pushed) inward in the lateral direction from the state that the pawl part 32 is engaged with the trailing edge feed tooth 37Z, the pawl part 32 rides on the release lever 43 so that the engagement with the trailing edge

feed tooth 37Z is released so as to be in a state that the arc-shaped movement in the reverse direction can be performed.

Thus, the massaging means supporting parts 15 can be swung toward the Y direction of the arrow mark in Fig. 6 about the swinging fulcrum 26 as a fulcrum (see Fig. 5), and by performing this swing, the pawl part 32 returns back to the state that the pawl part 32 is engaged with the leading edge feed tooth 37A (see Fig. 1) so that the massaging means supporting parts 15 returns back to the mutually separated state.

[0043]

By the way, the embodiments disclosed here are exemplified ones in every viewpoint and should not be interpreted as limited ones. The scope of the present invention is not defined by the above description but defined by the scope of the claims and it is intended to include meanings of the equivalents of the scope of the claims and all of the modifications within a range of the scope.

For example, in the case of adopting the airbags as the right and left massaging means, the airbags each having a bellows structure in a direction of performing an inflation and deflation or having a single bag structure and the like can be made.

DESCRIPTION OF REFERENCE NUMERALS

[0044]

- 1 ... Chair-type massaging machine
- 2 ... Seat
- 3 ... Backrest part
- 4 ... Side region massaging device
- 5 ... Footrest
- 6 ... Leg body
- 7 ... Armrest part
- 15 ... Massaging means supporting part
- 17 ... Massaging means
- 20 ... Width switching mechanism
- 21 ... Swinging mechanism
- 22 ... Ratchet part
- 25 ... Pivotally supporting base
- 26 ... Swinging fulcrum
- 27 ... Swinging base
- 32 ... Pawl part
- 32a ... Toe
- 32b ... Auxiliary toe
- 32c ... Pawl-furcate part
- 33 ... Rack member
- 35 ... Pawl pivotally supporting part
- 37 ... Feed tooth
- 37A ... Other feed tooth

37Z ... One feed tooth
38 ... Tooth valley
42 ... Reset mechanism
43 ... Release lever
45 ... Leading edge stopper
46 ... Trailing edge stopper

WHAT IS CLAIMED IS:

1. A chair-type massaging machine including a seat and a backrest part provided at a rear portion of the seat, comprising:

a pair of massaging means disposed as opposing to each other on both right and left sides of said backrest part and projecting forward from the backrest part in order to massage side regions of a body of a user, wherein

said paired massaging means are attached to said backrest part via a width switching mechanism freely switching between a mutually separated state and a mutually proximal state while being kept in a state of projecting forward from the backrest part.

2. The chair-type massaging machine according to claim 1, wherein said massaging means is provided with a swinging fulcrum with a shaft core thereof oriented in a vertical direction at a base end side thereof so that the massaging means is configured to swing about said swinging fulcrum.

3. The chair-type massaging machine according to claim 2, wherein said width switching mechanism includes a ratchet part enabling to retain an opposing distance

between both the paired massaging means while being narrowed stepwise at the time of switching the paired massaging means from the mutually separated state to the mutually proximal state, wherein

said ratchet part includes a pawl part that moves as interlocking with a swing about a swinging shaft core of said massaging means and a rack member formed with a plurality of feed teeth fixedly provided on the backrest part and engaged with said pawl part, and wherein

said rack member is provided with a reset mechanism moving the corresponding pawl part from one of the feed teeth engaged with the pawl part to the other feed tooth, thereby returning said paired massaging means from the mutually proximal state to the mutually separated state.

4. The chair-type massaging machine according to any one of claims 1 to 3, wherein said massaging means is provided with an airbag capable of pressurizing a shoulder region or a side part of an arm region of a user.