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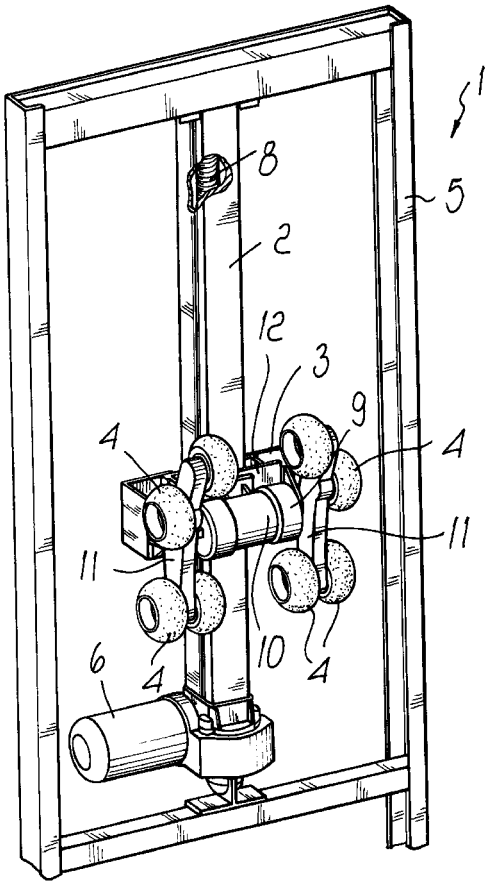
(54) Massage device to be inserted in the back of a massage chair or the like, having a more efficient vertical massage

(57) A massage device to be inserted in the back of a massage chair or the like, comprising a threaded shaft (8) along which a carriage (3) can slide, the carriage (3) being adapted to support a plurality of massage wheels (4) and being actuated along the threaded shaft (8) by a gearmotor (6), and a vibration device (10) which is rigidly coupled to the carriage (3) and is adapted to transmit vibrations to the massage wheels (4) in order to move the massage wheels (4) transversely with respect to the threaded shaft.



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Description

[0001] The present invention relates to a massage device to be inserted in the back of a massage chair or the like, having a more efficient vertical massage.

[0002] It is known that massage devices to be inserted in the back of massage chairs or the like allow to perform a massage in various directions, i.e., a massage in a horizontal direction along the length of the back of the chair, known as stretching massage, a massage in a direction which is transverse with respect to the back of the chair, known as tapping massage, and a massage known as kneading.

[0003] These massages are obtained by way of means for turning appropriate shafts about their respective axes so as to produce the alternating movement of massage wheels in a substantially horizontal and vertical direction.

[0004] Conventional massage devices therefore have a plurality of gearmotors, one for each different actuation of the massage wheels, which are connected, by means of their motor shafts and appropriate lever systems, to the massage wheels, accordingly transmitting thereto the intended motion.

[0005] These devices are the most advanced and refined ones currently commercially available but are of course also the most expensive ones owing to the complexity of their mechanisms.

[0006] These devices, although being exceedingly efficient from the point of view of the type of massage offered, are in fact highly complicated to manufacture and require a plurality of gearmotors in order to be able to perform different massage movements of the massage wheels.

[0007] On the other hand, the stretching massage, i.e., the massage in which the massage wheels supported by an appropriate carriage move along the back of the user, is unsophisticated and insufficient for the massage requirements of users.

[0008] The solution of a single massage of the stretching type, however, entails a significant cost reduction, but as mentioned it does not offer a satisfactory massage quality.

[0009] Massage devices are also known which combine with the single stretching-type massage a control of said type of massage, so as to apply said massage repeatedly to the same point of the back of the user, chosen at will, or so as to have a gradual movement of the massage carriage upward or downward, with the possibility of choosing the entire back or only the lower region or only the middle region or upper region of the user.

[0010] In practice it is possible to control both the duration of the movement of the carriage and the length of its stroke.

[0011] In this regard, reference should be made to European patent application 99123104.4 by the same Applicant, which is assumed included herein by reference.

[0012] Also in this case, however, it is necessary to provide an appropriate electronic circuit for controlling the duration and the stroke of the carriage that supports the massage wheels, with consequent costs.

[0013] The aim of the present invention is to provide a massage device to be inserted in the back of a massage chair or the like, provided exclusively with vertical massage, with an improvement of said massage, such as to make the massage device comparable with more expensive and complicated devices.

[0014] Within the scope of this aim, an object of the present invention is to provide a massage device to be inserted in the back of a massage chair or the like, wherein the vertical massage of the stretching type, despite being achieved with a single gearmotor, is improved so as to make the massage device similar in performance to conventional massage devices having a plurality of gearmotors.

[0015] Another object of the present invention is to provide a massage device to be inserted in the back of a massage chair or the like which is highly compact, so that it is possible to produce thinner backs which accordingly have an attractive aesthetic appearance.

[0016] Another object of the present invention is to provide a massage device to be inserted in the back of a massage chair or the like which fully meets the requirements of users both from the point of view of massage efficiency and from the point of view of costs.

[0017] Another object of the present invention is to provide a massage device to be inserted in the back of a massage chair or the like which is highly reliable, relatively easy to manufacture and at competitive costs.

[0018] This aim, these objects and others which will become apparent hereinafter are achieved by a massage device to be inserted in the back of a massage chair or the like, comprising a threaded shaft along which a carriage can slide, said carriage being adapted to support a plurality of massage wheels and being actuated along said threaded shaft by a gearmotor, characterized in that it is provided with vibrating means which are rigidly coupled to said carriage and are suitable to transmit vibrations to said massage wheels in order to move said massage wheels transversely with respect to said threaded shaft.

[0019] Further characteristics and advantages of the present invention will become apparent from the following detailed description of a preferred but not exclusive embodiment of the device according to the present invention, illustrated by way of non-limitative example in the accompanying drawings, wherein the only figure is a perspective view of the massage device according to the invention.

[0020] With reference therefore to said only figure, the massage device according to the invention, generally designated by the reference number 1. comprises in a conventional manner a threaded shaft 8 which is substantially vertical and supports a carriage or movable

frame 3 so that it can slide along said shaft; said carriage in turn supports massage wheels 4 so that they can rotate about their respective axes.

[0021] More particularly, the threaded shaft 8, which according to requirements can be fixed to a suitable frame, designated by the reference numeral 5, or can be inserted directly in the back of a massage chair or the like and fixed to the supporting structure of the chair, is rotationally actuated by a gearmotor 6 which is meant to produce the translatory motion of the frame or carriage 3 vertically along the threaded shaft 8 in order to produce a massage of the stretching type.

[0022] In the figure, the threaded shaft 8 is inserted in a parallelepipedal protective element 2 which acts as a rail for the sliding of the carriage 3.

[0023] The particularity of the invention resides in the fact that it provides vibrating means 10 which are rigidly connected to the carriage 3 and are suitable to act on the arms 11 that support the massage wheels 4.

[0024] Said vibrating means 10 are appropriately fixed to a plate 12 which is rigidly coupled to the carriage 3. The action of the vibrating means 10 on the arms 11 that support the massage wheels 4 produces a massage which can be defined as being intermediate between stretching and kneading.

[0025] In this manner, by adding a component which has limited costs and dimensions, the massage device according to the invention acquires improved massage characteristics with respect to conventional devices in which only stretching massage is available.

[0026] Conveniently, the vibrating means 10, which act on the arms 11 of the carriage 3 of the massage device according to the invention, are provided with means 9 for adjusting the intensity of the vibrations that can be transferred to the arms 11 of the carriage 3. The vibrating means 10 can be used or not by the user in combination with conventional stretching massage applied by the gearmotor 6, which allows a vertical translatory motion of the carriage 3 along the rail element 2.

[0027] The device according to the invention can also be inserted in backs of chairs which are smaller than the backs provided for massage devices that include arrangements for all possible massage types. In such cases, the presence of a plurality of gearmotors in fact requires the back that must accommodate the devices to have dimensions adapted to contain said devices. In the case of the invention, the presence of a single gearmotor together with the vibrating means 10 instead allows not only to reduce costs considerably in view of the great simplification of the device but also to insert said the device in backs which have a more attractive aesthetic appearance than backs prepared to accommodate conventional massage devices.

[0028] In practice it has been observed that the massage device according to the invention fully achieves the intended aim and objects, since it allows to obtain an improved massage from a low-cost and compact massage device. The device according to the invention therefore can be seen as an improvement of the device provided with a single massage of the stretching type, suitable for users who wish to have a product which is still cheap but has an improved performance with respect to the device capable of performing only the stretching massage.

[0029] The device thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims.

[0030] Thus, as mentioned, the device according to the invention can be provided with means 9 for adjusting both the duration of the stroke and the length of said stroke of the carriage 3, so as to improve the type of massage that can be obtained.

[0031] The vibrating means 10, arranged transversely to the direction of motion of the carriage 3, as shown in the figure, may also be arranged differently, provided that their action is applied to the arms 11 that support the massage wheels 4.

[0032] All the details may also be replaced with other technically equivalent elements. The device may be, for example, provided so as to be inserted in a bed or a sofa.

[0033] In practice, the materials employed, so long as they are compatible with the specific use, as well as the dimensions, as may be any according to requirements and to the state of the art.

[0034] The disclosures in Italian Patent Application No. MI99A000519 from which this application claims priority are incorporated herein by reference.

[0035] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

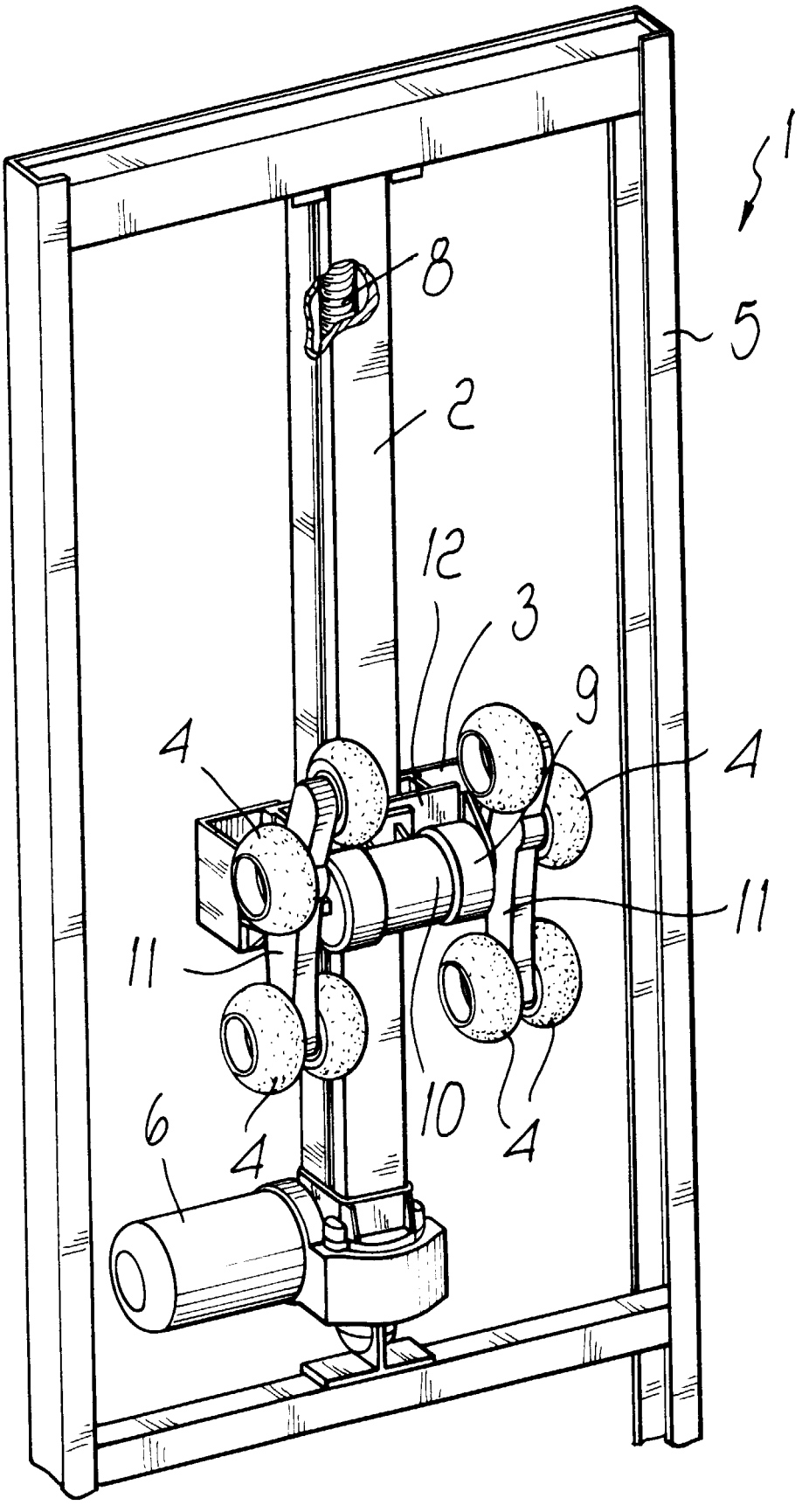
1. A massage device to be inserted in the back of a massage chair or the like, comprising a threaded shaft (8) along which a carriage (3) can slide, said carriage (3) being adapted to support a plurality of massage wheels (4) and being actuated along said threaded shaft (8) by a gearmotor (6), characterized in that it is provided with vibrating means (10) which are rigidly coupled to said carriage (3) and are adapted to transmit vibrations to said massage wheels (4) in order to move said massage wheels (4) transversely with respect to said threaded shaft.

2. The device according to claim 1, characterized in that said threaded shaft is supported by a frame (5) which is suitable to be inserted in the back of a massage chair or the like.

3. The device according to claim 1, characterized in that said vibrating means (10) are connected to a fixing plate (12) which is rigidly coupled to said carriage (3).

4. The device according to claim 1, characterized in that said vibrating means (10) comprise means (9) for adjusting the intensity of the vibrations generated by said vibrating means (10) and transmitted to said massage wheels (4).

5. The device according to claim 1, characterized in that said vibrating means (10) transmit vibrations to arms (11) for supporting said massage wheels (4), said arms being connected to said carriage (3).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