Claims

WHAT IS CLAIMED IS:

1. A vibration motor, comprising a housing (10), a motor (3) provided in the housing (10), a coupler (8) and a vibration assembly, wherein the vibration assembly comprises a rotating shaft (4) and an eccentric block (5) connected with the rotating shaft (4) and eccentrically provided, the rotating shaft (4) and the power output shaft of the motor (3) are coaxially provided and are in transmission connection through a coupler (8); a bearing (6) is fixed on the inner wall of the housing (10), the rotating shaft (4) penetrates into the bearing (6) and is rotatably connected with the bearing (6), and the motor (3) is fixedly provided with the inner wall of the housing (10~~).~~),

wherein the eccentric block (5) is provided with a fitting groove (51) matched with the outer shaft wall of the rotating shaft (4), and the rotating shaft (4) is at least partially embedded in the fitting groove (51);

wherein the eccentric block (5) is in a long block shape, the length direction of the eccentric block is provided in the same direction as the axial direction of the rotating shaft (4), a fixed disk (7) is sleeved on the rotating shaft (4), and the end of the eccentric block (5) in the length direction is detachably connected with the fixed disk (7).

2. The vibration motor according to claim 1, wherein two vibration assemblies are provided at both ends of the motor (3), respectively, and both ends of the motor (3) are provided with a protruding shaft, respectively, which is connected with the two vibration assemblies in one-to-one correspondence.

3. The vibration motor according to claim 1, wherein the eccentric block (5) and the rotating shaft (4) are detachably provided.

~~4. The vibration motor according to claim 1, wherein the eccentric block (5) is provided with a fitting groove (51) matched with the outer shaft wall of the rotating shaft (4), and the rotating shaft (4) is at least partially embedded in the fitting groove (51).~~

~~5. The vibration motor according to claim 1, wherein the eccentric block (5) is in a long block shape, the length direction of the eccentric block is provided in the same direction as the axial direction of the rotating shaft (4), a fixed disk (7) is sleeved on the rotating shaft (4), and the end of the eccentric block (5) in the length direction is detachably connected with the fixed disk (7).~~

~~6~~4. The vibration motor according to claim 1, wherein the motor (3) is erected in the housing (10), and the housing (10) is provided with a heat dissipation hole (11).

~~7~~5. The vibration motor according to claim 1, wherein two bearings (6) are provided in the axial direction of the rotating shaft (4), and the ratio of the distance between two bearings (6) to the size of the motor (3) in the same direction is not less than one half; the eccentric block (5) is in a long block shape, the length direction of the eccentric block is provided in the same direction as the axial direction of the rotating shaft (4), and the ratio of the length of the eccentric block (5) to the distance between two bearings (6) is not less than one third.

~~8~~6. The vibration motor according to claim 1, wherein the eccentric block (5) is cylindrical and sleeved on the rotating shaft (4), and the central axis of the eccentric block (5) is parallel to and spaced from the central axis of the rotating shaft (4).

~~9~~7. A rhythm device, comprising a vibrating plate (9) and a vibration motor according to any one of claims 1-8, wherein the vibrating plate (9) is connected with the vibration motor.

~~10~~8. The rhythm device according to claim ~~9~~7, wherein in the length direction, the vibrating plate (9) comprises a middle connecting section (93) and fin (91) sections located at both ends, the connecting section (93) connects two fin (91) sections and has a width smaller than that of the two fin (91) sections, the vibration motor is provided on the connecting section (93), and the axial direction of the rotating shaft (4) is consistent with the width direction of the vibrating plate (9).

~~11~~9. The rhythm device according to claim ~~10~~8, wherein each fin (91) section is provided with two connected fins (91); the vibrating plate (9) is provided as a fiberboard; and the motor (3) is provided as a brushless motor.

~~12~~10. The rhythm device according to claim 7~~9~~, wherein a connecting plate (14) is provided on the outer wall of the housing (10), and the vibrating plate (9) is attached and connected with the connecting plate (14);

alternatively,

a supporting leg (22) is provided on the housing (10), the supporting leg (22) comprises a connecting rod part (221) and a foot pad part (222) protruding in the radial direction of the connecting rod part (221), and the foot pad part (222) and the vibrating plate (9) are both provided with fixing holes and fixedly connected by bolts.

~~13~~11. The rhythm device according to claim ~~9~~7, further comprising a controller electrically connected with the motor (3), and a wireless communication module for communication and connection with a mobile terminal is provided on the controller.

~~14~~12. A rhythmic mattress, wherein the rhythmic mattress is provided with a mattress body and the rhythmic device according to any one of claims ~~9~~7-~~13~~11, and the vibrating plate (9) of the rhythmic device is connected with the mattress body.

~~15~~13. The rhythmic mattress according to claim ~~14~~12, wherein a waist massage area corresponding to the waist of the human body and a leg massage area corresponding to the lower leg of the human body are provided on the mattress body, and at least one of the rhythmic devices is provided in the waist massage area and the leg massage area, respectively.

~~16~~14. A rhythmic sofa, wherein the rhythmic sofa is provided with a sofa mattress and the rhythmic device according to any one of claims ~~9~~7-~~13~~11, and a vibrating plate of the rhythmic device is connected with the sofa mattress.

~~17~~15. A rhythmic deck chair, wherein the rhythmic deck chair is provided with a chair cushion and the rhythmic device according to any one of claims ~~9~~7-~~13~~11, and a vibrating plate of the rhythmic device is connected with the chair cushion.