WHAT IS CLAIMED IS:

1. A rotation driving mechanism of an air supply apparatus, comprising:

a fixed bracket, wherein the fixed bracket comprises a body portion, the body portion defines a mounting groove, a side wall of the mounting groove has a first through hole;

a rotary bracket, wherein the rotary bracket is sleeved on the fixed bracket and is rotatable with respect to the fixed bracket; and

a driving member, wherein the driving member is provided on the fixed bracket, and the driving member drives the rotary bracket to rotate;

a first transmission member, the rotary bracket being provided with a second transmission member drivingly coordinating with the first transmission member, and the first transmission member being connected to a driving shaft of the driving member, wherein the first transmission member is located in the mounting groove, and the first transmission member drivingly coordinates with the second transmission member via the first through hole;

a damper, wherein the side wall of the mounting groove has a second through hole, the damper is provided on the fixed bracket and is located in the mounting groove, and the damper drivingly coordinates with the second transmission member via the second through hole.

2. The rotation driving mechanism of an air supply apparatus according to claim 1, wherein

the second transmission member is provided on an inner wall surface of the rotary bracket opposite to the fixed bracket.

3. The rotation driving mechanism of an air supply apparatus according to claim 1, wherein

the first transmission member is a gear and the second transmission member is a rack.

4. The rotation driving mechanism of an air supply apparatus according to claim 1, further comprising:

a support bearing, the support bearing being supported between the fixed bracket and the rotary bracket.

5. The rotation driving mechanism of an air supply apparatus according to claim 4, wherein

an outer wall surface of a bottom wall of the mounting groove is provided with a mounting post, an inner ring of the support bearing is sleeved on the mounting post, and an outer ring of the support bearing is connected to the rotary bracket.

6. The rotation driving mechanism of an air supply apparatus according to claim 5, further comprising:

a friction plate, wherein the rotary bracket defines a fitting groove, the bottom wall of the fitting groove is provided with a third through hole, and the friction plate is sleeved on the mounting post and abuts against an outer end of the third through hole.

7. The rotation driving mechanism of an air supply apparatus according to claim 6, further comprising:

a snap spring, wherein a circumferential wall surface of the mounting post is provided with a positioning groove, the snap spring is provided in the positioning groove, and the snap spring abuts an end surface of the friction plate away from the third through hole.

8. The rotation driving mechanism of an air supply apparatus according to claim 1, wherein

an edge of an open end of mounting groove is provided with a first mounting portion and the driving member is provided with a second mounting portion connected to the first mounting portion.

9. The rotation driving mechanism of an air supply apparatus according to claim 8, wherein

the first mounting portion is provided with a first positioning portion and the second mounting portion is provided with a second positioning portion connected to the first positioning portion.

10. The rotation driving mechanism of an air supply apparatus according to claim 1, further comprising:

a Hall assembly, wherein the Hall assembly comprises a hall plate and a magnet, and one of the hall plate and the magnet is provided on the fixed bracket, and the other is provided on the rotary bracket.

11. The rotation driving mechanism of an air supply apparatus according to claim 1, wherein

the fixed bracket is provided with a first limiting structure and the rotary bracket is provided with a second limiting structure coordinating with the first limiting structure in limiting.

12. The rotation driving mechanism of an air supply apparatus according to claim 1, wherein

a central axis of the driving member, a central axis of the fixed bracket, and a central axis of the rotary bracket coincide.

13. The rotation driving mechanism of an air supply apparatus according to claim 1, wherein

a central axis of the fixed bracket and a central axis of the rotary bracket coincide, and a central axis of the driving member and a central axis of the fixed bracket do not coincide.

14. The rotation driving mechanism of an air supply apparatus according to claim 1, wherein

the damper is multiple, the second through hole is multiple, and the multiple dampers correspond to the multiple second through holes in a one-to-one correspondence.

15. The rotation driving mechanism of an air supply apparatus according to claim 1, wherein

the driving member is a driving motor.

16. An air supply apparatus, comprising:

the rotation driving mechanism of an air supply apparatus of any one of claims 1 to 15.

17. An air supply apparatus, comprising:

a first fixed seat;

a second fixed seat, the second fixed seat being connected to a head of the air supply apparatus; and

a rotation driving mechanism, the rotation driving mechanism having a fixed bracket and, a rotary bracket, the fixed bracket being fixedly connected to the first fixed seat, wherein the fixed bracket comprises a body portion, the body portion defines a mounting groove, a side wall of the mounting groove has a first through hole and the rotary bracket being fixedly connected to the second fixed seat, wherein the rotary bracket is sleeved on the fixed bracket,

and the rotation driving mechanism further has a driving assembly, and the driving assembly drives the rotary bracket to rotate around a pitch axis, wherein the driving assembly comprises a driving member, a first transmission member, the rotary bracket being provided with a second transmission member drivingly coordinating with the first transmission member, and the first transmission member being connected to a driving shaft of the driving member, wherein the first transmission member is located in the mounting groove, and the first transmission member drivingly coordinates with the second transmission member via the first through hole, a damper, wherein the side wall of the mounting groove has a second through hole, the damper is provided on the fixed bracket and is located in the mounting groove, and the damper drivingly coordinates with the second transmission member via the second through hole.

18. A household appliance, comprising:

a first fixed seat;

a second fixed seat; and

a rotation driving mechanism, comprising a fixed bracket and a rotary bracket, the fixed bracket being connected to the second fixed seat, wherein the fixed bracket comprises a body portion, the body portion defines a mounting groove, a side wall of the mounting groove has a first through hole and the rotary bracket being connected to the first fixed seat,

wherein the rotary bracket rotates about the fixed bracket to link the first fixed seat to rotate about the second fixed seat and the rotation driving mechanism further has a driving

assembly, wherein the driving assembly comprises a driving member, a first transmission member, the rotary bracket being provided with a second transmission member drivingly coordinating with the first transmission member, and the first transmission member being connected to a driving shaft of the driving member, wherein the first transmission member is located in the mounting groove, and the first transmission member drivingly coordinates with the second transmission member via the first through hole, a damper, wherein the side wall of the mounting groove has a second through hole, the damper is provided on the fixed bracket and is located in the mounting groove, and the damper drivingly coordinates with the second transmission member via the second through hole.