Claims

1. An air supply device, comprising a housing, wherein the housing comprises:
a suction port configured to draw air outside the housing;
a high pressure air generating portion comprising an impeller configured to turn the air into high pressure air and a motor configured to drive the impeller;
a blowout port configured to be a ring opening for blowing out the high pressure air; and
a first air passage configured to guide the high pressure air from the impeller to the blowout port,
wherein the housing further comprises:
a discharge electrode unit configured to generating ions; and
a discharge electrode unit box body arranged inside the first air passage, wherein the discharge electrode unit box body comprises an external ion discharge port configured to allow the ions to flow out toward an outside of the discharge electrode unit box body, a first space enclosing the discharge electrode unit, and a second space configured to allow the ions to flow toward a direction of the external ion discharge port, and the first space is in communication with the second space.

2. The air supply device of claim 1, wherein the external ion discharge port is arranged at an end portion of the second space close to the blowout port, and the external ion discharge port is staggered with the blowout port.

3. The air supply device of claim 2, wherein a plane where the external ion discharge port is located is perpendicular to a plane where the blowout port is located.

4. The air supply device of claim 1, wherein,
the housing is in a spherical shape; and
the discharge electrode unit box body is configured to conform to the spherical shape of the housing and form an arc shape curving toward an inner peripheral side of the housing from an upstream side of the first air

passage to a downstream side of the first air passage.

5. The air supply device of claim 1, wherein a first baffle is arranged at an end of the external ion discharge port close to the blowout port, and the first baffle covers at least a part of the external ion discharge port.

6. The air supply device of claim 5, wherein a notch is arranged at a peripheral edge of the external ion discharge port opposite to the first baffle.

7. The air supply device of claim 1, wherein an internal ion discharge port is arranged at a junction of the first space and the second space.

8. The air supply device of claim 7, wherein a liquid discharge port is arranged at a downstream side of the internal ion discharge port, and a liquid inside the second space is discharged toward the outside of the discharge electrode unit box body through the liquid discharge port.

9. The air supply device of claim 8, wherein a second baffle is arranged at an end of the liquid discharge port close to the internal ion discharge port, and the second baffle extends away from a direction of the internal ion discharge port and tilts toward an inner side of the second space.

10. The air supply device of claim 1, wherein the first space comprises a silencing portion, and a silencing cotton is arranged at an inner peripheral wall of the silencing portion.

11. The air supply device of claim 1, wherein the housing further comprises:

a plurality of induction air suction ports, wherein air is drawn by an induction of the high pressure air blown out from the blowout port;

an induction air mixing portion configured to mix the air drawn into the plurality of induction air suction ports;

an induction air blowout port configured to blow out induction air of the induction air mixing portion; and

a second air passage connecting the induction air suction ports, the induction

air mixing portion and the induction air blowout port.

12. The air supply device of claim 11, wherein,

the housing comprises an outer wall and an inner wall, a penetration wall is formed from an induction air suction port of the induction air suction ports to the induction air mixing portion, and the penetration wall is a peripheral wall of a penetration hole; and

the first air passage is formed by the outer wall, the inner wall and the penetration wall, the second air passage is formed by the inner wall and the penetration wall, and the second air passage and the first air passage intersect at the penetration hole.