What is claimed is:

1. A workpiece supporting apparatus comprising:

a Bernoulli chuck configured to generate a suction force by emitting a gas; and

a liquid ejection member surrounding the Bernoulli chuck and configured to discharge a liquid around the Bernoulli chuck;

wherein the liquid ejection member has a plurality of liquid ejecting openings arranged around the Bernoulli chuck,

the Bernoulli chuck includes a plurality of gas jet openings facing outward in radial directions of the Bernoulli chuck, and the plurality of gas jet openings are arranged to emit a gas radially, and

the plurality of liquid ejecting openings are located on a plurality of straight lines extending from the center of the Bernoulli chuck through the plurality of gas jet openings when viewed from above the liquid ejection member.

2. A workpiece supporting apparatus comprising:

a Bernoulli chuck configured to generate a suction force by emitting a gas; and

a liquid ejection member surrounding the Bernoulli chuck and configured to discharge a liquid around the Bernoulli chuck, wherein the liquid ejection member includes a side wall surrounding the Bernoulli chuck, a bottom portion coupled to the side wall, and an annular liquid ejecting opening facing an outer surface of the Bernoulli chuck, and

the annular liquid ejecting opening is located such that when a liquid is discharged from the annular liquid ejecting opening, the liquid flows from a gap formed between an outer wall of the Bernoulli chuck and the side wall of liquid ejection member outwardly along a surface of the workpiece.

3. The workpiece supporting apparatus according to claim 2, wherein the

annular liquid ejecting opening is located in the bottom portion.

4. The workpiece supporting apparatus according to claim 2, wherein the annular liquid ejecting opening is located in an inner surface of the side wall.

5. A workpiece processing apparatus comprising:

a processing head configured to process a workpiece; and

a workpiece supporting apparatus according to any one of claims 1 to 4, the workpiece supporting apparatus being configured to support the workpiece.

6. The workpiece processing apparatus according to claim 5, wherein

the processing head is configured to bring a polishing tool into contact with the workpiece to polish the workpiece, and wherein

the workpiece processing apparatus comprises a plurality of workpiece supporting apparatuses according to any one of claims 1 to 4, and

the plurality of working supporting apparatuses are arranged along the polishing tool.

7. A workpiece transporting apparatus comprising:

a workpiece supporting apparatus according to any one of claims 1 to 4, the workpiece supporting apparatus being configured to support a workpiece; and

a moving device configured to move the workpiece supporting apparatus.

8. A workpiece supporting method comprising:

supporting a workpiece by flow of gas, while sucking the workpiece by a suction force generated by emitting the gas from a Bernoulli chuck; and

discharging a liquid around the Bernoulli chuck from a liquid ejection member surrounding the Bernoulli chuck, wherein

the liquid flows outward along a surface of the workpiece from a plurality of liquid ejecting openings arranged around the Bernoulli chuck, the gas is emitted radially outwardly from a plurality of gas jet openings of the Bernoulli chuck, and

the plurality of liquid ejecting openings are located on a plurality of straight lines extending from the center of the Bernoulli chuck through the plurality of gas jet openings when viewed from above the liquid ejection member.

9. A workpiece supporting method, comprising:

supporting a workpiece by flow of gas, while sucking the workpiece by a suction force generated by emitting the gas from a Bernoulli chuck; and

discharging a liquid around the Bernoulli chuck from a liquid ejection member surrounding the Bernoulli chuck, wherein

the liquid is discharged from an annular liquid ejecting opening, and flows from a gap between the Bernoulli chuck and the liquid ejection member outwardly along a surface of the workpiece.