CLAIMS

1. A polishing apparatus comprising:

a table for supporting a polishing pad;

a polishing head for holding an object: and

a polishing liquid supply device for supplying a polishing liquid between the polishing pad and the object, wherein

the polishing apparatus is configured to polish the object by bringing the polishing pad into contact with the object in a presence of a polishing liquid and rotationally moving the polishing pad and the object with respect to one another,

the polishing liquid supply device includes: a polishing liquid supply head including a plurality of polishing liquid supply ports; a link mechanism configured to move the polishing liquid supply head along a polishing surface of the polishing pad; and a drive mechanism configured to drive the link mechanism; and

the drive mechanism is configured to drive the link mechanism such that the plurality of polishing liquid supply ports are arranged along a radial direction of the polishing pad in a first state where the polishing liquid supply head is disposed to be opposed to a center side of the polishing pad, and the plurality of polishing liquid supply ports are arranged along a radial direction of the polishing pad in a second state where the polishing liquid supply head is disposed to be opposed to an outer edge side of the polishing pad compared with the first state,

wherein the link mechanism includes a first arm configured to hold the polishing liquid supply head and a second arm coupled to the first arm,

the drive mechanism includes a first rotation mechanism for rotating the first arm so as to turn the polishing liquid supply head along the polishing surface of the polishing pad, and a second rotation mechanism for rotating the second arm so as to turn the first arm, and

the first rotation mechanism and the second rotation mechanism are configured to rotate the first arm and the second arm such that the plurality of polishing liquid supply ports

are arranged along the radial direction of the polishing pad in the first state, and the plurality of polishing liquid supply ports are arranged along the radial direction of the polishing pad in the second state.

2. The polishing apparatus according to claim 1, further comprising

a shaft disposed adjacent to the table and extending in a vertical direction, wherein

the link mechanism further includes a first coupling member configured to rotatably couple the first arm to the second arm, and a second coupling member configured to rotatably couple the second arm to the shaft, and

the first coupling member and the second coupling member are disposed in an outside of the table.

3. The polishing apparatus according to claim 2, wherein

the drive mechanism is configured to drive the link mechanism such that the polishing liquid supply head moves between the first state, the second state, and a third state where the polishing liquid supply head is disposed in the outside of the table.

4. A polishing apparatus comprising:

a table for supporting a polishing pad;

a polishing head for holding an object: and

a polishing liquid supply device for supplying a polishing liquid between the polishing pad and the object, wherein

the polishing apparatus is configured to polish the object by bringing the polishing pad into contact with the object in a presence of a polishing liquid and rotationally moving the polishing pad and the object with respect to one another, and

the polishing liquid supply device includes: a polishing liquid supply head including a plurality of polishing liquid supply ports; an arm that extends along a polishing surface of the polishing pad at a position higher than the polishing liquid supply head and is configured to hold the polishing liquid supply head; and a linear motion drive mechanism configured to linearly move the polishing liquid supply head between a center side and an outer edge side of the polishing pad along a radial direction of the polishing pad in a state where the plurality

of polishing liquid supply ports are arranged to be opposed to the polishing pad along the radial direction of the polishing pad.

5. The polishing apparatus according to claim 4, wherein

the arm includes an arm main body extending along the polishing surface of the polishing pad, and a connecting member configured to connect an upper surface of the polishing liquid supply head and the arm main body,

the linear motion drive mechanism is configured to linearly move the polishing liquid supply head along the radial direction of the polishing pad by moving the connecting member along the arm main body, and

a bottom surface of the arm main body is disposed at a position higher than a bottom surface of the polishing liquid supply head.

6. The polishing apparatus according to claim 5, wherein

the polishing liquid supply device further includes:

a shaft disposed adjacent to the table and extending in a vertical direction; and

a rotation mechanism configured to rotate the arm about the shaft; and

the linear motion drive mechanism is configured to linearly move the polishing liquid supply head such that a distal end of the polishing liquid supply head is disposed at a position farther from the shaft than a distal end of the arm when the polishing liquid supply head is disposed in the center side of the polishing pad.

7. The polishing apparatus according to claim 6, wherein

the polishing liquid supply device further includes a cover for covering the upper surface of the polishing liquid supply head and the arm main body, and

the cover is attached to the polishing liquid supply head, and configured to be movable along the arm main body in association with the linear motion of the polishing liquid supply head, and the cover is configured to cover the upper surface of the polishing liquid supply head and a first part including a distal end of the arm main body when the polishing liquid supply head is disposed in the center side of the polishing pad, and cover the

upper surface of the polishing liquid supply head, the first part of the arm main body, and a second part in a base end side with respect to the first part of the arm main body when the polishing liquid supply head is disposed in an outer edge side of the polishing pad.

8. The polishing apparatus according to any one of claims 1 to 7, further comprising an atomizer configured to supply a cleaning fluid to the polishing pad, wherein

the atomizer includes an atomizer main body disposed to be opposed to the polishing pad, and an inclination mechanism for inclining the atomizer main body such that a distal end of the atomizer main body becomes higher than a base end of the atomizer main body.

9. The polishing apparatus according to claim 8, wherein

the inclination mechanism includes a link mechanism connected to the atomizer main body, and a drive mechanism for inclining the atomizer main body by driving the link mechanism.

10. The polishing apparatus according to claim 9, wherein

the atomizer main body includes a flow passage extending from the base end to a proximity of the distal end of the atomizer main body, and is provided with a plurality of holes through which a bottom surface of the atomizer main body is communicated with the flow passage, and

the bottom surface of the atomizer main body is provided with a groove through which the plurality of holes are mutually communicated and communicated with the base end of the atomizer main body.