WHAT IS CLAIMED IS:

1. A cleaning nozzle that cleans a cleaning target face that is one of a holding face that holds a workpiece and/or a surface of the workpiece held on the holding face, the cleaning nozzle comprising:

an air nozzle having a jet port for jetting air toward the cleaning target face and extending in a direction parallel to the cleaning target face; and

a suction nozzle having a suction port for sucking air on the cleaning target face and arranged adjacent to and in parallel to the air nozzle,

wherein the air nozzle has electrode needles extending from an air space toward the jet port;

a high voltage power supply is connected to the electrode needles; and

the air nozzle jets ionized air from the jet port.

2. The cleaning nozzle according to claim 1, wherein

the suction port has an inclined inner wall configured for sucking air existing on the air nozzle side.

3. A cleaning method for cleaning a cleaning

target face that is one of a holding face for holding a workpiece and/or a surface of the workpiece held on the holding face, by using a cleaning nozzle,

the cleaning nozzle including

an air nozzle having a jet port for jetting air toward the cleaning target face and extending in a direction parallel to the cleaning target face, and

a suction nozzle having a suction port for sucking air existing on the cleaning target face and arranged adjacent to and in parallel to the air nozzle,

wherein the air nozzle has electrode needles extending from an air space toward the jet port, and

a high voltage power supply is connected to the electrode needles,

the cleaning method comprising:

a placement step of placing the cleaning nozzle above the cleaning target face in parallel to the cleaning target face with a gap left therebetween; and

a cleaning step of jetting, while relatively moving the cleaning nozzle placed by the placement step and the cleaning target face in an X-axis direction, parallel to the cleaning target face and besides crossing with an extension direction of the cleaning nozzle, air from the jet port and sucking the air reflected by the cleaning

target face through the suction port to clean the cleaning target face,

wherein a voltage is applied to the electrode needles of the air nozzle such that the air nozzle jets ionized air from the jet port.

4. The cleaning method according to claim 3, wherein

the suction port has an inclined inner wall configured for sucking air existing on the air nozzle side.

5. The cleaning method according to claim 3, wherein,

in the cleaning step, the suction port of the suction nozzle is arranged on an upstream side with respect to the jet port of the air nozzle in a direction of the movement of the cleaning target face with respect to the cleaning nozzle.