Claims

1. A plating apparatus comprising:

a plating section for plating a substrate;

a substrate holder for holding the substrate;

an anode holder disposed opposite the substrate and configured to hold an anode;

a holder transporter for holding and transporting the substrate holder and the anode holder;

a stocker for storing the substrate holder and the anode holder therein; and

a stocker setting section for storing the stocker therein;

wherein the stocker includes a moving mechanism for allowing the stocker to move into and out of the plating apparatus, and

wherein the stocker setting section includes:

a door which is openable and closable; and

a shutter which is openable and closable for isolating an atmosphere in the stocker setting section and an atmosphere in the plating apparatus from each other when the door is open.

2. A plating apparatus according to claim 1, wherein the moving mechanism includes a caster for allowing the stocker to move until the stocker is separated from the plating apparatus.

3. A plating apparatus according to claim 1, wherein the holder transporter includes a sensor for detecting whether the substrate holder is present in the stocker or not, and/or detecting the position of the substrate holder in the stocker.

4. A plating apparatus according to claim 1, further comprising:

a controller for monitoring and controlling statuses of the holder transporter and the stocker setting section; and

an indicating section for indicating, to the controller, a movement of the stocker.

5. A plating apparatus according to claim 1, wherein the stocker includes a latch handle for locking the stocker in the stocker setting section, and the stocker setting section includes a latch receiver for engaging the latch handle.

6. A plating apparatus according to claim 1, wherein the stocker setting section includes a door switch for limiting opening of the door and a shutter switch for limiting opening of the shutter, wherein the door switch and the shutter switch work with each other.

7. A plating method using a plating apparatus which can work automatically, the method comprising:

removing an anode holder from a stocker;

holding an anode with the anode holder;

transporting the anode holder, which is holding the anode, to a plating section by a holder transporter;

plating a substrate in the plating section;

transporting the anode holder back to the stocker by the holder transporter;

enabling the stocker to move out of the plating apparatus by a moving mechanism of the stocker while the plating apparatus is automatically working;

closing a shutter to isolate an interior of the plating apparatus from ambient air before the stocker is moved out of the plating apparatus; and

opening the shutter to allow the holder transporter to access the stocker after the stocker has been moved into the plating apparatus.

8. A plating method according to claim 7, wherein the stocker includes a caster, and the stocker is separated from the plating apparatus when the stocker is moved by the caster.

9. A plating method according to claim 7, further comprising:

indicating, to a controller of the plating apparatus, a movement of the stocker out of the plating apparatus before the stocker is moved out of the plating apparatus while the plating apparatus is automatically working.

10. A plating apparatus comprising:

a substrate holder for holding a substrate;

an anode holder for holding an anode;

a table on which the substrate is placed in and taken out from the substrate holder;

a stocker for storing the substrate holder and the anode holder therein;

a stocker setting section for storing the stocker therein;

a plating section located between the table and the stocker setting section for plating the substrate; and

a holder transporter for transporting the substrate holder and the anode holder between the table and the stocker,

wherein the stocker includes a moving mechanism for allowing the stocker to move into and out of the plating apparatus.

11. A plating apparatus comprising:

a plating section for plating a substrate;

a substrate holder for holding the substrate;

an anode holder disposed opposite the substrate and configured to hold an anode;

a holder transporter for holding and transporting the substrate holder and the anode holder;

a stocker for storing the substrate holder and the anode holder therein; and

a stocker setting section for storing the stocker therein;

wherein the stocker includes a moving mechanism for allowing the stocker to move into and out of the plating apparatus,

the stocker setting section includes a guide rail for adjusting a position and support columns for adjusting a height of the stocker, and

the stocker includes, in addition to the moving mechanism, a roller to be brought into contact with the guide rail to limit a moving direction of the stocker.