[CLAIMS]

[Claim 1]

A diaphragm valve, comprising:

a body with a flow path;

a stem;

a diaphragm;

a diaphragm depressor which is attached to the lower end of said stem; and

a connecting member which connects said diaphragm and said diaphragm depressor,

the diaphragm valve being able to open and close shutting off the flow path by deformation of the diaphragm,

wherein said connecting member has a rod-shaped part to be connected to said diaphragm depressor and a flange part which is radially protruding in a circular shape at the lower end of said connecting member and having at least one notch on the outer peripheral edge, and said rod-shaped part has a radially concaved constriction part above said flange part, and

wherein said flange part and said constriction part are embedded in the central part of said diaphragm, and wherein said flange part is formed at a lower end of said rod-shaped part.

[Claim 2]

The diaphragm valve of claim 1, wherein the outer diameter of said flange part is φ7.2-φ7.7 mm.

[Claim 3]

The diaphragm valve of claim 1 or 2, wherein said notch has a semi-circular shape.

[Claim 4]

The diaphragm valve of any one of claim 1 to 3, wherein said flange part has a shape where the central part of its lower surface bulges downward.

[Claim 5]

The diaphragm valve of any one of claim 1 to 4, wherein said constriction part is embedded in the central part of the diaphragm up to the upper part of said constriction part.

[Claim 6]

A diaphragm valve, comprising:

a body with a flow path;

a stem moveable up and down relative to said body;

a diaphragm which opens and closes the flow path in synchronization with the up-and-down movement of said stem;

a diaphragm depressor which is attached to the lower end of said stem and presses said diaphragm downward; and

a connecting member which connects the central part of said diaphragm to the lower part of said diaphragm depressor,

wherein said connecting member has a vertically placed rod-shaped part whose upper part is fixed to said diaphragm depressor and a flange part which is provided at the lower end of the rod-shaped part and protrudes radially outward of the outer peripheral surface of the rod-shaped part,

wherein the upper part of said flange part at the lower end of said rod-shaped part has a constriction part concaved radially inward,

wherein the outer peripheral edge of said flange part has at least one notch,

wherein the lower end of the rod-shaped part and said flange part of said connecting member are embedded in the central part of said diaphragm, and

wherein a component of the central part of the diaphragm is configured to cover both the upper and lower surfaces of the flange part by entering inside said constriction part of said rod-shaped part and said notch(es) of said flange part.

[Claim 7]

The diaphragm valve of claim 6, wherein the outer diameter of said flange part is φ7.2-φ7.7 mm.

[Claim 8]

The diaphragm valve of claim 6 or 7, wherein said notch has a semi-circular shape.

[Claim 9]

The diaphragm valve of any one of claim 6 to 8, wherein said flange part has a shape where the central part of its lower surface bulges downward.

[Claim 10]

The diaphragm valve of any one of claim 6 to 9, wherein the component of the central part of said diaphragm is configured to cover the upper part of said constriction part of said rod-shaped part.