CLAIMS

1. A seal structure for a flow-path connection part including a pair of flanges arranged to face each other, the seal structure comprising:

a gasket having protrusions provided symmetrically on front and back sides of the gasket at an outer periphery thereof or near the outer periphery; and

the flanges each having a receiving groove provided annularly in a connected surface thereof,

wherein the receiving groove is wider than the protrusion and has an arc-shaped deepest portion against which a top portion of the protrusion abuts, and

the top portion of the protrusion has a curved surface formed such that the curvature of the top portion is greater than or equal to the curvature of the deepest portion of the receiving groove,

wherein a curved surface that forms the arc-shaped deepest portion within the receiving groove being less than a curved surface that forms the entire receiving groove provided in the connected surface, the curved surface of the protrusion abuts less than the entire curved surface of the receiving groove.

2. The seal structure for the flow-path connection part according to Claim 1, wherein an inner diameter of the gasket becomes equal to an inner diameter of the flange when an inner portion of the protrusion of the gasket is pressed between the connected surfaces of the flanges.

3. The seal structure for the flow-path connection part according to Claim 1, wherein the pair of flanges include an engagement portion on outer peripheral side of the receiving grooves.

4. The seal structure for the flow-path connection part according to Claim 1, wherein the receiving groove has an inner surface defining an outer region of the receiving groove, the inner surface being abutted against an outer peripheral surface of the gasket and being a surface parallel to a center axis.

5. A liquid ejection device including the seal structure for the flow-path connection part according to Claim 1.

6. A liquid storage container including the seal structure for the flow-path connection part according to Claim 1.

7. A seal structure and a flow-path connection part including a pair of flanges arranged to face each other, the seal structure comprising:

a gasket having a flat portion and a protrusion provided symmetrically on front and back sides of the gasket at an outer periphery thereof or near the outer periphery; and

the flanges each having a receiving groove provided annularly in a connected surface thereof,

wherein the receiving groove is wider than the protrusion and has an arc-shaped deepest portion against which a top portion of the protrusion abuts,

the top portion of the protrusion has a curved surface formed such that the curvature of the top portion is greater than the curvature of the deepest portion of the receiving groove, and that a height of the protrusion is greater than a depth of the receiving groove,

wherein a sectional shape of the top portion of the protrusion is semicircular or semi-elliptic; the receiving groove has a semicircular or semi-elliptic sectional shape,

so that when the flanges are approached to each other in a facing state of the receiving grooves, where the gasket is fitted into the receiving grooves in not-centered relation, each protrusion undergoes a force acting in a direction toward the deepest portion, and movement of the gasket is stopped upon the protrusion reaching the deepest portion and respective centers of the gasket and the flanges being aligned with each other, and

when the flanges are connected, where the flat portion are collapsed by center side ends of the flanges, the gasket is press-contacted with the flanges at the deepest portion and the center side end, while leaving a play space in the receiving grooves.

8. The seal structure and the flow-path connection part according to claim 7, wherein a penetration hole is formed in a central region of the flat portion with a diameter set slightly greater than an inner diameter of the flow path so that an inner diameter of the gasket becomes equal to an inner diameter of the flange when an inner portion of the protrusion of the gasket is pressed between the connected surfaces of the flanges.

9. The seal structure and the flow-path connection part according to claim 7, wherein the pair of flanges include projected portions formed at

the outer peripheral side of the receiving grooves to provide an engagement portion on outer peripheral side of the receiving grooves.

10. The seal structure and the flow-path connection part according to claim 7, wherein the receiving groove has an inner surface defining an outer region of the receiving groove as a surface parallel to the center axes, the inner surface being abutted against an outer peripheral surface of the gasket and being a surface parallel to a center axis of the seal structure and the flow-path connection part.

11. The seal structure and the flow-path connection part according to claim 7, wherein the gasket is made of rubber using silicone, PTFE, or nitrile as raw material.

12. A liquid ejection device including the seal structure and the flow-path connection part according to claim 7.

13. A liquid storage container including the seal structure and the flow-path connection part according to claim 7.