CLAIMS

1. A top ring of a polishing apparatus, comprising:

a top ring main body having a substrate support surface supporting an upper surface of a substrate;

a retainer member disposed so as to surround an outer periphery of the substrate support surface to hold an outer edge of the substrate;

a pressing mechanism disposed above the retainer member and configured to press the retainer member downward; and

a band disposed extending from an outer peripheral wall of the retainer member to an outer peripheral wall of the pressing mechanism, the band having at least one fitting portion, wherein

at least one of the outer peripheral wall of the retainer member and the outer peripheral wall of the pressing mechanism is provided with a groove in which the fitting portion of the band is fitted,

the groove is a dovetail groove configured to have a groove opening, a groove bottom opposed to the groove opening, a first groove side wall connecting the groove opening to the groove bottom, and a second groove side wall connecting the groove opening to the groove bottom and opposed to the first groove side wall, in cross-sectional view, and the dovetail groove is configured such that an interval between the first groove side wall and the second groove side wall widens as the interval approaches the groove bottom, and

the fitting portion is configured to be in contact with the first groove side wall and the second groove side wall in a state where the fitting portion of the band is fitted in the dovetail groove.

2. The top ring of the polishing apparatus according to claim 1, wherein

the fitting portion of the band has a first projecting portion in contact with the first groove side wall and a second projecting portion in contact with the second groove side wall, and

a V-shaped groove in a cross-sectionally V shape is provided between the first projecting portion and the second projecting portion.

3. The top ring of the polishing apparatus according to claim 1, wherein

a part of the band is provided with an expansion and contraction portion expandable and contractable in a vertical direction.

4. The top ring of the polishing apparatus according to claim 1, wherein

the groove is provided only on any one of the outer peripheral wall of the retainer member and the outer peripheral wall of the pressing mechanism.

5. The top ring of the polishing apparatus according to claim 1, wherein

the groove is provided on both the outer peripheral wall of the retainer member and the outer peripheral wall of the pressing mechanism.

6. The top ring of the polishing apparatus according to claim 1, wherein

the groove is provided only on the outer peripheral wall of the retainer member among the outer peripheral wall of the retainer member and the outer peripheral wall of the pressing mechanism,

the top ring main body has an upper side member disposed so as to cover an upper portion of the pressing mechanism,

one end portion of both end portions of the band is sandwiched between the upper side member and the pressing mechanism, and

the fitting portion of the band is disposed on another end portion of the band.

7. The top ring of the polishing apparatus according to claim 1, wherein

the groove opening is provided with a depressed portion for a processing tool for processing the groove to pass through when the processing tool is inserted from the groove opening into the groove.

8. The top ring of the polishing apparatus according to claim 1, wherein

the substrate is a polygonal substrate.

9. A top ring of a polishing apparatus, comprising:

a top ring main body having a substrate support surface supporting an upper surface

of a substrate;

a retainer member disposed so as to surround an outer periphery of the substrate support surface to hold an outer edge of the substrate;

a pressing mechanism disposed above the retainer member and configured to press the retainer member downward; and

a band disposed extending from an outer peripheral wall of the retainer member to an outer peripheral wall of the pressing mechanism, the band having a fitting portion, wherein

the outer peripheral wall of the retainer member is provided with a groove in which the fitting portion of the band is fitted,

the top ring main body has an upper side member disposed so as to cover an upper portion of the pressing mechanism,

one end portion of both end portions of the band is sandwiched between the upper side member and the pressing mechanism, and

the fitting portion of the band is disposed on another end portion of the band.

10. A polishing apparatus comprising:

the top ring according to claim 1; and

a polishing table configured to hold a polishing pad for polishing the substrate held by the top ring.

11. The top ring of the polishing device according to claim 2, wherein a gap is provided between the groove bottom and the fitting portion when the fitting portion is fitted in the dovetail groove.

12. The top ring of the polishing apparatus according to claim 6, wherein the one end portion sandwiched between the upper side member and the pressing mechanism is configured to cover an entire top surface of the pressing mechanism.

13. The top ring of the polishing apparatus according to claim 7, wherein

a first positioning mark is provided on an outer peripheral wall of the top ring body,

a second positioning mark is provided on an outer peripheral wall of the retainer

member,

the depressed portion of the groove opening, the first positioning mark, and the second positioning mark are arranged so as to align in a vertical direction.