What is claimed is:

1. A polishing apparatus comprising:

a head body having a substrate holding surface configured to press a substrate against a polishing surface while rotating the substrate;

a retainer ring surrounding the substrate holding surface and configured to press the polishing surface while rotating together with the head body;

a stationary ring disposed above the retainer ring, the stationary ring being not rotatable together with the retainer ring; and

a local-load exerting device configured to apply a local load to a part of the retainer ring through the stationary ring, the local-load exerting device having a load transmission structure coupled to the stationary ring, the load transmission structure including a mechanism which permits a relative inclination between the local-load exerting device and the retainer ring;

wherein the mechanism is a tiltable coupling.

2. The polishing apparatus according to claim 1, wherein the tiltable coupling can tilt only in a direction tangential to the retainer ring at a location where the load transmission structure is coupled to the stationary ring.

3. The polishing apparatus according to claim 2, wherein the load transmission structure includes:

a pressing member coupled to the stationary ring; and

the tiltable coupling fixed to the pressing member.

4. The polishing apparatus according to claim 1, wherein the tiltable coupling is configured to be able to tilt in multiple directions.

5. The polishing apparatus according to claim 4, wherein the load transmission

structure includes:

two push rods for transmitting the local load; and

two spherical bearings which tiltably support the two push rods, respectively, the tiltable coupling comprising the two spherical bearings.

6. The polishing apparatus according to claim 5, wherein the two spherical bearings include:

two bearing housings; and

two projections which are in point contact with the two bearing housings, respectively.

7. The polishing apparatus according to claim 1, wherein the load transmission structure further includes a vibration absorber.

8. The polishing apparatus according to claim 7, wherein the vibration absorber comprises a spring.

9. The polishing apparatus according to claim 7, wherein the vibration absorber is made of rubber.

10. The polishing apparatus according to claim 1, wherein the load transmission structure includes two push rods for transmitting the local load,

the local-load exerting device includes:

a load generator; and

a bridge to which the load generator and both of the two push rods are coupled.

11. The polishing apparatus according to claim 10, wherein the local-load

exerting device further includes:

a guide rod coupled to the bridge; and

a linear guide slidably supporting the guide rod.

12. The polishing apparatus according to claim 1, wherein the local-load exerting device is not rotatable together with the retainer ring.

13. The polishing apparatus according to claim 1, wherein the tiltable coupling includes an upper coupling member, a lower coupling member, and a pivot shaft which rotatably couples the upper coupling member to the lower coupling member.