Claims

1. A device for treating a disc-like article with a fluid, the device comprising:

dispensing means for dispensing a fluid onto the disc-like article and a chuck for holding and rotating a disc-like article about an axis A perpendicular to the disc-like article, the chuck comprising a base body, a drive ring, and gripping members for contacting the disc-like article at its edge,

wherein the gripping members are eccentrically movable with respect to the centre of the disc-like article,

wherein the eccentric movement of the gripping members is driven by a drive ring,

wherein the drive ring is ~~rotatable~~ rotatably mounted to the base body, so that the drive ring is rotatable against the base body around the axis A and thereby driving the gripping members,

wherein the relative rotational movement of the drive ring against the base body is carried out by either holding the base body and rotating the drive ring or by holding the drive ring and rotating the base body, whereby the to-be-held-part (drive ring or base body) is held without touching the respective to-be-held-part by magnetic force, and

wherein the drive ring is a gear ring and the gripping members are cams eccentrically mounted to smaller gears (eccentric with respect to the rotation axis of the smaller gears), which are driven by the gear ring.

2. ~~A~~ The device according to claim 1, wherein the to-be-rotated part (base body or driving ring respectively) is rotated by magnetic force without touching the respective to be rotated part.

3. ~~A~~ The device according to claim 1, wherein the base body is formed as a hollow ring with an annular chamber and where the drive ring is accommodated within the annular chamber.

4. ~~A~~ The device according to claim 1, wherein the chuck is freely levitated by a magnetic bearing.

5. ~~A~~ The device according to claim 1, wherein the chuck is levitated and rotated by a driving mechanism selected from the group of active magnetic bearing and a bearing supported by high temperature superconducting magnets.

~~A device according to claim 1, wherein the drive ring is a gear ring and the gripping members are cams eccentrically mounted to smaller gears (eccentric with respect to the rotation axis of the smaller gears), which are driven by the gear ring.~~

~~A device according to claim 1, wherein the drive ring is held in standby position by an elastic member, whereby the gripping members are urged into closed position.~~

6. ~~A~~ The device according to claim 1, ~~wherein the device further comprises~~ further comprising:

a wall surrounding the chuck and during treating the disc-like article the chuck is freely levitated within the wall.

7. ~~A~~ The device according to claim ~~1~~ 6, wherein the wall surrounding the chuck is part of a closed chamber.

8. ~~A~~ The device according to claim 1, wherein dispensing means are provided for unobstructed dispensing of fluids onto both sides of the disc-like article.

9. A device for treating a disc-like article with a fluid, the device comprising:

dispensing means for dispensing a fluid onto the disc-like article and a chuck for holding and rotating a disc-like article about an axis A perpendicular to the disc-like article, the chuck comprising a base body, a drive ring, and gripping members for contacting the disc-like article at its edge,

wherein the gripping members are eccentrically movable with respect to the centre of the disc-like article,

wherein the eccentric movement of the gripping members is driven by a drive ring,

wherein the drive ring is rotatably mounted to the base body, so that the drive ring is rotatable against the base body around the axis A and thereby driving the gripping members,

wherein the relative rotational movement of the drive ring against the base body is carried out by either holding the base body and rotating the drive ring or by holding the drive ring and rotating the base body, whereby the to-be-held-part (drive ring or base body) is held without touching the respective to-be-held-part by magnetic force, and

wherein the drive ring is held in standby position by an elastic member, whereby the gripping members are urged into a closed position.

10. The device according to claim 9, wherein the to-be-rotated part (base body or driving ring respectively) is rotated by magnetic force without touching the respective to be rotated part.

11. The device according to claim 9, wherein the base body is formed as a hollow ring with an annular chamber and where the drive ring is accommodated within the annular chamber.

12. The device according to claim 9, wherein the chuck is freely levitated by a magnetic bearing.

13. The device according to claim 9, wherein the chuck is levitated and rotated by a driving mechanism selected from the group of active magnetic bearing and a bearing supported by high temperature superconducting magnets.

14. The device according to claim 9, further comprising: a wall surrounding the chuck and during treating the disc-like article the chuck is freely levitated within the wall.

15. The device according to claim 14, wherein the wall surrounding the chuck is part of a closed chamber.

16. The device according to claim 9, wherein dispensing means are provided for unobstructed dispensing of fluids onto both sides of the disc-like article.