WHAT IS CLAIMED IS:

1. A blade replacement mechanism comprising:

a first chucking portion configured to suction and chuck a blade;

a second chucking portion located inside the first chucking portion and configured to chuck a flange or a hub independently of the chucking by the first chucking portion; and

a detachable attachment member rotating portion located inside the second chucking portion and configured to be capable of rotating a detachable attachment member allowing the blade to be detachably attached to a spindle.

2. The blade replacement mechanism according to claim 1, wherein the detachable attachment member is a nut.

3. The blade replacement mechanism according to claim 1 or 2, further comprising an arm portion, wherein the arm portion is attached to a chucking unit including the first chucking portion, the second chucking portion, and the detachable attachment member rotating portion.

4. The blade replacement mechanism according to claim 3, further comprising an accommodation portion capable of accommodating a replacement blade.

5. The blade replacement mechanism according to claim 4, further comprising a movement mechanism configured to be capable of moving the chucking unit between a first operational position allowing the blade to be attached and detached and a second operational position allowing the replacement blade to be ejected from the accommodation portion.

6. The blade replacement mechanism according to claim 5, wherein the

movement mechanism includes a first slide mechanism configured to be capable of moving the chucking unit in a first direction, a second slide mechanism configured to be capable of moving the chucking unit in a second direction intersecting the first direction, and a rotation mechanism configured to be capable of rotating the chucking unit.

7. The blade replacement mechanism according to claim 6, wherein the rotation mechanism includes a first rotation mechanism configured to be capable of rotating the chucking unit in a first imaginary plane, and a second rotation mechanism configured to be capable of rotating the chucking unit in a second imaginary plane different from the first imaginary plane.

8. The blade replacement mechanism according to any one of claims 1 to 7, further comprising a detection unit configured to be capable of detecting at least one of abrasion and damage of the blade.

9. A cutting apparatus comprising a blade replacement mechanism according to any one of claims 1 to 8, the blade, and the spindle.

10. A blade replacement method employing a blade replacement mechanism comprising: a first chucking portion configured to suction and chuck a blade; a second chucking portion located inside the first chucking portion and configured to chuck a flange or a hub independently of the chucking by the first chucking portion; and a detachable attachment member rotating portion located inside the second chucking portion and configured to be capable of rotating a detachable attachment member allowing the blade to be detachably attached to a spindle, the method comprising the steps of:

suctioning and chucking the blade by the first chucking portion and also chucking the flange or the hub by the second chucking portion independently of

chucking by the first chucking portion, and, in that condition, rotating the detachable attachment member by the detachable attachment member rotating portion to remove the detachable attachment member from the spindle;

moving a chucking unit including the first chucking portion, the second chucking portion, and the detachable attachment member rotating portion to an accommodation portion;

releasing the suctioning and the chucking by the first chucking portion, and accommodating the blade in the accommodation portion;

suctioning and chucking by the first chucking portion a replacement blade accommodated in the accommodation portion;

moving the chucking unit to fit the replacement blade to the spindle; and

rotating the detachable attachment member by the detachable attachment member rotating portion to fix the replacement blade to the spindle.

11. The method according to claim 10, further comprising the step of detecting at least one of abrasion and damage of the blade.