WHAT IS CLAIMED IS:

1. A grinding apparatus comprising:

a holding table that holds a workpiece; and

a grinding unit including a spindle and a grinding wheel that is mounted to the spindle and that grinds the workpiece held by the holding table,

wherein the grinding wheel has a grindstone formed by binding abrasive grains with a bonding agent, and

the grinding apparatus further comprises:

a grinding water supply unit that supplies grinding water to at least the grindstone when the workpiece held by the holding table is ground by the grinding unit;

a light applying unit that is disposed adjacent to the holding table and that applies light to a grinding surface of the grindstone grinding the workpiece held by the holding table; and

a light applying unit moving section by which the light applying unit can be positioned at a first position on a first rotational trajectory of the grinding wheel mounted on the spindle in the case where the grinding wheel has a first diameter and a second position on a second rotational trajectory of the grinding wheel in the case where the grinding wheel has a second diameter.

2. The grinding apparatus according to claim 1,

wherein the grindstone has the abrasive grains and photocatalyst grains bound by the bonding agent, and

the light applying unit applies the light that excites the photocatalyst grains.

3. The grinding apparatus according to claim 1, wherein the bonding agent is a vitrified bond.

4. The grinding apparatus according to claim 2, wherein the bonding agent is a vitrified bond.