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; and

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

the light applying unit includes a light emission section that emits light, ~~and~~ a diffusion preventive wall that surrounds the light emission section and that prevents diffusion of the light and a cleaning water supply section for supplying cleaning water to remove dirt in the light supplying unit.

2. The grinding apparatus according to claim 1,

wherein the light applying unit is disposed on a

rotational trajectory of the grinding wheel in such a manner as to face the grinding surface of the grindstone, and

the diffusion preventive wall is formed with an entrance section through which the grinding wheel enters and an exit section through which the grinding wheel exits.

3. 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.

4. The grinding apparatus according to claim 2,

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.

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

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

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

8. The grinding apparatus according to claim 4,

wherein the bonding agent is a vitrified bond.

9. The grinding apparatus according to claim 1, wherein the light applying unit further includes a cover provided over the light emission section, and the cleaning water supply section jets cleaning water onto the cover to remove dirt formed on the cover.

10. The grinding apparatus according to claim 1, wherein the light applying unit is disposed on an immediately upstream side of a position at which the grindstones make contact with the workpiece.