WHAT IS CLAIMED IS:

1. A porous chuck table for holding a ~~plate-like~~ workpiece under suction, comprising:

a porous plate having a porous structure, the porous plate having a holding surface for holding the workpiece under suction thereon; and

a frame surrounding the porous plate and having a face side lying flush with the holding surface,

wherein the porous plate is completely ~~at least~~ made of spherical glass particles, and further wherein adjacent ones of the glass particles are partly joined together, and interstices between adjacent ones of the partly joined glass particles function as pores through which a fluid flows.

2. The porous chuck table according to claim 1, wherein the holding surface of the porous plate is flat.

3. The porous chuck table according to claim 1, wherein the glass particles have particle diameters selected in a predetermined range from 3 μm to 4 mm.

4. The porous chuck table according to claim 1, wherein the frame is made of glass.

5. The porous chuck table according to claim 1, wherein porosity of the porous plate represented by a ratio of a volume of the pores to the volume of the

porous plate is in a range from 5% to 40%.

6. The porous chuck table according to claim 1, wherein the glass particles are made of a material that is capable of being sintered at a temperature between 700°C. and 800°C.~~A method of manufacturing a porous chuck table, comprising the steps of:~~

~~filling a mold frame with spherical glass particles having particle diameters selected in a predetermined range from 3 μm to 4 mm;~~

~~sintering the glass particles that have filled the mold frame to partly join adjacent ones of the glass particles together, thereby producing a porous plate; and~~

~~grinding a face side of the porous plate fixedly fitted in a frame which is of a shape surrounding the porous plate, together with a face side of the frame, thereby planarizing the face side of the porous plate,~~

~~wherein the step of sintering the glass particles is finished while interstices are being left between the glass particles in the porous plate, so that the interstices function as pores through which a fluid flows.~~

7. A processing apparatus comprising:

a porous chuck table including

a porous plate having a porous structure, the porous plate having a holding surface for holding a

workpiece under suction thereon, and a frame surrounding the porous plate and having a face side lying flush with the holding surface, and

the porous plate is completely made of spherical glass particles, and further wherein adjacent ones of the glass particles are partly joined together, and interstices between adjacent ones of the partly joined glass particles function as pores through which a fluid flows, and

a processing unit processing the workpiece held on the porous chuck table.~~The method according to claim 6,~~

~~wherein in the step of sintering the glass particles, porosity of the porous plate represented by a ratio of a volume of the pores to the volume of the porous plate is adjusted by at least one of sintering temperature, sintering time, and pressure applied to the glass particles.~~

8. The processing apparatus according to claim 7, wherein the processing unit is a cutting unit cutting the workpiece held on the porous chuck table with a cutting blade.~~method according to claim 6, wherein~~

~~the step of filling the mold frame includes the step of filling the mold frame with a mixture of the glass~~

~~particles and frit smaller in diameter than the glass particles.~~

9. ~~A~~The processing apparatus according to claim 7, wherein the processing unit is a laser beam applying unit applying a laser beam to the workpiece held on the porous chuck table to process the workpiece. ~~comprising:~~

~~a porous chuck table including~~

~~a porous plate having a porous structure, the porous plate having a holding surface for holding a workpiece under suction thereon, and a frame surrounding the porous plate and having a face side lying flush with the holding surface, and~~

~~the porous plate is at least made of spherical glass particles, adjacent ones of the glass particles are partly joined together, and interstices between adjacent ones of the partly joined glass particles function as pores through which a fluid flows, and~~

~~a processing unit processing the workpiece held on the porous chuck table.~~

10. The processing apparatus according to claim 7~~9~~, wherein the processing unit is a grinding unit grinding the workpiece held on the porous chuck table with a grinding stone. ~~wherein~~

~~the processing unit is a cutting unit cutting the workpiece held on the porous chuck table with a cutting blade.~~

11. A porous chuck table for holding a workpiece under suction, comprising:

a porous plate having a porous structure, the porous plate having a holding surface for holding the workpiece under suction thereon; and

a frame surrounding the porous plate and having a face side lying flush with the holding surface,

wherein the porous plate is made of spherical glass particles and fit comprised of a powder of glass particles, and further wherein adjacent ones of the glass particles are partly joined together with the frit therebetween, and interstices between adjacent ones of the partly joined glass particles function as pores through which a fluid flows.

~~The processing apparatus according to claim 9,~~

~~wherein the processing unit is a laser beam applying unit applying a laser beam to the workpiece held on the porous chuck table to process the workpiece.~~

12. The processing apparatus according to claim 11~~9~~,

wherein the holding surface of the porous plate is flat.~~processing unit is a grinding unit grinding the~~

~~workpiece held on the porous chuck table with a grinding stone.~~

13. The porous chuck table according to claim 11, wherein the glass particles have particle diameters selected in a predetermined range from 3 μm to 4 mm.

14. The porous chuck table according to claim 11, wherein the frame is made of glass.

15. The porous chuck table according to claim 11, wherein porosity of the porous plate represented by a ratio of a volume of the pores to the volume of the porous plate is in a range from 5% to 40%.

16. The porous chuck table according to claim 11, wherein the glass of the frit and the glass of the spherical glass particles are the same glass material.

17. The porous chuck table according to claim 11, wherein the glass of the frit comprises a first glass material and the glass of the glass particles comprises a second glass material, and further wherein the first glass material has a lower melting point than that of the second glass material.

18. A processing apparatus comprising:

a porous chuck table including

a porous plate having a porous structure, the porous plate having a holding surface for

holding a workpiece under suction thereon, and a frame surrounding the porous plate and having a face side lying flush with the holding surface, and

the porous plate is at least made of spherical glass particles and fit comprised of a powder of glass particles, and further wherein adjacent ones of the glass particles are partly joined together with the fit therebetween, and interstices between adjacent ones of the partly joined glass particles function as pores through which a fluid flows, and

a processing unit processing the workpiece held on the porous chuck table.

19. The processing apparatus according to claim 18, wherein the processing unit is a cutting unit cutting the workpiece held on the porous chuck table with a cutting blade.

20. The processing apparatus according to claim 18, wherein the processing unit is a laser beam applying unit applying a laser beam to the workpiece held on the porous chuck table to process the workpiece.

21. The processing apparatus according to claim 18, wherein the processing unit is a grinding unit grinding the workpiece held on the porous chuck table with a grinding stone.

22. The processing apparatus according to claim 18, wherein the glass of the fit and the glass of the spherical glass particles are the same glass material.

23. The processing apparatus according to claim 18, wherein the glass of the fit comprises a first glass material and the glass of the glass particles comprises a second glass material, and further wherein the first glass material has a lower melting point than that of the second glass material.