Claims

1. A pump for pumping liquid, comprising a pump chamber and an impeller (4) arranged to rotate in said pump chamber, said impeller being suspended in a lower end (5) of an axially extending drive shaft unit (6), wherein said lower end (5) of the drive shaft unit (6) is received in a cylinder-shaped recess (10) of the impeller (4), and wherein the impeller (4) comprises an axially extending hole (21) that connects the cylinder-shaped recess (10) and the pump chamber, **characterized** in that the impeller (4) is displaceable back and forth in the axial direction in relation to the drive shaft unit (6), and in that the drive shaft unit (6) comprises an axially extending pin (22) that projects from said lower end (5) of the drive shaft unit (6), wherein said pin (22) is arranged in said hole (21) and arranged to prevent that the pumped liquid enters the cylinder-shaped recess (10) of the impeller (4).

2. A pump according to claim 1, wherein a liquid sealing (23) is arranged at the interface of said hole (21) and said pin (22).

3. A pump according to claim 1 or 2, wherein a lateral surface (24) of the pin (22) abuts an inner surface of the hole (21).

4. A pump according to any of claims 1-3, wherein an axial section of a lateral surface belonging to the lower end (5) of the drive shaft unit (6) abuts an inner surface (16) of the cylinder-shaped recess (10).

5. A pump according to any of claims 1-4, wherein the pin (22) is tube-shaped.

6. A pump according to any of claims 2-5, wherein the liquid sealing (23) is made up of an O-ring.

7. A pump according to any of claims 2-6, wherein the liquid sealing (23) is arranged in a groove of an inner surface of the hole (21).

8. A pump according to any of the preceding claims, wherein the drive shaft unit (6) comprises a drive shaft (11) and a sleeve (12), wherein the sleeve (12) surrounds and is releasably connected to the drive shaft (11) and makes up part of the lower end (5) of the drive shaft unit (6).

9. A pump according to claim 8, wherein said pin (22) is fixedly connected to said sleeve (12).

10. A pump according to any of the preceding claims, wherein the impeller (4) is an open impeller comprising a hub (18), an upper cover plate (19) and at least one blade (20) connected at least to said cover plate (19).

11. A pump according to claim 10, wherein said cylinder-shaped recess (10) and said hole (21) are arranged in the hub of the impeller (18).

12. An impeller assembly for placement in a pump chamber, comprising an impeller (4) with a cylinder-shaped recess (10) and a sleeve (12), wherein said sleeve (12)is received in said cylinder-shaped recess (10), and wherein the sleeve (12) is arranged to be connected to an axially extending drive shaft (11), wherein the impeller (4) is displaceable back and forth in the axial direction in relation to the sleeve (12), and wherein the impeller (4) comprises an axially extending hole (21) that connects the cylinder-shaped recess (10) and the pump chamber, **characterized** in

that the sleeve (12) comprises an axially extending pin (22) that projects from the sleeve (12), wherein said pin (22) is arranged in said hole (21) and arranged to prevent that the pumped liquid enters the cylinder-shaped recess (10) of the impeller (4).