CLAIMS

1. A fluid pump for a hydraulic or pneumatic drive system comprising a fluid motor, the fluid pump comprising:

at least one piston means; and

for the or each piston means, a cylinder means, in which the or each cylinder means and the associated piston means define a chamber, and in which the or each cylinder means is operatively coupled to a pressure transmission line, in which the or each piston means is arranged to at least partially cause reciprocating flow of fluid in the associated pressure transmission line, the reciprocating flow being for at least partially causing back and forth movement of a further piston means of a fluid motor to which the pressure transmission line is operatively coupled.

2. A fluid pump according to Claim 1, in which the or each cylinder means is operatively coupled to a single respective pressure transmission line.

3. A fluid pump according to Claim 1 or 2, in which the at least one piston means comprises a plurality of piston means, the plurality of piston means being arranged to cause the reciprocating flow of the fluid in the pressure transmission lines, whereby the reciprocating flow of the fluid in the pressure transmission lines causes the back and forth movement of the further piston means of the fluid motor.

4. A fluid pump according to Claims 1, 2 or 3, in which the fluid pump further comprises a drive shaft, and is driven by rotation of the drive shaft.

5. A fluid pump according to Claim 4, further comprising motion conversion means for converting rotational motion of the drive shaft to repeated motion driving the at least one piston means.

6. A fluid pump according to any preceding claim, in which the at least one piston means comprises two piston means.

7. A fluid pump according to Claim 6 when dependent on Claim 4 or 5, comprising a double-ended piston having one of the two piston means at each end thereof, in which the double-ended piston is arranged for reciprocating movement along the axis of the drive shaft.

8. A fluid pump according to Claim 4, further comprising a cam mounted on the drive shaft, in which the drive shaft, cam and the at least one piston means are arranged so that rotary motion of the drive shaft causes the cam to move the or each piston means.

9. A hydraulic or pneumatic drive system comprising:

(a) the fluid pump of any one of the preceding claims;

(b) for the or each cylinder means, a respective pressure transmission line;

(c) a fluid motor comprising, for the or each pressure transmission line, a further piston means having an associated further cylinder means, the further piston means and the associated further cylinder means defining a further chamber, in which the or each pressure transmission line is operatively coupled to the further cylinder means, in which the reciprocating flow of fluid in the at least one pressure transmission line causes the back and forth movement of the at least one further piston means.

10. A system according to Claim 9, in which each pressure transmission line is operatively coupled to a single respective cylinder means.

11. A fluid motor for a hydraulic or pneumatic drive system comprising a fluid pump, the fluid motor comprising:

at least one piston means; and

for the or each piston means, a cylinder means, in which the or each cylinder means and the respective piston means define a chamber, and in which the or each cylinder means is operatively coupled to a pressure transmission line, in which reciprocating flow of fluid in the at least one pressure transmission line at least partially causes back and forth movement of the at least one piston means.

12. A system according to Claim 11, in which each pressure transmission line is operatively coupled to a single respective further cylinder means.

13. A fluid motor according to Claim 11 or 12, in which the at least one piston means comprises a plurality of piston means, the reciprocating fluid causing the back and forth movement of the plurality of piston means.

14. A fluid motor according to any of Claims 11 to 13, in which the fluid motor further comprises a drive shaft, and in which the fluid motor is arranged for the back and forth movement of the at least one piston means to drive rotation of the drive shaft.

15. A fluid motor according to Claim 14, further comprising motion conversion means for converting the back and forth movement of the at least one piston means to rotational movement of the drive shaft.

16. A fluid motor according to Claim 11 or 15, in which the at least one piston means comprises two piston means.

17. A fluid motor according to Claim 16 when dependent on Claim 14 or 15, comprising a double-ended piston having one of the two piston means at each end thereof, in which the double-ended piston is arranged for reciprocating movement along the axis of the drive shaft.

18. A hub assembly comprising A fluid motor according to any of Claims 11 to 17.

19. A hydraulic or pneumatic drive system comprising:

(a) a fluid motor according to any of Claims 11 to 17;

(b) for the or each cylinder means, a pressure transmission line;

(c) a fluid pump comprising a further piston means having an associated further cylinder means, the further piston means and the associated further cylinder means defining a further chamber, in which the or each further cylinder means is operatively coupled to the one or more pressure transmission lines, in which at least one further piston means is arranged to at least partially cause reciprocating flow of fluid in the one or more pressure transmission lines, in which the reciprocating flow at least partially causes the back and forth movement of the at least one piston means of the fluid motor.

20. A hydraulic or pneumatic drive system comprising:

(a) at least one pressure transmission line;

(b) a fluid pump comprising:

at least one first piston means; and

for the or each first piston means, a first cylinder means, in which the or each first cylinder means and the associated first piston means define a first chamber, and in

which the or each first cylinder means is operatively coupled to a pressure transmission lines, in which the fluid pump is arranged to cause back and forth movement of the or each first piston means, which causes reciprocating flow of fluid in the at least one pressure transmission line;

(c) a fluid motor comprising:

at least one second piston means; and

for the or each second piston means, a second cylinder means, in which the or each second cylinder means and the respective second piston means define a second chamber, and in which the or each second cylinder means is operatively coupled to a pressure transmission line, in which the fluid motor is arranged so that the reciprocating flow of fluid in the at least one pressure transmission line at least partially causes back and forth movement of the at least one second piston means.

21. A system according to Claim 20, in which the at least one first piston means comprises a plurality of first piston means, the plurality of first piston means being arranged to cause the back and forth movement of each of the second piston means.

22. A pedal-driven vehicle or machine, comprising the hydraulic or pneumatic drive system according to any of Claims 9, 10, 20 and 21.