

PATENTS ACT 1977

IN THE MATTER OF British
Patent Application No 2289724 in
the name of Trevor Slaney

DECISION

1. Patent Application number GB9410655.6, entitled "Propulsion unit" was filed on 27 May 1994. It was published under the number GB2289724 on 29 November 1995.
2. The specification describes apparatus comprising a plurality of cylinders and pistons mounted on a baseplate, with the cylinders being supported by the baseplate and the pistons interconnected by a linkage system. The cylinders are connected in groups so as to be in fluid communication with each other, and means are provided for filling the apparatus with hydraulic fluid under pressure or compressed air.
3. Following the request for preliminary examination and search, which was filed on 24 May 1995, the examiner reported in a letter accompanying the search report as follows:

"You are advised that Patents are not normally granted for inventions that contravene well established laws and principles, since such inventions are not regarded as meeting the requirement that they should be capable of industrial application. With regard to your invention, it would appear that the apparatus would not be capable of producing a resultant force since there is no mechanism outside the apparatus to accommodate a reaction to the force. Further, if the force were used to propel a vehicle or to drive a spindle, the apparatus would then appear to produce an energy output without any corresponding energy input, thereby contravening the well established law relating to the conservation of energy.

While the examiner cannot enter into any more detailed discussion concerning patentability until Substantive Examination, you are strongly advised to consider the above comments prior to requesting such examination and incurring further expense."

4. Despite this report, Mr Sleney proceeded to the next stage and requested substantive examination on 28 May 1996.

5. There followed an exchange of correspondence in which the examiner repeated his view that the invention was not capable of industrial examination, while Mr Sleney argued that his apparatus would work as he described and that it was therefore patentable. No agreement could be arrived at, so a Hearing was appointed for 4 December 1998. Mr Sleney was unfortunately unable to attend the hearing, but gave his consent to the decision being issued on the basis of the papers on file.

6. I will firstly explain in more detail the nature of the invention as described. To assist explanation, the single figure supplied with the application is attached.

7. Nine cylinders 1, 2, 3, 4, 5, 6, 7, 8, 9 are mounted on a baseplate 65. They are arranged in two aligned groups of four, the alignments subtending an angle of 120E, with the remaining cylinder acting along a line at an angle of 120E to each alignment. A piston 10, 11, 12, 13, 14, 16, 15, 17, 18 is associated with each cylinder 1 to 9 respectively. Pistons 10 to 13 and 15 to 18 are coupled together in pairs by rods 33, 34, 35 and 36, and brackets 40 and 37 link the rods in each aligned group. The brackets are connected to each other and to a further bracket linked to the piston 14 associated with the ninth cylinder 5 at a pivot point 47.

8. Hydraulic pipes 28, 29 and 30 connect pairs of cylinders (1 and 8, 2 and 9, 3 and 7 respectively), and further pipes 31, 32 link cylinders 4, 5 and 6.

9. As described, pipes 28, 29, 30 and 31, together with their associated cylinders, are filled with hydraulic fluid. Cylinders 3 and 7 are pressurised either hydraulically or by compressed air or by other means.

10. The specification describes at some length how pressure in a cylinder will be transmitted to another cylinder. Thus, pressure in cylinder 3 will exert pressure in cylinders 2 and 4 (owing to the bracket 40). Similarly, pressure in cylinder 7 exerts pressure in cylinders 6 and 8.

Furthermore, pressure in cylinder 2 is transmitted to cylinder 9 through the pipe 29, while pressure in cylinder 8 is transmitted through pipe 28 to cylinder 1.

11. The movement of the pistons is also linked; if piston 11 moves in the direction of an arrow 62, then, via pipe 29, fluid will flow into cylinder 9 and move piston 18. Similarly movement of piston 17 is transmitted to piston 10.

12. The description then states that if piston 13 moves in the direction of arrow 62, then piston 16 will move in the direction of arrow 61.

13. I think this is wrong; such movement of piston 13 would move piston 16 in the opposite direction, that of arrow 51.

14. Following from this statement, the description has the bracket 41 moving in direction 62 and bracket 42 moving in the direction 61. This, it is said, will move the pivot point 47 to displace the piston 14 in direction 48, transferring hydraulic fluid from cylinders 4 and 6 to cylinder 5.

15. The description concludes that when pressure is introduced into cylinders 3 and 7, all of the pistons remain stationary and the links 41, 42 and 43 remain at angles of 120E to one another. The pressure in cylinders 3 and 7 causes pressure in cylinders 1, 2, 4, 5, 6, 8 and 9. Pressures exerted on the closed ends of cylinders 4, 5 and 6 all act towards the pivot point 47, cancelling each other. Similarly the pressures on the closed ends of cylinders 1, 2, 8 and 9 cancel each other.

16. But pressure on the closed ends of cylinders 3 and 7, it is said, while cancelling each other in the directions 63 and 64 will push in the direction 50, generating a force for which there is no opposing force. This force is said to cause motion of the baseplate.

17. I have so far addressed my comments to the invention as described, and have not considered the invention as defined by the claims. There are four claims, of which claim 4 is in the form of an "omnibus" claim. The main claim, Claim 1, while consisting of several sentences which could be said to obscure its scope, is as a whole sufficiently clear for the reader to establish that the

invention comprises features of the invention as described, as it must to meet the requirement that the claims are supported by the disclosure. Any consideration of the allowability of the claims by reason of the industrial applicability of the invention claimed apply equally to the invention as described.

18. The examiner has argued that the invention is incapable of industrial application on two grounds.

19. Firstly, the apparatus described appears to generate a propulsive force without there being a reaction to the force. Such apparatus has been called a reactionless drive, and conventional science denies that a drive can operate in this way. All known drives involve an interaction between the driven object and its surroundings, either as on a motor vehicle in which the wheels interact with the road, or as on a ship a force rotates the propeller which interacts with the water, or as with a jet engine or a rocket in which propulsion fluid is forced out of the vehicle and it is the reaction to the force applied to the propulsion fluid which propels the vehicle.

20. The drive described does not involve interaction with the surroundings and despite Mr Slaney's plea in his letter of 14 July 1997 to cast preconceived ideas from mind, and his suggestion in his letter of 4 February 1998 that the "opposing force is transferred into the hydraulic fluid", I am satisfied that the baseplate cannot be moved in the manner suggested.

21. The examiner has provided a careful analysis of the forces acting in the cylinders and on the pistons and has concluded that they cancel each other. I agree with his analysis.

22. Secondly, the propulsion unit as described is contrary to the law of conservation of energy. Even if I could be persuaded that the baseplate could be moved as described, I am bound to conclude that the device moves without the consumption of energy. The description refers to the drive providing a continuous controllable thrust of power in any direction. This makes the apparatus into a form of perpetual motion, and it is well established, and to my mind incontrovertible, that perpetual motion is impossible.

23. I therefore agree with the examiner. The invention is contrary to natural law and thus incapable of industrial application. I have no alternative but to refuse the application.

24. The application having been filed on 27 May 1994, according to Section 20 of the Patents Act 1977 and Rule 34 of the Patents Rules 1995, the application should have complied with all the requirements of the Act and Rules by 27 November 1998. As I have decided above, the application did not comply with the requirements at that time.

25. The applicant has however the right to extend the period for compliance by one month, by filing Patents Form 52/77 together with the appropriate fee, which is £135. If the application were to proceed, this procedure would have to be followed.

26. However, as the specification as a whole relates to an invention which is contrary to natural law, I can conceive of no form of amendment which could remove the bar to patentability.

27. This being a technical matter, any appeal must be lodged within six weeks of the date of this decision.

Dated this 30th day of December 1998

M G WILSON

Principal Examiner, acting for the Comptroller

THE PATENT OFFICE