



PATENTS ACT 1977

APPLICANT Nigel John Buck

ISSUE Whether patent application
GB0814361.2 complies with sections
1(1)(a), (b), (c) and 14(3)

HEARING OFFICER H Jones

DECISION

Introduction

- 1 The application relates to a Self Generating Electric Vehicle (SGEV) having either a single or a series of alternators associated with the drive-wheel(s) of a vehicle in order to recharge an onboard battery and for extending the range of travel. The description is very brief, but sets out in general terms the current situation of vehicle propulsion systems and the concept behind the invention, namely an entirely electric powered vehicle combining lightweight technology, making use of strong recyclable material and a mechanism for recharging on-board batteries for use in propelling the vehicle.
- 2 The examiner argues that the invention, insofar as he can make out, is neither novel, inventive or capable of industrial application, and that the application does not disclose the invention in a sufficiently clear manner for it to be performed by a person skilled in the art. The examiner has interpreted the words “super-light electric car driven by self-generating power” as an indication that the invention is concerned with a perpetual motion machine and therefore contrary to well-established physical laws. In subsequent correspondence, for example in an email dated 19th October 2012, the applicant has reinforced this impression by referring to the vehicle “causing perpetual motion, thus causing perpetual charging”. Nevertheless, the applicant disagrees with the examiner’s arguments for refusing the application and so the matter has been referred to me for a decision on the papers.

The invention

- 3 The propulsion mechanism of the SGEV comprises an arrangement of cogs, flywheels, alternators and motors, and may be situated adjacent each of the four wheels of a vehicle. The specification explains that the alternator and motor can be combined into a single unit with suitable gearing “giving 1:6 ratios” and that the capacity of the battery can be reduced because the vehicle can self-generate its own energy. The claims suggest that the flywheel and alternator arrangement will allow the batteries to be charged even when the vehicle is stationary. The claims are unconventional in that they set out the aims and benefits of the invention rather than specifying the technical features that distinguish it from the prior art, but the key

features of the invention set out in the application are, I believe, the ones listed above.

4 In an email dated 28th May 2012, the applicant describes his invention as follows:

“Current technology for electric cars have batteries with as an energy source for the electric motor. These batteries need to be charged routinely, and often. Some vehicles use more batteries to provide more energy at the cost of weight. Some vehicles use an on-board power source, typically an engine that requires its own fuel, at the cost of complexity and weight.

My proposal is that energy that is available is captured via alternator which is attached to the vehicle driveline. This alternator is used to recharge the batteries, increase the available energy, and consequently extending the vehicles usable distance per charge.

The energy I envision making use of is when the vehicle is coasting or braking, anytime the motor is not actually driving the vehicle. With specifically design electrical control, the system would recognize when the alternator could be switched to charging the batteries. The recharging of the onboard batteries would not eliminate the need to do a separate deep charge, however this idea would greatly extend the available travel distance for the vehicle, as well as reducing the amount of deep charge time required.”

5 The final paragraph appears to point the invention away from the perpetual motion machine that the examiner has understood from the application as filed, but is inconsistent with some of the later statements made by the applicant concerning perpetual charging and perpetual motion. In his letter to the applicant dated 26th March 2012, the examiner has taken the view that the words “self-generating electric vehicle” and the description of “limited battery reserves sufficient to start the vehicle and power lighting are required” clearly imply a vehicle that requires no external input of energy beyond an initial battery reserve to start the vehicle in motion; the energy it then needs to run is derived from its own motion.

The law

6 Inventions concerning perpetual motion machines are subject to objection for failure to meet the requirements of industrial application (section 1(1)(c)) and those of clarity and sufficiency of the description (section 14(3)). Inventions that operate in a manner which is clearly contrary to well-established physical laws are regarded as not having industrial application because such devices cannot physically be made to operate in the way suggested. However, the court has said¹ that in cases where there is a reasonable and substantial factual dispute about whether the invention does offend against physical laws, then refusal of an application should not be pursued.

7 With regard to clarity and sufficiency, the argument is similar in that an invention which operates in a manner contrary to well-established laws of physics cannot be put into effect by a person skilled in the art no matter how it is described in the specification of an application. The claimed benefits of the invention simply cannot be achieved, no matter how detailed the application is or how clear it is to understand.

Analysis

8 Having reviewed the application as filed and also the subsequent correspondence, I find that I am in total agreement with the examiner that the self generating electric

¹ Blacklight Power Inc. [2008] EWHC 2763 (Pat)

vehicle operates contrary to the well-established first law of thermodynamics: this law states that in a closed system, energy can neither be created nor destroyed, it can only be transferred from one state to another. The suggestion that the vehicle has a longer range simply by recharging a battery from the motion of a drive wheel without any improvement in the efficiency of the transmission system would require additional energy to be added to the closed system when that is clearly not the case. The description that the vehicle can self-generate its own energy, which I have taken to mean that it generates sufficient energy needed for it to operate as a vehicle is, in itself, contrary the first law of thermodynamics.

- 9 The only suggestion that the invention does not rely entirely on the energy it creates appears in the applicant's email dated 28th May 2012, which attempts to clarify the nature of the invention by saying that "the recharging of the onboard batteries would not eliminate the need to do a separate deep charge". However, I find that this is inconsistent with the description of the invention set out in the application as filed, and is further contradicted by the later comments from the applicant that the vehicle causes perpetual charging and perpetual motion.

Conclusion

- 10 I conclude that the invention contravenes the first law of thermodynamics and therefore is incapable of industrial application. The description of the invention is insufficient for it to be reproduced by a person skilled in the art. There is no need for me to consider the further novelty and inventive step objections raised by the examiner. I am refusing the application under section 18(3).

Appeal

- 11 Under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal must be lodged within 28 days.

H JONES

Deputy Director, acting for the Comptroller