



BL O/080/07

15th March 2007

PATENTS ACT 1977

APPLICANT Trevor Lyn Whatford

ISSUE Whether patent application number GB0516006.4 relates to a patentable invention

HEARING OFFICER B Westerman

DECISION

Background

- 1 This decision is about whether Mr. Whatford should be granted a patent for his invention. The examiner maintains that the invention is contrary to established scientific law and will not work. Mr. Whatford disagrees. Attempts to resolve this disagreement by correspondence in the usual way were unsuccessful, and the matter therefore came before me at a hearing on 26th February 2007. Mr. Whatford attended in person, and the examiner, Mr. Barnes-Paddock also attended.

The application

- 2 The application relates to an apparatus which is alleged to generate energy using the effects of gravity. In one embodiment, it is made up of a rotor immersed in liquid carrying a number of pairs of weighted levers, each pair co-acting with a pair of connected chambers containing gas. As the apparatus rotates, the gas is forced from one to the other chamber so that the buoyancy of the gas is said to be effective to rotate the rotor, providing useful energy. In another embodiment, the rotor operates in air and fluid is moved to one side of the rotor by the weighted levers and is said to be effective to rotate the rotor, again producing useful energy. What was said at the hearing was applicable to the buoyancy embodiment, but it is clear to me that the submissions made could equally apply to the other embodiment.
- 3 Claim 1 as it stood at the time of the hearing is the only independent claim and is as follows:

“A rotary device comprising a number of near balanced primary leverage systems, comprising an number of fulcrum pivoting weighted levers that pivot of the rotary device in a balanced manner, normally in evenly spaced opposite pairs, because the leverage systems are nearly

balanced it take less energy to rotate them than the leverage energy created by them, this leverage energy is then used to drive suitable propulsion systems (that form part of the rotary device) that drive the rotary device with a surplus torque to do work, each lever (D) is connected to the rotary device by a bearing fulcrum (I), the weighted sections of the levers (L2) are totally unimpeded (without any external physical contact or devices) to allow the total leverage (L1 & L2) force to be used, by (F) a means of transferring the leverage which is connected to or forms the work end of the levers (L1) part, the weighted L2 lever part is more than 30 times longer than the L1 section of the lever (D), resulting in a leverage force (L1 & L2) of 30 to 1, this gives the L1 section of the lever (D) a power to weight ratio of more than 30 times that of the weight of (C) the levers weight when the levers are at there optimum position, when the said leverage systems are rotated the levers fall away on one half of the rotary device creating a leverage force of 30 to 1 at there optimum position while the levers on the opposite side of the rotary device fall back creating a leverage force (L1 & L2) of 30 to 1 when the levers are at there optimum position, the result is a rotary device comprising a near balanced primary leverage system that works in a manner that uses the force of gravity to generate a leverage force (L1 & L2) of over 30 to 1 per lever per half cycle, the leverage is then used to drive the rotary devices means of propulsion , via (F) a means of transferring the leverage energy to drive the propulsion systems, the completed near balanced primary leverage System will require smaller amounts of energy to rotate the primary leverage system in comparison to the massive leverage energy (L1 & L2) converted by the leverage system when the leverage system are rotated, example if the rotary device has 16 pairs of levers that would be 32 lever weights x the 30 to 1 ratio, the leverage force generated by the levers this would be a force of 1,920 x the weight of 1 lever weight per one rotation to rotate the rotary device to do work. The said weighted levers should be taken to their practical maximum to increase the size of the propulsion system and work. All volumes and ratios can be adjusted.”

- 4 The application is the national phase of a PCT application published as WO 2004/067952. As is customary, the international application was subject to a search, and the published international application includes a search report which draws attention to six previously published documents. An international preliminary examination report was also established which indicated the view of the International Preliminary Examining Authority (in this case the European Patent Office) that the claims then under consideration lacked novelty, inventive step and industrial applicability. In the national phase, the UK examiner focused on the issue of industrial applicability, and specifically deferred considerations of novelty, inventive step and clarity. I was not addressed on these deferred issues at the hearing and therefore can come to no conclusion as to whether or not there are objections under these heads.

The law

- 5 Under section 1(1)(c) of the Patents Act 1977, a patent may be granted only

for an invention that is capable of industrial application. Section 4(1) explains this by saying that an invention shall be taken to be capable of industrial application if it can be made or used in any kind of industry, including agriculture. It is, however, settled law that machines alleged to operate in a manner which is clearly contrary to well-established physical laws are regarded as not having industrial application.

The Issues

- 6 From the outset the UK examiner maintained that the invention did not operate in a manner consistent with established scientific principles as it proposed the generation of mechanical power output in a way which he says contravenes the law of conservation of energy (the first law of thermodynamics) which states that energy may not be created or destroyed, only converted from one form to another.
- 7 Mr Whatford, on the other hand suggests that, by reason of the balanced nature of the rotor with a multiplicity of lever pairs and the leverage ratio, the device will in fact provide the energy by utilizing gravity as the power source. He also questions the veracity and applicability of the law of conservation of energy.

Assessment

- 8 Taking first the submission about how much weight I should give to the law of conservation of energy. I am sure that I can not put aside this law. Whilst scientific laws may sometimes be approximations to the truth, and occasionally have exceptions, I do not consider that I can disregard the enormous body of science which supports the general applicability of the law of conservation of energy.
- 9 Mr Whatford took pains, at the hearing, to explain his device, and brought with him a part of the lever system he said was similar to that used in it. I asked him if he had produced a device which worked, and he informed me that he had produced a rotor carrying the multiple sets of levers, but without the buoyancy arrangement. He said that if, in this device, a small weight was attached to the rotor then the device began to rotate, but stopped if left. He said that he expected that, if the buoyancy arrangement were to be added, this would act to maintain the rotation, and the leverage of the lever devices would move the gas in an appropriate way to achieve this.
- 10 The examiner, on the other hand, expressed the view that the conversion of the potential energy of each weight when at the top of the rotor into kinetic energy when at the bottom would be exactly equal to the energy required to raise the same weight back to the top, and that there would therefore be no energy to maintain the rotation. Whilst Mr Whatford seemed to accept this, he also said that the movement of the gas as urged by the leverage system results in the buoyancy of the gas providing the energy to keep the device in rotation and thus provide useful power output.
- 11 Mr Whatford made much of his belief that the leverage ratio would enable the

energy to be amplified, and provided his example with spring balances to demonstrate the force difference. However, it is clear to me that the movement of weight at the long end under gravity would provide a force, and the work done by gravity at that end would be the force multiplied by the distance moved. At the other end, the force will be larger, but the distance through which the force works is smaller, and the work done is exactly the same. I can see no way in which the work done can be affected by the leverage, even though, as demonstrated by the example, the forces will be different. To say otherwise would clearly contravene the law of conservation of energy.

- 12 This being so, and it being accepted that, if the device were to be rotated, the gas or fluid has to be moved from one place to another through mechanical or fluid linkage or connections, this would of necessity require energy, however small, and I can find no discernible source for this.
- 13 Having considered all that was said and shown at the hearing, and all of the correspondence on the file, I can see no way in which the device could work as described without defying the law of conservation of energy. Like many similar devices that have been sent to the Patent Office before, I am satisfied that, once started, the device will simply come to rest at a point of stable equilibrium.

Conclusion

- 14 As I have said, it is settled law that machines alleged to operate in a manner which is clearly contrary to well-established physical laws are regarded as not having industrial application. I find that the invention does not comply with section 1(1)(c) and can see nothing in the application that could form the basis of an allowable amendment that would meet this objection. I therefore refuse this application.

Appeal

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

B WESTERMAN

Deputy Director acting for the Comptroller