



## **PATENTS ACT 1977**

APPLICANT                      Trevor Lyn Whatford

ISSUE                              Whether patent application number  
GB 0702274.2 complies with section  
1(1)(c) and 14(3)

HEARING OFFICER              Mrs S E Chalmers

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## **DECISION**

### **Introduction**

- 1     The application entitled 'A Rotary Device' is derived from an international application published by WIPO as WO2006/003468. The application entered the national phase and was republished as GB 2430712 on 4 April 2007.
- 2     On 6 November 2009, the examiner issued an examination report expressing the view that the invention was contrary to established scientific principles, specifically the Law of Conservation of Energy, and would not work. He also took the view that the application did not provide enough information about the invention for it to be performed by a person skilled in the art. The applicant disagreed, arguing that the invention was not contrary to physical laws, and that, as this invention was different from the prior art, the failure of previous devices did not mean that this invention could not work.
- 3     The applicant requested a hearing which was held before me on 6 May 2010 to resolve these issues. Mr Whatford appeared in person and the examiner, Mr Peter Middleton, also attended. At the hearing, Mr Whatford provided me with further explanation about his invention using a model and some calculations and he also showed me some photographs of his previous models. I am grateful to Mr Whatford for this further explanation – which my decision takes into account – and for his patience in answering my many questions.

### **The application**

- 4     According to the application, the invention aims to generate energy using multiple falling weighted levers arranged on a rotary structure. As the structure rotates,

each lever is able to fall once per 180 degrees rotation – twice per full cycle. Each lever has a hydraulic arrangement so that the energy of the falling lever is converted to energy in the hydraulic system. Some of this energy is used to drive a propulsion system to rotate the rotary structure (e.g. hydraulic motors). The application is clear that surplus energy is also available – the purpose of the invention is to produce energy. The applicant suggests that a certain minimum number of levers may be required – devices with fewer levers may not work, or will not work as well – due to what he terms the ‘multi-lever phenomenon’. The wording of the claims is not at issue so I will not reproduce them here.

### **The law to be applied**

- 5 In order to be patentable, under section 1(1)(c) of the Act, an invention must be ‘capable of industrial application’. It is settled law that machines alleged to operate in a manner which is contrary to well established physical laws are regarded as not capable of industrial application.
- 6 Section 14(3) requires that the disclosure is clear enough and complete enough for the invention to be performed by a person skilled in the art. If an invention cannot work at all, because it relies on impossible physical processes, then it inevitably follows that no description could be complete enough to allow the invention to be performed.

### **Industrial application**

- 7 The examiner has argued that the invention operates in a manner contrary to established scientific principles – namely the Law of Conservation of Energy (the First Law of Thermodynamics) – because there is no energy input from gravity (or any other source). Hence, implicitly, there can be no energy output from the device. As I explained to Mr Whatford at the hearing, this Law states that energy may not be created or destroyed, only converted from one form to another.
- 8 Mr Whatford began by explaining an example of how a weighted lever, connected to a hydraulic piston, could pump a given amount of fluid, at a given pressure, when it falls. The precise details seem to differ from the application, but the principle is the same: that the gravitational potential of a weight can be converted to energy in a hydraulic system when the weight falls. I have no problem with this assertion; whenever a weight falls, the potential energy it loses must be converted into a different form, and it is perfectly possible to harness this with a hydraulic system.
- 9 Mr Whatford went on to explain the rotating system of the levers using his prototype model. He asserted that the system is always in (or at least close to) a state of balance, so this mechanism is a very efficient way of lifting the weighted levers. In other words, Mr Whatford asserted that his system made it possible to increase the potential energy of the weights – as the mean height of each weight is raised by the rotation – by a mechanism that requires less energy than the potential energy gained by the weights.
- 10 I cannot accept this assertion, as this would require energy to be created, which is not possible. In fact each weight takes just as much energy to lift as it releases

when it falls, whether by rotation or any other mechanism, and whether considered individually, in pairs or any number together. Of course, in the real world, some energy will always be lost due to friction, so it will take more energy to rotate the device than it can produce.

- 11 If, as Mr Whatford asserts, the system is in a state of near balance, how can I say that it will require significant amounts of energy to rotate it? Because it is not in rotary balance. The falling levers lower the centre of gravity of the rotary support. As the support is rotated by the drive system the centre of gravity is moved horizontally away from the rotary axis, and so opposes the drive. Far from rotating a balanced load, the drive system is rotating an eccentric load to lift the weights back to their upper positions. As with all rotary systems: what falls down, must be lifted up. The lifting system is not – and could not be – more than 100 percent efficient, so the drive system requires as much energy as the falling levers can produce, ignoring losses. Without the addition of a continuous energy input (which is not allowed for in the application) the device will simply come to a stop.
- 12 Mr Whatford also questioned the validity of the Law of Conservation of Energy. As this is a basic law of physics, universally accepted by physicists according to normally accepted scientific principles, and no evidence has been presented that casts any doubt on its validity, I cannot accept this argument. I also note that the Law of Conservation of Energy has been accepted in numerous previous court judgments that are binding on me.
- 13 It is clear that Mr Whatford believes passionately in his invention. However after carefully considering 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 invention could work as he claims in his application. The answer to the question of whether the invention will work or not essentially boils down to basic physics. Standing back from the detail and looking at the wider picture, there is no doubt in my mind that it would be contrary to well-established physical laws for the wheel to sustain endless self-rotation let alone generate surplus energy. I therefore find that the invention as claimed is not capable of industrial application as required by section 1(1)(c) of the Act.

### **Is there enough information?**

- 14 The examiner has argued that the application does not contain enough information about the invention for it to be performed by a person skilled in the art. Specifically, it is not clear how the device could be made to generate more energy than is originally put into the system. Again having considered all the material very carefully I am in no doubt that the application is neither clear nor complete enough for the invention to be performed by a person skilled in the art, as required by section 14(3) of the Act.

### **Conclusion**

I find that the invention does not meet the requirements of Sections 1(1)(c) and 14(3). Furthermore, I can see nothing in the application that would form the basis of an allowable amendment that would meet these objections. I therefore refuse

this application.

**Appeal**

- 15 If Mr Whatford disagrees with anything in my decision, he has a right of appeal to the Patents Court. Under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal must be lodged within 28 days of the date of the decision stated above.

**Mrs S E Chalmers**

Deputy Director acting for the Comptroller