



PATENTS ACT 1977

APPLICANT Peter Branton

ISSUE Whether patent application GB1403059.7 complies
with the sections 1(1)(c) and 14(3) of the Act

HEARING OFFICER Mr B Micklewright

DECISION

Introduction

- 1 Patent application GB1403059.7 filed in the name of Peter Branton and entitled “The S.E.G. (Super Efficient Generator)” was filed on 20 February 2014 and was later published on 28 August 2015 as GB2523349A. A letter was issued on 13 May 2014 warning Mr Branton that his invention may not be patentable and offering him a refund of the search fee. However, Mr Branton decided to continue with his application and filed a replacement set of claims on 27 May 2014.
- 2 Examination was performed on 22 March 2018. The examiner argued that the invention as described contravenes well established laws of physics and so fails to meet the requirement of section 1(1)(c). The examiner also argued that the disclosure supplied in the description would not enable a skilled person to perform the invention and so fails to meet the requirement of section 14(3). There followed a further round of correspondence and a further examination report maintaining objections to industrial applicability and insufficiency and offering Mr Branton the opportunity to present his case to a hearing officer at a hearing.
- 3 A week before the hearing on 12 October, Mr Branton submitted an amended page of description by email. The proposed amendments do not affect the outcome of my decision, so I will not consider them here.

The application

- 4 The application relates to an electrical generator comprising a central vertical axle supporting a central rotator having a series of permanent magnets (G) attached thereto. The central vertical axle is supported at either end by bearings within bearing housings. The central rotator is surrounded by several further vertical axles (F), each supporting multiple electrical coils (B) formed around soft iron cores. Each vertical axle surrounded by a set of coils is referred to as a “coil wheel”. An electrical motor is used to initiate the spinning motion of the central vertical axle and accelerate it up to working speed. This motor is then disengaged. It is proposed that

at working speed, the free moving coil wheels will spin and as they pass through the magnetic field of the permanent magnets current will flow in the coils. This electrical current may be drawn off from the coils via electrical contact D. The electricity so produced may be used to do work or may be earthed. A control system analyses the workload being drawn from the generator and will earth any surplus electricity. A secondary electric motor, the “momentum motor”, can be used to maintain the momentum of the central vertical axle, if required. The system is illustrated in figure 1 of the description which has been reproduced below.

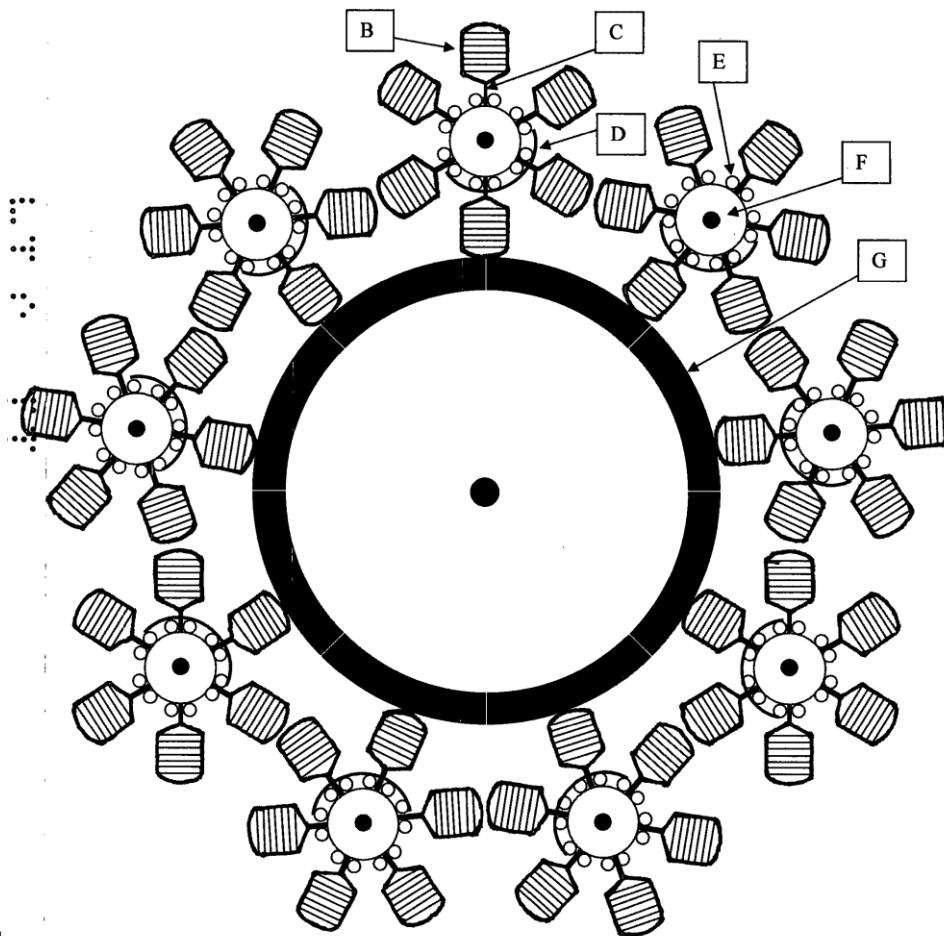


Figure 1

- 5 Frictional losses are minimised by engineering precisely symmetrical bearings and by using non-magnetic supporting parts such as aluminium. Further, it is suggested that an arrangement of a further three ring magnets (E, F & G shown in figure 4) attached to the central axle also help to reduce the friction of the ball bearings. Drag is minimised by using a stream-lined design and coils having oval cores and rounded ends. Once the generator is running at working speed, it is alleged that just 5% of the electricity produced is needed to drive the momentum motor to maintain the operational speed.

- 6 The application as amended on 27 May 2014 comprises six independent claims. These claims are directed to certain functional properties of the individual components of the generator. None of these claims detail the technical features of the invention and how they interact to provide a working generator. Claim 1, for example, states:

“1. The ‘coil wheel’ is an original system its function is to maintain the resistance between the cores of the coils to the magnets to produce electricity but remove resistance to rotations caused by it”.

- 7 It is noted that claim 6 indicates that the generator produces more electricity than it uses:

“6. Calculation taken at the point of maintaining the constant at working speed. Because the resistances have all been reduced, removed or countered along with maintaining various constants this is the first electrical generator that can also be driven by electricity with a surplus from the amount produced to the amount used”.

The Law

- 8 Section 1(1) of the Patents Act 1977 sets out requirements that must be fulfilled in order for a patent to be granted for an invention. One of these conditions is that the invention is capable of industrial application. 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 settled law that devices which operate in a manner contrary to well established physical laws are not capable of industrial application because such devices cannot be physically made to operate in the way described.
- 9 Section 14(3) of the Patents Act requires that a patent application shall disclose the invention in a manner which is clear enough and complete enough for the invention to be performed by a person skilled in the art.

Analysis

- 10 As highlighted above, the claims on file do not clearly define the invention but rather focus on the result to be achieved. I will therefore consider the disclosure of the application as a whole and decide whether the specification provides a basis for an allowable set of claims.
- 11 At the hearing, Mr Branton was invited to present his arguments in relation to industrial application and sufficiency. I am grateful to Mr Branton for the supplementary explanation he provided during the hearing which has helped me in reaching my decision. Mr Branton proposed that the generator needs to be taken up to working speed in order to generate electricity and that the production of electricity causes an increased “attractive energy” in the coils as current flows from the coil wire to the electrical contact (D). A first coil that is in contact with the electric contact (D) will be more attracted to the permanent magnets (G) than a second coil that is

not aligned with the electric contact (D). Mr Branton indicated that the harvesting of electricity via the electric contact is what causes this imbalance in attractive force and causes the coil wheels to rotate. The spinning motion is then self-sustaining – the fact that energy is being harvested keeps the coil wheels turning. If current is not flowing away then rotation will stop.

- 12 I have carefully considered Mr Branton's explanation of how the invention works in relation to the law of conservation of energy. This law states that the total energy of an isolated system remains constant, meaning that energy can neither be created nor destroyed but may be converted from one form to another. Although inherent energy losses in the invention, such as those caused by friction and drag, are minimised, these losses are not eliminated. In reality, without any additional input of energy, the central vertical axle would eventually slow and stop.
- 13 Relative movement between the coils and the magnetic field converts kinetic energy into electrical energy. This kinetic energy will eventually be dissipated through inherent frictional losses. Even if the momentum motor is fed with electricity harvested from the coils to boost rotation of the central vertical axle, the amount of electricity available from the coils will gradually diminish.
- 14 Therefore, it is inevitable that the system would be unable to produce a surplus amount of energy, as described in the application. Consequently, I conclude that the described invention operates in a manner contrary to well-established physical laws and so is not capable of industrial application, as required by section 1(1)(c) of the Act.
- 15 Having determined that the invention as described is not capable of industrial application, it follows that the specification cannot disclose the invention in a manner which allows the invention to be performed by a skilled person. That is, the application does not disclose the invention clearly enough and completely enough for a skilled person to build an electrical generator that produces a surplus of electricity. The invention as described therefore fails to comply with section 14(3) of the Act.

Conclusion

- 16 I have found that the invention as described does not comply with sections 1(1)(c) and 14(3) of the Act and can see nothing in the application that could form the basis of an allowable amendment that would meet these objections. I therefore refuse the application.

Appeal

- 17 Any appeal must be lodged within 28 days after the date of this decision.

B MICKLEWRIGHT

Deputy Director, acting for the Comptroller