

## **PATENTS ACT 1977**

IN THE MATTER OF

Patent application 9710345.1

in the name of Barry Richardson

### **DECISION**

#### **Introduction**

1. Application 9710345.1, entitled "Centrifugal flight transporter", was filed on 20 May 1997. It was accompanied by a Form 9/77, requesting preliminary examination and search and also Form 10/77, requesting substantive examination, together with the prescribed fees.
2. A combined search and examination report duly issued dated 18 August 1997, in which the examiner raised objections, including an explanation as to why he thought that the invention was not capable of industrial application and that he was of the opinion that the claims defining the invention were not distinguished from some prior art documents found upon search. Mr Richardson responded to this letter with amendments and submissions, but the examiner in his letter dated 3 March 1999 sustained the objection of lack of industrial applicability. This letter specified that response must be made by 5 July 1999.
3. Although Mr Richardson was in correspondence with the Patent Office in December 1999, he did not respond fully to the examiner's points until after a reminder in an Office letter from the Formalities examiner, when he filed letters dated 30 March 2000 and 18 April 2000. Notwithstanding this late reply, the examiner responded, in a letter dated 11 May 2000, to the submissions on the technical points, and also asked for a reason as to why he should accept the response so late.
4. In his letter dated 25 May 2000, Mr Richardson asked that the matter be considered

afresh by a senior officer at a hearing, and explained the circumstances of his late reply. It is clear to me from this letter and the other correspondence that the late reply was occasioned largely by Mr Richardson's uncertainty as to how to, rather than an intention not to, proceed.

5. The examiner responded in a letter dated 6 June 2000, and arrangements for the hearing were instigated. In his final letter, dated 10 September 2000, Mr Richardson stated that he did not wish to be present at the hearing, but was content for the decision to be taken on the basis of the submissions he has made during the correspondence on the case.

6. It thus falls to me as Hearing Officer to decide the matter on the basis of the documents on file. In coming to my decision, I have carefully considered all of the documents and letters on the file of the application.

### **Relevant Law**

7. Before considering the facts relating to the matter, I will set out the relevant legislation.

8. Section 1(1) of the Patents Act 1977 states

*"1(1) A patent may be granted only for an invention in respect of which the following conditions are satisfied, that is to say -*

*(a) .....*;

*(b) .....*;

*(c) it is capable of industrial application;"*

9. The Act defines "industrial application" in Section 4(1), which states:-

*Subject to subsection (2) below, 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.*

10. It is settled law, under these Sections, that processes or articles alleged to operate in a manner which is clearly contrary to well-established physical laws are regarded as not having industrial application.

### **The application**

11. The specification is to do with a “Centrifugal Flight Transporter”. As disclosed, the invention involves a mass or masses in rotation about an axis, and it is said that, if the rotating mass or masses is/are moved upwardly, they will cause a net upward force to be applied to the complete assembly, thus causing vertical movement. The specification is explicit that this effect is not to do with forces such as are found in a turbine, screw or blade device, or as in the conventional helicopter.

12. The mass(es) in question can be as small as particles travelling within a particle accelerator where the movement is achieved by “pulsing” of the particles, or more tangible masses which can be moved electro-mechanically or electrically.

13. As I have said above, amendments have been made since the filing, and the statement of claim as it stands is as follows:-

“1. A Centrifugal Flight Transporter will allow movement through a gas or liquid not based on propulsion as conventional turbine, blade or screw based devices or based on centrifugal systems which relate to imbalances in the centrifugal forces to produce motion. (These produce a force which is in the same plane or close to the line of rotation of the device, the Centrifugal Flight Transporter produces a force which is a right angles to the plane of rotation.)

2. A Centrifugal Flight Transporter will allow movement through a vacuum not based on reaction as conventional rocket/particle drive systems or based on centrifugal systems which relate to imbalances in the centrifugal forces to produce motion. (These produce a force which is in the same plane or close to the line of rotation of the

device, the Centrifugal Flight Transporter produces a force which is a right angles to the plane of rotation.)

3. A Centrifugal Flight Transporter will permit a fully re-useable means of space entry and exit.

4. A Centrifugal Flight Transporter substantially as described herein with reference to Figure 4 of the accompanying drawing.

Note ! The helicopter uses the aerodynamic forces of the rotating blades and the resulting reaction to produce its lifting force. The Centrifugal Flight Transporter does not use any such reactive force to produce its vertical lifting force.”

### **Assessment**

14. I am clear that, in coming to a decision on this issue, I must not restrict myself to the invention claimed, but rather should consider all of the matter disclosed and should only refuse the application if I am convinced that there is nothing present which could form the basis for a patentable invention.

15. I must first decide what the broadest disclosure of the application is. As can be seen from the claims quoted above, the application is clear that the device is said not to work by virtue of conventional blade, turbine or screw based devices, or by way of imbalances in centrifugal systems. I consider that the application clearly and consistently says that if a mass or masses are rotating about an axis, and a force is applied to the mass or masses in a direction parallel to the axis of rotation, there will result a force acting at right angles to the plane of rotation effective to move the entire device, the force not being dependent upon the various effects mentioned in claim 1. This is confirmed by Mr Richardson in his letters to the Office.

16. I must therefore now consider whether this invention satisfies the requirement of Section 1(1)(c), which I have quoted above.

17. I summarise the main thrust of the examiner's view as being that the invention would be inconsistent with Newton's third law of motion. He says that, for there to be a force to move the complete assembly, there must, according to Newton's law, be an equal and opposite reaction to this force. If the reaction force acts within the closed system of the device, then the action and reaction must cancel out, and there will be no net force. He goes on to argue that, in his view, the application does not disclose any means by which the reaction force could be applied to anything outside the closed system. Whilst this is the crux, as I see it, of his objection, he has been careful, in the correspondence to address all of the submissions and scenarios posited by the applicant during the correspondence on this case.

18. I have also considered again all of the various submissions on the issue of industrial applicability made by Mr Richardson during the correspondence, as follows.

19. In his letter dated 6 August 1998, Mr Richardson agrees with many of the detailed points made by the examiner in his previous report, but suggests that, if the mass(es) are rotating in a horizontal plane, "then the mass will not be subject to the force of gravity as the mass has effectively no mass to be effected by gravity" He then goes on to say that by a change in relational angle between the rotating mass and the hub, "the energy within the rotating mass if sufficient will apply a force to the hub". I think that this is confusing the concept of mass (an intrinsic property of matter) and weight (a force depending on the interaction between mass and the prevailing gravitational field). Clearly a body will always have mass, and so I do not think this argument supports Mr Richardson's argument. Furthermore, and as the examiner says, it neglects the reaction force consequent upon the force effecting the relational angle, which Newton's law would say must be present.

20. In that same letter, he posits the situation where, if falling within a vacuum holding weights, he can affect his motion by swinging the weights (also mentioning a similar procedure which he has come across to jump over ditches). However, the movement of the weights he mentions is in a direction parallel with the resultant effect, rather than perpendicular to it, as in his invention. So, again, I do not see this as supporting his case.

21. His letter dated 30 March 2000, draws an analogy with gyroscopes, but explicitly goes on to distinguish the gyroscopic effects from his invention. He later submitted a copy of an article from the December 1999 issue of “Engineering Technology” where the author Glenn Turner, reviews activity in the use of gyroscopes, in particular for propulsion, but I note that even this article describes itself as “a little more speculative than usual”, and on a close reading of this, I can find nothing which would support Mr Richardson’s assertion.

22. His letter of 25 May 2000, replying to a report from the examiner dated 11 May 2000, acknowledges that some of the points made by the examiner are correct, but posits the situation where two connected masses are in a weightless environment, and one is projected away from the other, leading to movement of the arrangement. The examiner in his reply, in my view rightly, points out, if I can summarise, that the overall effect will be no overall change in the position of the centre of mass of the assembly as a whole.

23. In his final letter, Mr Richardson mentions another arrangement (which, I note he acknowledges as “outside of the patent design”). It does however have some similarities with his device. He posits a balanced rotating mass which has a movable part, which, he says, when moved at right angles to the plane of rotation will “try and take up a new rotational position which will impose a force on the hub”. I can not see that this differs from the proposal he has in his invention so far as again he does not explain where the reaction to the movement of the mass is absorbed.

24. Having carefully considered all of these submissions, however, I can find nothing, other than Mr Richardson’s fervently held and sincere belief, to persuade me that Newton’s third law does not apply to the device of the invention. I can see no way in which the reaction force could be absorbed within the closed system nor dispersed in any way given the very definite statements about the mechanisms which the invention does not use. Given that I can not see how, according to well-established natural law, the device could operate, I am bound to come to the conclusion that I must find that the application is not capable of industrial application. I can find nothing in the application to which this finding would not

apply, and therefore refuse the application.

### **Appeal**

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

Dated this 3rd day of October 2000

**B WESTERMAN**

Deputy Director, acting for the Comptroller

**THE PATENT OFFICE**