



**PATENTS ACT 1977**

APPLICANT Darran Bird

ISSUE Whether patent application  
GB 0611578.6 complies with sections  
1(1)(b), 1(2) & 14(3) of the Patents Act

HEARING OFFICER Dr. S. Brown

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**DECISION**

**Introduction**

- 1 Patent application GB 0611578.6 concerns a 'method for determining the length of a shaft of an individually adapted golf club'. It was filed on 13 June 2006 in the name of Darran Bird and was published as GB2430629.
- 2 During the examination process, the examiner raised three main issues: (i) that the invention was excluded as some combination of computer program, a mental act, and a mathematical method; (ii) that the invention was obvious; (iii) that the application was too unclear to allow others to perform the invention.
- 3 The applicant and the examiner were unable to resolve these issues and a hearing was held on 20 May 2010. Present in person were myself, the examiner, Mr. Mark Sexton, and an observer, Mr. Daniel Cox. Present via video-link from Germany were the applicant, Mr. Darran Bird, and Patent Attorney Dr. Bernhardt.

**Decision in brief**

- 4 The claims concern measuring the lengths of various body parts of a golfer standing in an upright position, calculating an optimum length of the shaft of a golf club using these lengths plus some predetermined angles, then choosing a golf club with this shaft length. What this contributes to human knowledge is a better calculation which enables a more convenient measurement process and results in a better choice of golf club shaft length.

- 5 Mr. Bird argued very eloquently at the hearing about the significant advantages of his invention and the historical and bio-mechanical research behind it. I do not doubt any of these things but for issue (i) UK law requires me to ask 'does the invention make a relevant *technical* contribution?' Regrettably, I am forced to conclude that it does not. Rather, it is a combination of a mathematical method and a method of doing business where the business is choosing customized golf equipment.
- 6 Thus, the contribution made by the invention as defined in the claims falls solely in subject matter excluded under section 1(2) of the Patents Act. I have read the specification carefully and can see nothing that could be reasonably expected to form the basis of a non-excluded claim.
- 7 I therefore **refuse** this application under section 18(3) of the Patents Act. Having come to this conclusion, I will not cover issues (ii) & (iii) in any detail. Mr. Bird may **appeal** this decision to the Patents Court within 28 days of the date of the decision stated above. I will now explain my decision in more detail:

### **The Application**

- 8 The claims I was asked to consider were filed on 16<sup>th</sup> September 2009. There are 4 claims in total with only claim 1 being independent. It reads:

*Method for determining the length of the shaft of a golf club to produce an individually adapted golf club, wherein the length (I1) from the floor to the ankle, the length (I2) from the ankle to the knee, the length (I3) from the knee to the hip, the length (I4) from the hip to the shoulder and the length (I5) from the shoulder to the root of the middle finger of the right arm, which lengths are decisive for the height position of a golfers hands above the floor in the address position and during golf swing, are measured and the length(L) of a first shaft piece up to a second shaft piece or end piece (L1) is calculated by the measured lengths and predetermined angles (A, B, C, D) between adjacent body parts corresponding to said lengths (I1-I5), as well as a predetermined angle (E) between the arms and the shaft or a predetermined lie angle ( $\alpha$ ) and wherein the respective lengths are measured while the golfer is standing upright, and the length measurement from hip to shoulder (I4) is multiplied with a given correction factor to compensate for the curvature of the spine when the address position is taken.*

- 9 Figure 1 of the application shows how these lengths and angles relate:

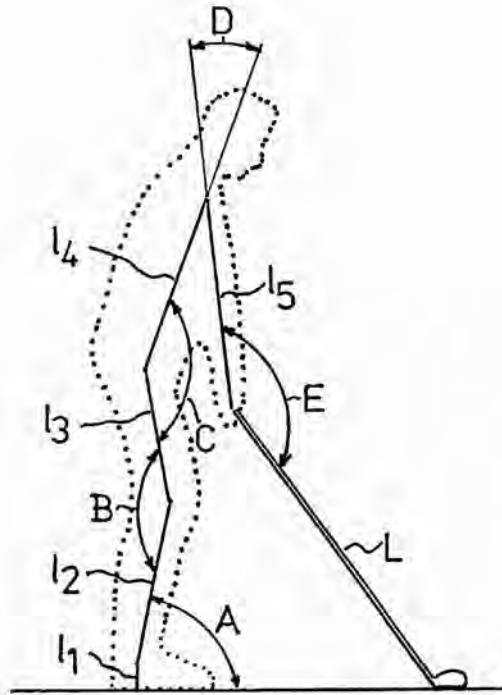


FIG.1

I will deal with each of the three issues in turn:

### Excluded matter

#### **The law and its interpretation**

10 Section 1(2) of the Patents Act reads:

*It is hereby declared that the following (among other things) are not inventions for the purposes of this Act, that is to say, anything which consists of:*

- (a) a discovery, scientific theory or mathematical method;*
- (b) a literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever;*
- (c) a scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer;*
- (d) the presentation of information;*

*but the foregoing provision shall prevent anything from being treated as an invention for the purposes of this Act only to the extent that a patent or application for a patent relates to that thing as such.*

11 The key legal precedent in this area is the judgment of the Court of Appeal in *Aerotel Ltd v Telco Holdings Ltd* and *Macrossan's Application* [2006] EWCA Civ 1371, [2007] RPC 7 ("*Aerotel*"). In this case the court approved a four-step test for assessing excluded matter, namely:

- 1) Properly construe the claim
- 2) Identify the actual (or alleged) contribution
- 3) Ask whether it falls solely within the excluded matter
- 4) Check whether the contribution is actually technical in nature.

### **Application of the Aerotel test**

#### Properly construe the claim

12 I do not think that any problems arise over the construction of the claim - to my mind there are three main parts: (i) The lengths (I1-I5) of various body parts are measured while the golfer is standing upright; (ii) a calculation is performed using these lengths plus the predetermined angles (ABCDE) plus a few other factors, to determine an optimum length (L) of the shaft of a golf club for the golfer; (iii) choosing, or otherwise producing, a golf club with this shaft length.

#### Identify the contribution

- 13 As summed up by Lord Justice Jacob in the *Aerotel* Court of Appeal judgment, the key question here is 'what has the inventor really added to human knowledge?' Mr. Bird and his Attorney argued that two main things have been added. Firstly, by its use of predetermined angles, the method allows golfers to be measured in a standing position. This is more comfortable and more easily done than much of the prior art which requires measurements while a golfer maintains the address position.
- 14 Secondly, the calculation itself is better, resulting in a much larger variation in optimum shaft length (L) than anything in the prior art. It is known, for example, to use a table that simply relates the overall height of a golfer to a recommended shaft length. However, Mr. Bird explained very eloquently why such a simple method does not allow for many important factors including different body shapes, the growth in average human height across history, and bio-mechanically correct golf club usage for healthy and effective play.
- 15 Mr. Bird also argued that precisely how the angles (ABCDE) are predetermined is not part of the contribution. This was mostly in relation to the issue of clarity and sufficiency but it also helps clarify things here too.

- 16 I am happy to accept Mr. Bird's arguments. So to summarise the contribution is a better calculation which enables a more convenient measurement process and results in a better choice of golf club shaft length.

Ask whether it falls solely within the excluded matter

- 17 The bulk of the contribution, but not all of it, resides in a mathematical method. The parts of the contribution that are clearly not just mathematical method are the measurement step and the choice of a golf club in response to the result of the calculation. However, both these parts, and the contribution as a whole, appear to me to be no more than a method of doing business where the business is choosing customized golf equipment.
- 18 I am thus forced to conclude that the contribution consists only of excluded subject matter. Claim 4 states that the calculation may be performed by computer software but as programs for computers are also excluded this does not change matters. The application thus fails the third Aerotel step.

Check whether the contribution is actually technical in nature

- 19 I cannot see any relevant technical effect in the contribution. The measurement step could be performed by a person with a tape measure, the calculation is a mathematical method, and the choice of golf club can also be done by a person. Taken as a whole the contribution appears to be a method of doing business. Thus the application also fails the fourth Aerotel step.

Inventive Step

- 20 As I have found that the application is excluded under section 1(2) I will not consider this issue in any depth. Prima facie, however, I would agree with Mr. Bird's arguments that the claims are novel and inventive over the prior art.
- 21 The documents cited by the examiner disclose methods that require a golfer to take up the address stance. Only then are various lengths and angles measured to determine an optimum golf club length. None of the documents disclose measuring the lengths specified in Mr. Bird's application. Nor do they disclose measuring anything with the golfer standing upright and then combining this information with predetermined angles related to the address stance. Additionally, none of the citations disclose anything that would lead the skilled reader any further towards Mr. Bird's invention. Thus the claims appear novel and inventive.

### Clarity & Sufficiency

- 22 Likewise, I will not consider this issue in any depth. Briefly, problems arise because the application does not explicitly detail how the angles (ABCDE) or the correction factor for spinal curvature are predetermined in practice. As mentioned above, Mr. Bird argued that precisely how these values are predetermined is not part of the invention. I am happy to accept this and to conclude that a skilled person could perform the invention based on the information in the application. Knowing what the angles and factors relate to several obvious ways to predetermine them immediately suggest themselves.

### **Decision**

- 23 I have found that the contribution made by the invention falls solely in subject matter excluded under section 1(2). I have read the specification carefully and I can see nothing that could be reasonably expected to form the basis of a valid claim. I therefore refuse this application under section 18(3) of the Patents Act.

### **Appeal**

- 24 If Mr. Bird disagrees with anything in this 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.

**Dr. S. Brown**

Deputy Director acting for the Comptroller