



## **PATENTS ACT 1977**

APPLICANT    Nicholas David Smith

ISSUE    Whether patent application number  
    GB1110592.1 complies with sections 1(1)(b)

HEARING OFFICER                                H Jones

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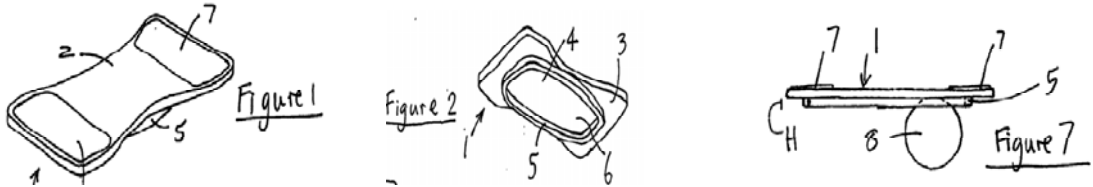
## **DECISION**

### **Introduction**

- 1 UK patent application GB1110592.1 is a divisional application of GB0711760.9 with a priority date of 16<sup>th</sup> June 2006. The application relates to an exercise apparatus comprising a balance board arrangement that can be mounted on a separate ball and that a user can stand and balance upon. The board is defined in claim 1 as being substantially flat, although it is noted in the description that this term “substantially flat” could mean “slightly dished at the centre”. The examiner has taken the view that this gives a particular significance to the meaning of the term “significantly flat” beyond the normal purposive construction of the term, and, as a consequence, renders the invention obvious in light of prior art patent literature. The applicant disagrees both with the examiner’s interpretation of the claim and the relevance of the prior art documents.
- 2 The issue came before me to decide at a hearing held by video-conference on 17<sup>th</sup> November, at which Mr James Whyte, instructed by the applicant’s patent attorney Mr Michael Deans, appeared as counsel for the applicant. The applicant, Mr Smith, was also in attendance, together with Mr Dean’s assistant, Ms Catrin Perry. Before the hearing, Mr Whyte submitted skeleton arguments which I found extremely helpful in focusing attention onto the key issue to be decided in this case, namely the construction of the term “substantially flat” in claim 1. In response to the skeleton argument, the examiner conceded that if the proper construction of the term “substantially flat” is the technically inconsequential departure from flatness suggested by Mr White in his skeleton argument then the inventive step argument falls away and the application can be granted.

## The application

- 3 The invention can best be described by reference to figs. 1, 2 and 7 of the application reproduced below.



- 4 The balance board 1 has a top side 2 for the user to stand on and an under side 3 having a wall 5 intended to limit movement of a ball when in use. The application explains that the wall serves to restrain movement of the ball and board relative to each other beyond a maximum extent so that the ball is restrained from simply rolling out under the board, causing a user balancing on the board to fall.
- 5 The application has one independent claim, claim 1:

*Exercise apparatus comprising a balance board in combination with a ball; the balance board being shaped to define a generally longitudinal direction and a direction generally transverse to the longitudinal direction; the board having a top side, that extends continuously over the longitudinal and transverse extent of the board, the whole surface of which top side is available for a user to balance upon, and an underside; the board being formed from a first top portion defining said top side and having a substantially flat region on its under side and a second lower portion defining a wall projecting from the substantially flat region and having an inner surface defining a region at least substantially bounded by said inner surface and consisting of at least a portion of said substantially flat region, the distance across the bounded region in the longitudinal direction of the board being greater than in the transverse direction, and the ball having a diameter less than the distance across the bounded region in the transverse direction; the ball being entirely separate from the board, and the bounded region being arranged to be freely mounted on top of the ball; the board being enabled to move relative to the ball, when the bounded region is balanced on the ball and a user balances on the top side, with at least a degree of spherical rotational freedom and also a degree of translational freedom in directions other than the vertical, and with the inner surface of the wall defining both a maximum extent for movement of the board relative to the ball and a restraint against the ball rolling out from under the bounded portion.*

## Claim construction

- 6 In the context of deciding whether the invention involves an inventive step, an essential first step is to understand what that invention is before considering whether any difference between it and the prior art would be regarded as inventive by the skilled person. Section 125 of the Act sets out the meaning of an invention as that specified in a claim as interpreted by the description and any drawings. Although

rather long-winded, the scope of the invention set out in claim 1 is reasonably unambiguous based on the ordinary meaning of the words of the claim, and I would not expect it necessary for a skilled person to have to rely on the description or the drawings in order to understand the meaning of the invention. To the uninitiated, there may be a degree of doubt about what is meant by the term “substantially” in the context of flatness, but as Mr Whyte points out in his skeleton argument, the law is quite clear on the use of such generalising expressions in patent claims - he points in particular to paragraph 14.130 of the Office’s Manual of Patent Practice:

*“14.130 Generalising expressions such as "substantially" or (applied to numerical data) "about" should be construed, both as regards the extent of the monopoly and the relationship between the invention and the prior art, according to the subject-matter and the context. They may be allowable if they do not render the scope of the claims indeterminate. In PLG Research v Ardon, [1995] RPC 287 Aldous J. applied the Catnic principle in holding that "substantially uniplanar" did not exclude an insubstantial departure from uniplanarity due, for example, to features inherent in manufacture. "Uniplanarity" should be judged on the basis of the eye of the skilled addressee, who would judge a departure by its size and quality. On the other hand, where such generalising expressions are inappropriate, eg a reference to "an alkyl group containing about five carbon atoms", objection should be raised.”*

- 7 So, as Mr Whyte put it to me at the hearing, the law points to a purposive construction of the term “substantially flat” to mean “flat or a technically inconsequential departure from flatness”, and does not require any reference to the description or the drawings in order to construe it as such. Nevertheless, Mr Whyte refers to a number of passages in the description which support the construction of “substantially flat” as being flat:
- a) page 1 lines 24-25, discussing the prior art: “Boards have been provided with a substantial concave surface beneath the board. However, this results in a board with a complex construction...”;
  - b) page 2 lines 11-13, mirroring the wording of claim 1, “the board being formed from a first top portion... having a substantially flat region on its under side...”;
  - c) page 3 lines 8-16, speaking about the board of the invention: “The substantially flat region on the underside need not be entirely flat. It could be slightly dished at its centre, and the term “substantially flat” is to be understood to encompass such variations. However, the substantially flat region with a wall surrounding it is to be contrasted with the substantial concave region in some prior boards which may terminate in a lip... Apart from their expense, which is a major drawback, the smoothly concave shape right up to the lip simply guides the ball towards the lip, and a simple excess movement will carry the ball past the lip, causing the user to fall.”
- 8 Mr Whyte also points to the figures, which exclusively show an entirely flat underside. He adds that the claim is worded so as to avoid a non-infringement argument based upon a technically inconsequential departure from flatness. The word ‘substantially’ imports a degree of flexibility which precludes an exact and literal construction, so functions expressly to include within the claim the sort of variants that survive the first *Catnic* question, i.e. those that have no material effect on the way the invention

works. He says that the skilled reader takes a practical approach, particularly in the case of a simple mechanical patent such as the present one.

- 9 The examiner argues that there is a definite indication in the application as to what is meant by “substantially flat”, and that this can be found within the passage of text at lines 8-16 of page 3 quoted above. Here the description quite clearly says that the substantially flat surface can be slightly dished at its centre, which gives the term a meaning beyond an inconsequential departure from flatness.
- 10 The first question I must answer is whether there is any need for me to refer back to the description and figures when the ordinary meaning of the words and the purposive construction of the claim provides sufficient clarity to understand the invention. In normal circumstances I would say no, but in this case there is specific reference in the description as to what the reader should understand from the term that it simply cannot be ignored.
- 11 The next question to answer is what would the skilled reader understand from the term “substantially flat” when taking the additional context provided by the description into account. I accept Mr Whyte’s argument that the application points away from the surface being substantially curved as is the case the in prior art balancing boards where the curved surface acts as a means of restraining movement of the board relative to the ball. I believe that there is also some significance in the fact that the description limits the departure from flatness to the centre of the board, i.e. the slightly dished shape “at its centre”. Although the description does not say so, I would expect the skilled person to interpret this as a means for initially positioning the ball relative to the board before the user steps on and, possibly, providing some small degree of initial stability. However, the general teaching of the description is that of a flat surface where restraint of the ball relative to the board is the function of the wall and of the wall only. This leads me to conclude that the term “substantially flat” can be construed in the way that Mr Whyte suggests, i.e. a technically inconsequential departure from flatness.
- 12 The examiner accepts that if I find in the applicant’s favour on the meaning of “substantially flat” then the inventive step objection falls away. As the examiner has no other objections to the granting of a patent, I shall remit the application back to relevant section to make the necessary arrangements for grant.

**H JONES**

Deputy Director, acting for the Comptroller