



17 August 2011

PATENTS ACT 1977

APPLICANT Jest Technologies PTY Limited

ISSUE Whether patent application
GB 0810152.9 complies with sections
1(1)(a), 1(1)(b), 14(5)(b) and 76(2)

HEARING OFFICER J E Porter

DECISION

Introduction

- 1 International patent application PCT/AU2006/001606 entitled "A compression garment or method of manufacture thereof" was filed on 30 October 2006 in the name of Jest Technologies PTY Limited. The application claimed a priority date of 25 November 2005 from patent application AU 2005906582.
- 2 The international application was published as WO 2007/059552 A1 on 31 May 2007, and entered the UK national phase on 4 June 2008 as UK application number GB 0810152.9. It was reprinted as GB 2 446 544 A on 13 August 2008.
- 3 Following several rounds of examination, the applicant has been unable to convince the examiner that the application as amended does not add matter, that the claims are clear, or that the invention is novel and inventive.
- 4 The matter therefore came before me at a hearing held on 17 June 2011. The applicant was represented by Mr Thomas Lambert of the patent attorneys Wilson Gunn. Also present was Mrs Rebecca Villis, who was assisting me, and Dr Sarah Whitehead, the examiner.

The application

- 5 The application concerns sportswear garments which are designed to apply compression to particular areas of the body. This is said to increase circulation, reduce the likelihood of certain injuries, and assist in the recovery from injuries. In particular, the invention concerns a compression garment in which muscle groups are isolated from one another by the provision of panels which are joined by seams following the contour of the surface anatomy of the muscle groups. The garment provides gradient compression to the muscles.

6 The application comprises two independent claims. Claim 1 relates to a compression garment and claim 23 to a method of manufacturing a compression garment. The claims as they now stand read as follows:

1. A compression garment comprising:

a compression fabric formed into a number of panels that follow the outline of muscle groups according to the surface anatomy of a person; and

a number of seams joining adjacent said panels,

such that the shape of the compression garment is formed by joining adjacent said number of panels together at said number of seams;

wherein the seams follow the contour of the surface anatomy of the muscle groups when the garment is assembled and worn, such that the panels and seams isolate each muscle group from the others, and each garment panel provides targeted gradient compression to said muscle groups.

23. A method of manufacturing a compression garment comprising the steps of:

laying out a compression fabric;

applying one or more patterns to the compression fabric that define the outline of muscle groups according to the surface anatomy of a person;

cutting the compression fabric into panels according to said patterns;

and sewing the panels together such that a number of seams follow the contour of the surface anatomy of the muscle groups, such that when the garment is assembled and worn, the panels and seams isolate each muscle group from the others and each garment panel provides targeted gradient compression to said muscle groups.

The law

7 Section 76(2) relates to the adding of matter to a patent application, and says

No amendment of an application for a patent shall be allowed under section 15A(6), 18(3) or 19(1) if it results in the application disclosing matter extending beyond that disclosed in the application as filed.

8 Section 14(5) sets out various requirements for the claims, and in particular says

The claim or claims shall -

(a) define the matter for which the applicant seeks protection;

(b) be clear and concise;

[other provisions not relevant]

9 Section 1(1) deals with the conditions for grant of a patent, and states that:

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

(a) the invention is new;

(b) it involves an inventive step;

[other provisions not relevant]

10 Section 2 sets out what novelty means; subsections (1) and (2) are relevant here:

(1) An invention shall be taken to be new if it does not form part of the state of the art.

(2) The state of the art in the case of an invention shall be taken to comprise all matter (whether a product, a process, information about either, or anything else) which has at any time before the priority date of that invention been made available to the public (whether in the United Kingdom or elsewhere) by written or oral description, by use or in any other way.

11 Section 3 sets out how the presence of an inventive step is determined:

An invention shall be taken to involve an inventive step if it is not obvious to a person skilled in the art, having regard to any matter which forms part of the state of the art by virtue only of section 2(2) above (and disregarding section 2(3) above).

12 The attorney made some submissions in respect of the way in which I should approach these provisions, which I consider as a part of my analysis below.

Argument and analysis

13 In my view, it is necessary first to deal with the issues of added matter and clarity, before going on to consider the questions of novelty and inventive step.

Arguments concerning added matter

14 Claims 1 and 23 were amended on 30 March 2011 to read that “each garment panel provides targeted gradient compression to said muscle groups”.

15 The examiner’s view is that the specification as filed does not clearly and unambiguously disclose that each panel provides “targeted gradient compression”, as distinct from the overall garment providing a compression gradient across its entirety, which is targeted at particular muscle groups. Thus, in her view, the inclusion of this feature appears to add matter to the application (although the clarity objection relates to this feature too – see below).

16 At the hearing, Mr Lambert put forward a number of reasons in support of the applicant’s view that this feature does not add matter.

17 First, he pointed out that claim 1 as filed referred to “a compression fabric formed into a number of panels, said panels defining muscle groups according to the surface anatomy of a person...wherein each garment panel provides targeted compressive support to the said muscle groups isolating each muscle group from the others”. He then pointed out that claim 3 as filed (which was dependent on claim 1) stated that “the fabric uses gradient compression to isolate the muscle groups”. Claim 3 as filed, he argued, therefore brings out that it is the gradient compression, in conjunction with the seams, that serves to isolate the muscle groups.

18 Mr Lambert also directed me to lines 18 and 19 of page 12 of the specification as filed, which states that “the fabric creates a graduated compression across the musculature...”. He was of the view that the term “musculature” can refer not only to the muscles of the body as a whole but also to individual muscle groups – and

he provided me with dictionary definitions to support this view. More specifically, since the application as a whole is directed to individual muscle groups, the term “musculature” in this application referred to individual muscle groups rather than the whole body. In support of this view Mr Lambert directed me to originally-filed claim 26, which referred to “the musculature of muscle groups”.

- 19 He therefore contended that it is clearly and unambiguously derivable from the specification as filed that each panel acts on a respective muscle group, and that each panel applies gradient compression targeted on that muscle group.
- 20 As noted earlier, the issue of added matter is inextricably bound up with the examiner’s objection to lack of clarity. Before going any further on the added matter point, I therefore turn to the clarity issue.

Arguments concerning clarity

- 21 The examiner contends that the term “targeted gradient compression” in claim 1 (and elsewhere) is unclear, and that the phrase “each garment panel provides targeted gradient compression to said muscle groups” in claims 1 and 23 does not necessarily make clear that the compressive force varies within a single panel, as the applicant contends, rather than across the garment as a whole.
- 22 Her view is reinforced by the reference in the current claims to “each garment panel” providing targeted gradient compression “to said muscles groups”, and it also relates to her point about the meaning of “musculature” and the reference on page 12 lines 18 to 19 to the fact that “the fabric creates a graduated compression across the musculature”.
- 23 Mr Lambert took the view at the hearing that claims 1 and 23 were clear in defining that each panel applies a targeted gradient compression across a muscle group. He argued that the application discloses how the targeted gradient compression is achieved – namely, that the warp and weft arrangement in the fabric of a panel creates a graduated distribution of compression in each panel. He conceded that the description does not provide a lot of information on this point, but argued that it is known to use warp and weft differences to provide a compression gradient, and therefore it is not necessary to include detail on how this is achieved. Taking the view that references to “musculature” mean the musculature of individual muscle groups, he then takes the references to “said muscles groups” in claims 1 and 23 as referring to each muscle group that the panel isolates.
- 24 Thus, he argued, the claims are clear in setting out that a targeted gradient compression is applied across particular isolated muscle groups.

Analysis of the added matter and clarity arguments

- 25 Looking at the specification as a whole, I am clear that it teaches that a garment panel is associated with a respective muscle group, and that each panel provides compressive support which is targeted on its respective muscle group. I also agree with the attorney that claim 1 as filed makes this point clearly.

- 26 I am less convinced by the argument put forward in relation to claim 3 as filed when read in light of claim 1. Claim 3 refers to the fabric using gradient compression to isolate a muscle group – as Mr Lambert pointed out. But there remains, in my view, a question over whether, when claims 1 and 3 are read in combination, they provide disclosure of each panel providing “targeted gradient compression” to a muscle group, or whether they provide disclosure of gradient compression across the garment fabric as a whole being used to ensure that panels provide targeted compressive support to muscle groups (but where any given panel is at uniform compression).
- 27 However, the specification as filed can shed some further light on this point. It seems to me that, when it talks about gradient compression, it does so in terms of that gradient compression being associated with a particular panel of the fabric, rather than referring to a gradient across the garment as a whole.
- 28 First, there is page 11 of the specification as filed, which refers at lines 7-9 to forming a fabric panel around the calf, and in which the fabric creates a gradient compression. Also, I have no difficulty in accepting the assertion that “musculature” is not limited to the muscle grouping of the entire body, but can relate to a particular muscle group or part of the body. The dictionary definitions I was shown provide support for this, but also the specification as filed refers on page 14 to “the musculature of the knee” and, as Mr Lambert pointed out, original claim 26 refers to the “musculature of muscle groups”. It follows, therefore, that I can accept that the statement on page 12 that “The fabric creates a graduated compression across the musculature...” would say to the skilled reader of the specification that it is concerned with graduated compression across a muscle group.
- 29 It follows that I am satisfied, when the claims are read in light of the specification as a whole, that the phrase “each garment panel provides targeted gradient compression to said muscle groups” is sufficiently clear in meaning. In the light of the description and the previous reference in the claim to each isolated muscle group, I do not think this phrase can be understood as referring to each panel providing targeted gradient compression to the muscle groups as a whole. It means that each panel is designed to target compression on a muscle group, and that there is a compression gradient across each panel.
- 30 It follows from my reasoning that I am satisfied that the specification as filed does disclose that each panel can provide gradient compression which is applied to a particular muscle group. Therefore I do not think that the amendments of claims 1 and 23 add matter.

Novelty

- 31 As noted above, the examiner takes the view that it is unclear whether the compression is graduated over the whole garment or across a single panel. In light of this, the invention is not considered in her view to be novel over the disclosure in European patent application EP1110464 A3 (“Speedo”), which was published in 2001. The examiner in particular contends that the construction of the compressive swimsuit in Speedo which provides muscle-specific compressive panels would inevitably result in gradient compression of the muscles.

- 32 Mr Lambert contends that claims 1 and 23 are novel. In his view, Speedo is silent on the provision of a gradient compression and in particular provides no disclosure of gradient compression over individual panels.
- 33 Speedo discloses a compression garment for swimming or other sporting activities, made of panels of stretchable elasticated fabric (compression fabric) joined by seams where panels are shaped specifically for a muscle area which they enclose and are bordered by seams. It discusses providing higher tension in parts of the suit relative to other parts. Paragraph [0005], for example, refers to constructing the suit to “fit closely and under high tension around the wearer’s waist or lower back relative to the tension around the broader and stiffer chest and pelvic regions above and below”. Given my finding on clarity, the question now is – does Speedo disclose a panel providing gradient compression across that panel?
- 34 Paragraph [0014] of Speedo refers to the possibility of a muscle group not being entirely surrounded by seams – where tensioning is less important the muscle groups may be separated by a nexus or isthmus of one fabric region to another. Mr Lambert took the view that in this case the seams do not follow a muscle group and so this does not amount to providing a gradient compression across a panel which isolates a muscle group by virtue of the panel and seams. I think he is right that claim 1 of the application in suit requires the panel and the seams to isolate a muscle group, and that the panel and seams of the embodiment discussed in paragraph [0014] of Speedo do not do this, since the muscle group is described as not being entirely surrounded by seams.
- 35 Speedo also refers in paragraph [0038] to fabrics having different stretchabilities in the warp and weft directions. Mr Lambert argued that a specific arrangement of warp and weft is required to achieve the gradient compression of the application in suit. He acknowledged that there is little discussion of how this is achieved but contended that it would be done using a known variation of warp and weft to produce a variation in tension. By contrast, he argued that the reference in Speedo to the effect of warp and weft is made in the context of how stretchability is affected or controlled by the positioning of seams – since there are different stretchabilities in the warp and weft directions, positioning the seams in a certain direction will affect the tension in a particular direction.
- 36 Having considered the point carefully, my view is this: Speedo teaches that panels isolate each muscle group and that it is possible to have gradient compression over different parts of the whole garment. It does not, however, disclose explicitly the idea of having gradient compression over a panel which isolates a muscle group. To the extent that paragraph [0038] mentions the warp and weft of the material, I agree that here the specification is acknowledging factors which are known to affect stretchability. The warp and weft arrangement is one; the length of the material is another. Whilst it may be argued that the skilled person would realise that warp and weft could in certain circumstances be used to create a gradient compression, that does not – it seems to me – get so far as saying that the acknowledgment of the effects of warp and weft at paragraph [0038] of Speedo has “planted the flag” at the idea of providing gradient compression over a particular panel.

37 I conclude that claims 1 and 23 are novel over the disclosure in Speedo.

Inventive Step

38 The examiner also contends that the invention of claims 1 and 23 lacks an inventive step.

39 It is agreed that the approach I should adopt is to work through the well-established steps set out by the Court of Appeal in *Windsurfing*¹ and restated by that Court in *Pozzoli*². These are:

(1)(a) Identify the notional "person skilled in the art"

(1)(b) Identify the relevant common general knowledge of that person;

(2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it;

(3) Identify what, if any, differences exist between the matter cited as forming part of the "state of the art" and the inventive concept of the claim or the claim as construed;

(4) Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?

Step 1 – identify the skilled person and their common general knowledge

40 In her examination report dated 12 January 2011, the examiner considered the person skilled in the art to be someone working in the design and manufacture of compression garments for sporting purposes. She went on to attribute to this skilled person knowledge not only of compression technology in sportswear but also compression technologies, including fabrics, used in other garments, such as gradient compression stockings, and their advantages.

41 Mr Lambert did not disagree with this assessment in either respect, and I am happy to adopt it.

Step 2 – identify the inventive concept

42 The examiner went on to identify the inventive concept of claim 1 as the arrangement of fabric panels and seams according to the surface anatomy of a person in order to provide isolated compressive support to the muscle group, in which the fabric used to form said panels uses gradient compression to compress the muscle groups.

43 Mr Lambert presented the inventive concept as provision of a compression garment which can be used to improve the performance of an athlete while he is in motion by providing targeted gradient compression across each panel of the garment. This, he said, provides advantages over global gradient compression in that a high pressure gradient can be maintained across each muscle group even when the wearer is in motion.

¹ *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd* [1985] RPC 59

² *Pozzoli SpA v BDMO SA* [2007] EWCA Civ 588, [2007] FSR 37

44 As discussed above, I have understood the phrase “each garment panel provides targeted gradient compression to said muscle groups” to mean that each panel targets compression on a muscle group, and that there is a compression gradient across each panel. I therefore agree with Mr Lambert that on this basis the inventive concept must include the use of gradient compression across individual panels.

45 The application as filed does disclose the idea that individual panels remain around their respective muscle groups even when the wearer moves, so that targeted compression is maintained to the muscle group (although I note this is referred to in claim 2 rather than the independent claims being discussed here). I do, however, think the application is silent as to the question of what happens to the compression gradient within each panel during motion or flexing of the wearer. So, while I agree the application discusses maintaining compression on individual muscle groups when the wearer is in motion, the application does not make reference to maintenance of a particular gradient. Also, while the improved athletic performance of the wearer may be a consequence of this inventive concept, I do not think that it forms part of the inventive concept itself.

46 I therefore consider the inventive concept to be the arrangement of fabric panels and seams according to the surface anatomy of a person in order to provide isolated compressive support to one or more muscle groups, where each individual panel provides gradient compression to the muscle group it isolates.

Step 3 – identify the differences between the state of the art and the inventive concept

47 The examiner and Mr Lambert agree that Speedo represents the closest prior art, and so is the starting point from which to consider this step.

48 The examiner considers the difference identified in step 3 to be that Speedo does not specify that the fabric uses gradient compression to compress the muscle groups.

49 Mr Lambert takes a different view – that Speedo is directed to a different concept, namely to enable a highly-tensioned fit of a swimsuit over a body. He considers that Speedo does not identify gradient compression across individual muscle groups or the advantages that this provides.

50 It seems clear to me that Speedo discloses a close-fitting swimsuit or other similar sports garment which provides muscular support and compression to individual muscle groups by the provision of panels of compressive material joined by seams. Each muscle group is isolated by the panel and seams.

51 Having identified the inventive concept in step 2 above, it is clear that the difference between that inventive concept and Speedo is that the panels of the Speedo garment do not provide gradient compression to the muscle group which they isolate. I note that this is consistent with my reasoning in paragraph 36 above, in relation to novelty.

Step 4 – is the difference obvious to the skilled person?

- 52 The examiner considers the use of gradient compression to be well-known in sports compression garments and medical compression garments. In particular, she identifies two other published patent applications which exemplify the use of gradient compression in sportswear and swimsuits respectively. These are international patent application WO 02/064073 A1 published in 2002 (“Duffy”) and European patent application EP 1127500 A3 published in 2001 (“Adidas”). She considers that it would be obvious to the skilled person to combine the teachings of either Duffy or Adidas with that of Speedo to arrive at the compression garment of claims 1 and 23.
- 53 The applicant disagrees, and at the hearing Mr Lambert put forward a number of reasons for doing so. First, he considered that Speedo is directed towards a different problem from the application in suit, and is concerned with providing an improved tightly-fitting garment. Compression may vary across the Speedo garment but this, he argued, is all in the context of improved fit.
- 54 The application in suit, on the other hand, is not concerned with uniform tight fit but with providing a compression garment that improves the performance of the athlete when they are moving. He acknowledged that paragraph [0002] of Speedo refers to reducing muscle vibration and fatigue, but argued that muscle fatigue is only one of the problems addressed by using gradient compression across each panel in the way of the application in suit.
- 55 Mr Lambert therefore disagreed with the examiner that the skilled person would be prompted to consider gradient compression when looking at Speedo – because use of gradient compression across individual muscle groups and use of a tightly-fitting swimsuit are different solutions to the problem of addressing muscle fatigue. Since Speedo solves the problem of muscle fatigue using a tightly-fitting garment, the skilled person would not go on to consider solving that problem using gradient compression in a panel.
- 56 He also argued that Speedo teaches away from the use of gradient compression because it requires a uniform compression across each of the panels. Although he could not point me to where Speedo says this explicitly, Mr Lambert argued that it was derivable from the teaching that a uniform tight fit is required for each panel.
- 57 Turning to Adidas and Duffy, Mr Lambert argued that they describe global gradient compression across the whole of the garment, so that even if the skilled worker were to combine the teaching of either document with that of Speedo they would arrive at a garment where compression varied globally across the suit rather than across individual panels.
- 58 I have considered all of these points very carefully. The application in suit is concerned with sporting garments which provide the optimum compression of muscle groups in order to improve circulation and thereby muscle performance (e.g. quicker lactic acid removal), reducing the likelihood of muscular injuries and aiding recovery from such injuries.

- 59 I consider that Speedo is addressing fundamentally this type of problem or issue. Speedo talks about optimal ways of compressing muscle and improved fit, in order to improve performance and also reduce muscle fatigue. I am therefore satisfied that the skilled person would give it serious consideration when considering how to deal with issues of improved muscular performance.
- 60 Secondly, I do not agree with Mr Lambert's assertion that Speedo provides a solution which would stop the skilled person from considering other adjustments or features. It talks about achieving a highly-tensioned fit, and also discusses the use of different tensions in different panels. It does not say in terms that one should have a uniform tight fit across each panel, although Mr Lambert considered that the skilled man would infer this because Speedo is about a tight fit being used to improve muscle performance, and so the skilled man would be directed away from considering gradient compression. I am not convinced by this point, and do not consider that the teaching amounts to a direction to the skilled man to this effect.
- 61 Speedo generally indicates that a highly-tensioned fit is desirable, and refers to "improved tension fitting". There is discussion of achieving, in general terms, "high tension over the wearer's body" and having at least some "high tension regions of the suit" but I do not see that these discussions clearly direct the skilled person to consider only uniform compression in each panel. I cannot see any convincing basis for saying that the discussion of these points would lead the skilled person away from considering other known techniques for improving muscle performance. I therefore do not agree that Speedo would rule out of the skilled person's mind the possibility of options other than a uniform compression in each panel.
- 62 Of course that in itself is not enough to say that the invention is lacking an inventive step. But that is where the disclosure in Adidas and Duffy are relevant.
- 63 Both documents teach that gradient compression may be applied across a tensioned sporting garment in order to improve muscular performance, circulation and efficiency. I think that the skilled person would give the disclosure of these documents serious consideration when considering the problem of improving muscular performance and preventing muscular injury. It may therefore be the case that the general discussion of gradient compression in Adidas and Duffy is sufficient, when taken with Speedo, to say that the only difference between Speedo and the application in suit – that of gradient compression across each of the panels – is one that would be obvious to the skilled person. However, I think there is a further factor which clinches this point.
- 64 Adidas in particular discloses a tensioned swimsuit where portions of that suit apply "graduated compression" in specific areas. In particular, paragraphs [0012], [0013], [0034] and [0035] refer to the use of gradient compression in various portions of the swimsuit which are applied to, for example, an arm or leg.
- 65 Mr Lambert did not consider these portions to represent the panels of the application because they do not isolate muscle groups; rather, they apply to the whole of an arm or leg. I agree with that so far as it goes.

- 66 However, as noted above, the only difference between Speedo and the invention in suit is that the latter has gradient compression across the panels. Adidas not only teaches that gradient compression in a tensioned compressive garment is a way of helping to achieve better muscular performance, it goes so far as to teach the skilled person that gradient compression can be applied in specific identified parts of that garment.
- 67 I am therefore satisfied in light of that teaching that the skilled person would not be exercising any inventive ingenuity in taking the disclosure of Speedo and providing a garment as disclosed in that document, but with a compressive gradient across the panels.
- 68 It follows that I consider claims 1 and 23 to be lacking in an inventive step. In the circumstances of this case, I do not need to consider the dependant claims.

Conclusion

- 69 I conclude that the application does not contain added matter, and that the claims are clear and define an invention which is novel over the prior art identified. However, I conclude that claims 1 and 23 are lacking in an inventive step.
- 70 The compliance period has expired and there is no possibility of an extension under rule 108. I therefore refuse the application under section 18(3).

Appeal

- 71 Under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal must be lodged within 28 days.

Dr J E PORTER

Deputy Director acting for the Comptroller