



PATENTS ACT 1977

APPLICANTS Theresa Jane Pope & Hayley Marie Leete

ISSUE Whether patent application GB1204489.7 complies
with section 1(1(b)) of the Act

HEARING OFFICER Dr Jim Houlihan

DECISION

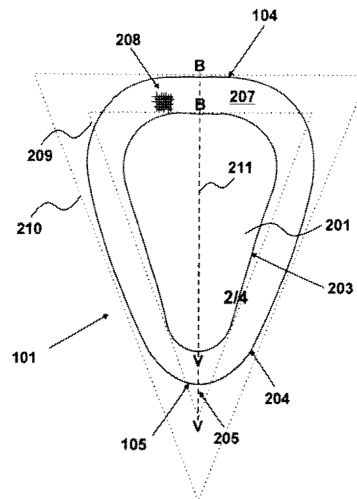
Background

- 1 The application is entitled “perspiration shield” and was filed on 13 March 2012 and published on 18 September 2013 as GB2500226 A.
- 2 The examiner had pursued the objection that the claims were not inventive on the basis of several prior art documents. As the matter was not resolved the applicant requested a hearing. In line with practice, the examiner issued a letter of 16 October 2016 summarising the issues to be decided at the hearing.
- 3 Before the hearing took place I reviewed the papers on the file and asked the examiner to reconsider some of the prior art which he had cited earlier in the proceedings but was not mentioned in his letter of 16 October 2016. Also, I considered there were several authorities which may become relevant to applying the law of inventive step to those documents. I therefore asked the examiner to draw both the additional prior art and the case law to the applicant’s attention in a further letter dated 18 January 2017. I can confirm that I have considered all the relevant material on this file and that it has been drawn to the applicant’s attention as necessary.
- 4 A hearing took place on 26 January 2017. Representing the applicant was Mr Samuel Pedwell [REDACTED] I was assisted by Dr Matthew Jefferson. The examiner also attended.

The invention

- 5 The alleged invention (“the invention” for convenience) relates to a perspiration shield for the underarm. It comprises an absorbent pad for contact with sweat glands and a barrier layer to prevent fluid from escaping from the pad and staining clothes. Both the pad and the barrier layer are in the shape of an acute isosceles triangle as

best illustrated by figure 2 of the application reproduced below. A border area is defined between the edges of the barrier layer and the pad and an adhesive is provided in this area to secure the device to the underarm area. The application suggests that such a pad is particularly useful for people who experience excessive sweating and/or for whom conventional chemically-based deodorants might cause irritation.



The law

6 The issue to be decided is whether the inventions of claims 1-15 involve an inventive step. This concerns section 1(1)(b) and section 3 of the Act.

7 Section 1, as is relevant, reads:

“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) it involves an inventive step...*”
- (c)...*
- (d)...*

and references in this Act to a patentable invention shall be construed accordingly.

8 Section 3 of the Act requires that:

“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).”

9 Whether an invention defined by the claims involves an inventive step is assessed using the four-step test first formulated by the Court of Appeal in *Windsurfing*

*International Inc. v Tabur Marine (Great Britain) Ltd*¹ and restated by the court in *Pozzoli SPA v BDMO SA*² (the Pozzoli test):

“(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?”

The claims

10 The present version of the claims was filed on 10 December 2015 and consists of the main claim, thirteen dependent claims and an omnibus claim.

11 Claim 1 reads:

A perspiration shield releasably adherable to the skin of the underarm, comprising:

a perspiration absorbing pad having an outer perimeter defining a first shape, and

a perspiration barrier layer configured to be impermeable to perspiration, the barrier layer having an outer perimeter defining a second shape, and having an inner side and an outer side;

said perspiration absorbing pad is disposed on the inner side of said perspiration barrier layer such that a border between the outer perimeter of said perspiration absorbing pad and the outer perimeter of said perspiration barrier layer is defined on the inner side of said perspiration barrier layer, and

said perspiration barrier layer carries adhesive presented in said border around the outer perimeter of said perspiration absorbing pad;

said first shape of said perspiration absorbing pad and said second shape of said perspiration barrier layer are each an acute-isosceles triangle with rounded corners shape having a base and a vertex, and

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

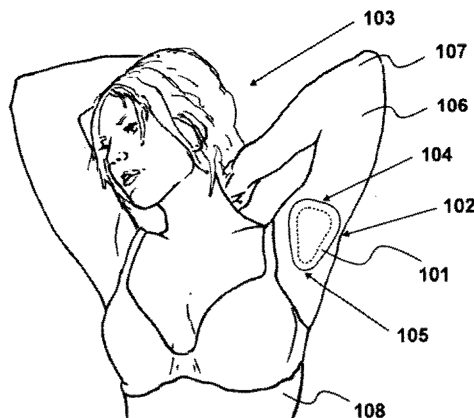
² *Pozzoli SPA v BDMO SA* [2007] EWCA Civ 588

said perspiration absorbing pad and said perspiration barrier layer are relatively oriented such that said perspiration shield has an arm end at which the bases of said first shape and second shape are oriented and a torso end at which the vertexes of said first shape and said second shape are oriented.

- 12 Firstly, I must construe this claim having regard to section 125(1) of the Act and Protocol 69 of the European Patent Convention, following the well-known House of Lords authority on claim construction in *Kirin-Amgen*³. This requires that I construe the claims purposively, interpreting them in the light of the description and drawings, to decide what a person skilled in the art would have understood the language of the claim to mean.
- 13 With the exception of the final clause, there are not considered to be any issues with the construction of claim 1. To that point, claim 1 is clear and describes a product.
- 14 However, the final clause on lines 19-22 which reads “*said perspiration absorbing pad...second shape are oriented*” relates to the use of the product and essentially introduces a method aspect to the claim. In my view, this makes the claim unclear. At the hearing Mr Pedwell accepted that this final phrase did not limit the features of the product.
- 15 The final clause of the claim specifies:

“...such that the perspiration shield has an arm end at which the bases ... are oriented and a torso end at which the vertexes ... are oriented”.

- 16 The *in use* arrangement is illustrated in figure 1 of the application (reproduced below) from which it can be seen that the perspiration shield is designed to be worn with a vertex towards the torso and a base towards the arm.



- 17 However, the claim does not relate to a method of wearing or using such a perspiration shield. At the start of the hearing Mr Pedwell indicated that the claim did not relate to a particular in-use orientation, but rather it was to be construed as merely requiring that the triangular absorbing pad and barrier layer were relatively oriented so that their sides and vertexes were aligned.

³ *Kirin-Amgen v Hoechst Marion Roussel and others* [2005] RPC 9.

- 18 In my view, the invention of claim 1 lies solely in the particular shape of the perspiration shield. This is in accordance with the arguments put forward by Mr Pedwell at the hearing regarding the advantages of the acute isosceles triangle defined. I also note that, aside from the shape, there are no other features which require it to be worn in a particular way.
- 19 I will therefore proceed on the basis that claim 1 relates to a product as defined in the first six phrases which must be suitable for the orientation stated in the final phrase.

Windsurfer/Pozzoli

- 20 Having established how claim 1 is to be construed I will now apply the *Pozzoli* test.

Step 1-(a) Identify the notional "person skilled in the art"; (b) Identify the relevant common general knowledge of that person

- 21 Mr Pedwell agreed with the examiner's assessment of the skilled person and the common general knowledge as follows:

(1)(a) The notional "person skilled in the art" may be identified as a manufacturer of absorptive perspiration pads.

(1)(b) Such a person would be fully aware of the various types of perspiration pads available, even the different shapes of pads available.

Step 2 - Identify the inventive concept of the claim in question or if that cannot readily be done, construe it

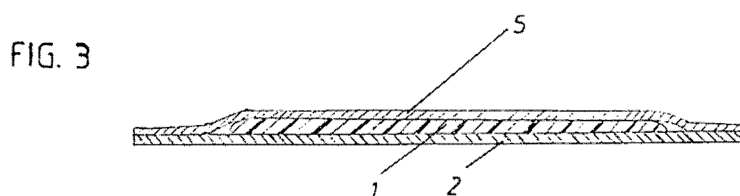
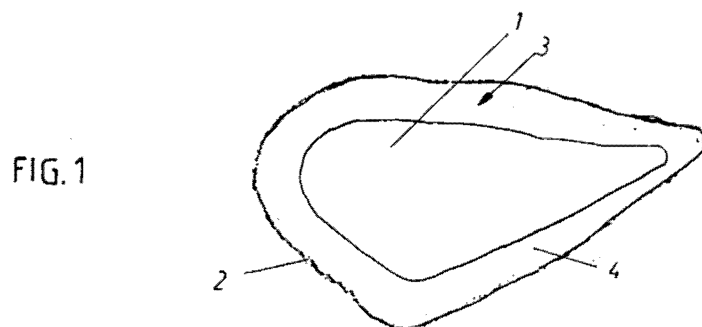
- 22 The inventive concept was discussed at some length. Mr Pedwell's submissions on this point concerned the structure and shape of the article and also its orientation. I agree with his points on structure and shape but, as indicated above, I do not think the inventive concept is limited to a particular in-use orientation.

- 23 In my view the inventive concept is as follows: a perspiration shield comprising a waterproof barrier layer and an absorbent pad, the barrier layer and absorbent pad both having an acute isosceles triangle shape with rounded corners and being relatively aligned so that the bases define one end and the apexes define another end, so that the pad is suitable for location in the underarm (an isosceles triangle is one with two sides of equal length).

Step 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

- 24 The examiner cited DE 20206879 U1 (ERASLAN) as the state of the art. This document is in German. At the hearing Mr Pedwell referred to a professionally translated version but this has not been shared with the IPO and I relied on the computer translated version provided by the examiner to the applicant. In any event, there was no disagreement regarding the teaching of this document as a whole or the particular interpretation of any words.

25 ERASLAN discloses a device for absorbing underarm sweat. Figures 1 and 3 are reproduced below. They show a plan view of a particular embodiment and a cross-section of the structure respectively. With reference to these figures, this document specifies an absorbent pad (1), an air permeable supporting material (2) and an edge region provided with adhesive (4). A hygiene cover (5) is also provided to be removed before use.



26 Although the shape of the pad may not be entirely clear from figure 1, the description (page 3, lines 1 to 3) specifies an acute triangular shape. Figure 1 is considered to show rounded corners. I pointed out that claim 6 of ERASLAN specifically refers to an acute-angled triangular shape. Mr Pedwell acknowledged this. In a nutshell, to me ERASLAN discloses an acute triangularly shaped perspiration pad with rounded corners which has the same significant structural components as the pad in suit.

27 Mr Pedwell said at the outset that he completely agreed with the examiner's view on this step - that the difference between the state of the art and the inventive concept is the specific triangular shape of the invention at issue -an acute isosceles triangle. However, later in his submissions He sought to distinguish the air-permeable layer in ERASLAN from the waterproof layer in the invention in suit. In discussing this point, Mr Pedwell referred to two different categories of sweat absorption pads that would be known to the skilled person. Firstly, there are pads designed for low to normal sweat absorption, for example for people who cannot tolerate antiperspirants. Secondly, there are those designed for heavy sweat absorption, for example for people who sweat profusely and for whom antiperspirants are ineffective. He said for the former a waterproof barrier layer is not necessarily required, the sweat being held within the absorptive pad, whilst in the latter a waterproof layer would be required. Mr Pedwell's view was that in either case the outer layer may be described as air-permeable, breathability being a desirable feature of both.

28 Having listened to Mr Pedwell's submissions, I consider the examiner's point that the barrier (2) in ERASLAN is waterproof is a reasonable conclusion to make. I think it would be unnecessary to specify its permeability to air if it was also water permeable - it would simply be referred to as a permeable layer. I consider it is safe to assume that the barrier layer is to prevent the leakage of fluid. For example, if one considers

the general art of plasters and sanitary products the outermost layer is necessarily waterproof.

- 29 I find it difficult to accept Mr Pedwell's contention that the skilled person would only read ERASLAN as specifying air-permeability and that it does not necessarily mean it is waterproof. To my mind it is implicit that the barrier layer in ERASLAN is waterproof. Nonetheless, I will give Mr Pedwell the benefit of the doubt on this point and take this feature into account in construing the inventive concept. I may need to revisit it later if the decision turns on this point.
- 30 In applying the next step of the *Pozzoli* test I will proceed on the basis that there are two differences between the inventive concept and the state of the art as exemplified by ERASLAN as follows: (i) the particular acute isosceles shape of the absorption layer and of the barrier layer of the perspiration shield in suit and also (ii) the explicit waterproof nature of the barrier layer.
- 31 Mr Pedwell also suggested that the relatively aligned orientation of the two layers was also a relevant difference. However, I think that Figure 1 of ERASLAN shows such a relative alignment and this does not therefore constitute a difference over the state of art.

Step 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?

- 32 The kernel of Mr Pedwell's submissions was that the shape of the invention in suit has a particular technical significance. He said the applicant's view is that "*the sweat gland area is almost precisely acute-isosceles shaped*" and is wider at the arm end than at the torso end. However, I note that no evidence has been provided to support this assertion. I noted a passage in the description on page 4 lines 21-23 which reads "*The shape of the perspiration absorbing pad 2011 complements the shape of the zone in which the sweat glands are found in the armpit and comfortable to the user*". Mr Pedwell agreed that this was the most relevant part of the specification on this issue. I am inclined to accept for the purpose of this decision that the sweat gland area might be a triangular shape, albeit I would add that I think it is reasonable to acknowledge the fact that human bodies necessarily vary in shape and size.
- 33 Mr Pedwell also emphasised at the outset it was the applicant's view that the "*acute-isosceles shape is absolutely critically important certainly from a commercial perspective*". However, no commercial evidence was supplied either in the application or in correspondence. Many things could be commercially relevant and this in itself is not determinative in the consideration of inventive step, although it may have a bearing on the question of inventiveness (the Manual of Patent Practice under section 3 refers to a number of authorities on this issue). However, I do not need to consider it in any more detail here as Mr Pedwell did not elaborate further on this point.
- 34 Mr Pedwell explained that the shape of the pad was especially chosen to provide the most effective absorption in the most compact and comfortable form possible. This was achieved by matching the shape of the pad to the shape of the sweat gland area, especially the area which has the highest density of sweat glands. Mr Pedwell

also explained that it was important that the adhesive areas avoided the sweat glands as this would interfere with the performance of the adhesive.

35 I regard the words of Kitchin J (as he then was) in *Abbott Laboratories Ltd v Evysio Medical Devices ULC* (EWHC [2008] Pat 800) applicable here. He says at paragraph 181:

“...there is no invention in stipulating a feature which is arbitrary and serves no useful purpose. It has long been established that a patent cannot be used to prevent a person from doing what is merely an obvious extension of what has been done or was known in the art before the priority date. The public are entitled to make obvious products using obvious and ordinary techniques. The selection of a number of these products by reference to an arbitrary parameter which has no technical significance does not involve an inventive step and does not create a patentable invention. It involves no technical ingenuity and solves no technical problem”.

36 In my view, the difference in shape between ERASLAN and the inventive concept is arbitrary. Having considered Mr Pedwell’s arguments on this point, clearly put as they were, I can see nothing inventive in making relatively minor changes to the triangular shape of the pad illustrated in figure 1 of ERASLAN to achieve the acute isosceles shape of the pad of the present invention.

37 Secondly, I shall deal with the provision of a waterproof layer. As outlined above, Mr Pedwell set out two categories of perspiration pads when discussing the meaning of air-permeable, one of which was the heavy sweat absorption pad with waterproof barrier layer. For the reasons I have given above I have no doubt that a waterproof barrier layer in this type of absorbent pad is clearly well known in the art. To my mind, this difference, if it actually exists, between ERASLAN and the inventive concept is not at all inventive.

38 I therefore have no doubt in coming to the conclusion that the differences between the inventive concept underlying the invention in suit and the state of the art illustrated by ERASLAN are obvious, having regard to the common general knowledge.

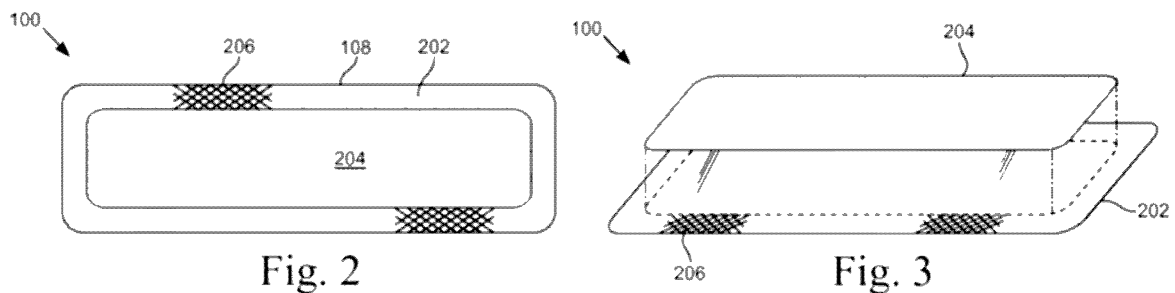
39 In his final letter and the preceding examination reports, the examiner objected that claim 1 lacked an inventive step based on a combination of US 2010/0299796 A1 (HASHMAIN) and GB 2438159 A (GUY). This objection was also considered at the hearing. On one hand, I do not need to consider this issue as I have already found that the invention of claim 1 is obvious on other grounds. However, for completeness I will consider it here.

40 Care must be exercised when combining, “mosaicing”, documents in light of the knowledge of the skilled person. There is no general rule on mosaicing; the Manual of Patent Practice (section 3) provides references to some authorities on this subject. This case law indicates that mosaicing is not limited to cases where there is a specific cross-reference from one document to another⁴. Rather, the issue as I see it in relation to the present case is whether when considering the direction given in a

⁴ Pfizer Ltd’s Patent [2001] FSR 16

prior art document a person skilled in the art would naturally draw on other prior art as an obvious consequence.

- 41 Mr Pedwell was not opposed to the supposition that HASHEMAIN and GUY could be considered in combination as he acknowledged both documents lie in the same field of underarm sweat absorption pads. However, his contention was that even if the skilled person would combine these documents he/she would not arrive at the invention in suit, as suggested by the examiner.
- 42 I will now consider whether the skilled person would be able to produce the invention in suit with HASHEMAIN and GUY in front of him, without having recourse to any inventive ingenuity.
- 43 Steps 1 and 2 of the *Pozzoli* test for inventiveness remain the same and it is only necessary to consider steps 3 and 4 in relation to HASHEMAIN and GUY.
- 44 HASHEMAIN describes, with reference to figures 2 and 3 (reproduced below), an adhesive underarm perspiration pad that comprises a barrier layer (108) and an absorbent layer (204). The perspiration pad has a border (202) provided with adhesive (206). Paragraph [0028] of this document specifies that the barrier layer is impermeable to perspiration. Only rectangular or elongate octagonal shapes are particularly disclosed but they nevertheless show rounded corners and that the layers are relatively aligned. Paragraph [0034] makes clear that the invention is not limited to these shapes and it may be "round or square or another shape to maximise the comfort of the wearer".



- 45 Mr Pedwell referred to a statement in paragraph [0033] in HASHEMAIN which reads:

"In other embodiments, one end of the perspiration pad 100' is wider than the opposite end. The wide end is configured to secure proximate the torso of the person 102 and the narrower end is configured and sized to extend toward the distal end of the arm 106 of the person 102."

- 46 Mr Pedwell acknowledged that HASHEMAIN teaches towards a triangular shaped pad but argued that it teaches that the wide end is to be secured to the torso, and the narrow end towards the arm. He said this was the reverse situation to the intended use of the applicant's invention. However, that is not relevant. As I have already said above, I do not consider that claim 1 is restricted by the use of the pad.

- 47 To my mind, the difference between the pad in HASHEMAIN and the inventive concept lies only in the particular shape of the inventive concept, i.e. an acute isosceles triangle with rounded corners.
- 48 GUY discloses an underarm perspiration absorbing pad comprising a permeable membrane to be placed adjacent the skin, an inner absorbent layer and an outer waterproof layer. There is no border area formed between any of these layers and adhesive is provided directly on the permeable membrane. Figure 3 of this document (below) seems to illustrate an equilateral triangle. An equilateral triangle necessarily falls within the definition of an acute isosceles triangle, as all three sides are of the same length.

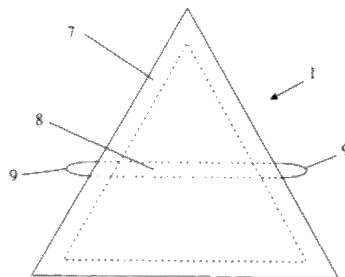


Fig. 3

- 49 I consider that the skilled person could modify the pad illustrated in HASHEMAIN based on the equilateral triangularly-shaped pad illustrated in GUY to produce a pad with an acute isosceles shape having rounded corners without requiring any inventive ingenuity. I appreciate that an equilateral triangle may not be regarded as an 'acute' isosceles triangle. However, I cannot see anything inventive in making two sides of the triangle in GUY acute, given the evidence before me about the structure of the sweat gland area. I think such a modification would be an arbitrary one which, as I have already indicated above, does not make something that is not inventive, inventive⁵.
- 50 No objection was formally made that the combination of the features of the waterproof layer, adhesive tabs and the shape of the pad represents a collocation⁶. As such I will not formally make a finding on this point. The issue did arise however in the context of discussions on HASHEMAIN and GUY. Mr Pedwell reiterated his point that the construction of the pad, its shape and intended alignment all contribute to the aim of the invention which is to absorb high levels of sweating. My *prima facie* view is that those features are not in a synergistic relationship but I would emphasise that I am not making a formal decision on this point.
- 51 I hold that claim 1 is also obvious on account of the disclosure of GUY and HASHEMAIN, when considered in combination.

⁵ Actavis UK Limited v Novartis AG Court of Appeal [2010] EWCA Civ 82

⁶ Sabaf v MFI Furniture Centres Ltd [2005] RPC 10

Dependent claims and omnibus claim

- 52 The examiner had said that he considered claims 2-14 related to conventional features in the art. In his supplementary report of 18 January 2017 at paragraph 10 he cited some examples of prior art to illustrate that the features of claims 2-6, 9-14 are commonplace.
- 53 At the beginning of the hearing Mr Pedwell helpfully agreed that the sole issue to be decided was whether claim 1 had an inventive step. If it did not then he said he would tend to agree that claims 2-14 could be obvious, particularly if ERASLAN was the closest prior art. As I have found claim 1 to be obvious on account of both ERASLAN alone and a combination of HASHEMAIN and GUY, to my mind claims 2-14 are obvious. Nonetheless, for completeness I will run through them briefly below.
- 54 To my own knowledge claims 2-6, and 9-14 detail common and conventional features of materials in this art and this is confirmed by the prior art cited in the examiner's supplementary report. I am firmly of the view therefore that claims 2-6 and 9-14 offer nothing inventive over claim 1.
- 55 That leaves claims 7 and 8 which relate to parameters. I consider that the parameters detailed in these claims could be inherent in the prior art or at least would result from routine and obvious modification in the construction of the pad of claim 1. These claims are also not inventive.
- 56 Claim 15 is an omnibus claim. As a result of an amendment in the Patents (No.2) Rules 2016, from 6 April 2017 it will no longer be possible to include omnibus claims in UK patent applications, unless this is the only way to define the technical features of the invention clearly and concisely. However, we are not at that point at present and I will consider this claim in light of practice as it stands.
- 57 In view of the law of construction which I have mentioned above I have considered claim 15 in light of the drawings and statement of invention on page 2 of the application (which has not been amended during prosecution). Having construed claim 15 in this way I do not think that the inventive concept which underpins it is any different to that which underpins claim 1. As I have found the inventive concept of claim 1 to be obvious it follows that claim 15 is obvious too.
- 58 Having considered the specification as a whole, I cannot see anything inventive in claims 2-15.

Conclusion

- 59 I hold that claim 1 is obvious on account of the disclosure of DE 20206879 U1 (ERASLAN) having regard to the common general knowledge.
- 60 I also consider that claim 1 is not inventive when considering the teachings of US 2010/0299796 A1 (HASHEMAIN) and GB 2438159 A (GUY) in combination.

- 61 I consider that claims 2-14 describe features which are either commonplace or represent conventional or obvious parameters and therefore do not involve an inventive step. The omnibus claim, claim 15, is also not inventive.
- 62 I therefore refuse the application under section 18(3) of the Act as it does not comply with section 1(1)(b).

Appeal

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

Dr Jim Houlihan

Deputy Director, acting for the Comptroller