



Neutral Citation Number: [2010] EWCA Civ 702

Case No: A3/2009/1837

IN THE COURT OF APPEAL (CIVIL DIVISION)
ON APPEAL FROM THE HIGH COURT, CHANCERY DIVISION,
PATENTS COURT
MANN J
HC07C02048

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 22nd June 2010

Before :

LORD JUSTICE PILL
LORD JUSTICE PATTEN
and
SIR PAUL KENNEDY

Between :

OCCLUTECH GmbH	<u>Respondent</u>
- and -	
AGA MEDICAL CORPORATION	<u>Appellant</u>
- and -	
DOT MEDICAL LIMITED	<u>Third Party</u>

Martin Howe QC (instructed by Hogan Lovells International LLP) for the Appellant
Peter Prescott QC (instructed by Marks&Clerk Solicitors LLP) for the Respondent

Hearing dates : 25th and 26th May 2010

Approved Judgment

Lord Justice Patten :

Introduction

1. This is an appeal by the defendant, AGA Medical Corporation (“AGA”), against a judgment of Mann J dated 31st July 2009 ([2009] EWHC 2013) in which he upheld the claim by Occlutech GmbH (“Occlutech”) for a declaration of non-infringement in respect of two of its products in relation to the patent in suit. This is European Patent No. (UK) 808 138 which has a priority date of 8th July 1994. It includes both a product claim (claim 1) for a medical device (and 14 dependent product claims) and a method claim (claim 16). One of its principal applications is for the occlusion of blood vessels and other body lumens.
2. Claims 1 and 16 are in these terms:-
 - “1. A collapsible medical device (60) comprising a metal fabric formed of braided metal strands, the device (60) having a collapsed configuration for delivery through a channel in a patient's, and has a generally dumbbell-shaped expanded configuration with two expanded diameter portions (64) separated by a reduced diameter portion (62) formed between opposed ends of the device, **characterized in that** clamps (15) are adapted to clamp the strands at the opposed ends of the device.
 16. A method of forming a medical device according to any one of the preceding claims, the method comprising the steps of:
 - (a) providing a metal fabric formed of a plurality of braided strands, the strands being formed of a metal which can be heat treated to substantially set a desired shape;
 - (b) deforming the metal fabric to generally conform to an internal wall surface of a moulding element;
 - (c) heat treating the metal fabric in contact with the surface of the moulding element at an elevated temperature, the temperature and the duration of the heat treatment being sufficient to substantially set the shape of the fabric in its deformed state;
 - (d) removing the metal fabric from contact with the moulding element; and
 - (e) clamping the opposite end.”
3. The numerals in claim 1 are all derived from Figure 5A in the patent specification which is reproduced in the appendix to this judgment.

4. The claim against AGA also included an attack on the validity of the patent based on one piece of prior art: an international patent application (No W094/12136) referred to as Boston Scientific. This relates to a stent for body lumens formed out of knitted nitinol wire. The judge rejected what emerged as an obviousness attack and there is no cross-appeal on this issue. But Boston Scientific is referred to in the specification of the patent in suit and is marginally relevant to the issues of construction with which this appeal is concerned.
5. The issues of alleged infringement turn almost exclusively on what is meant by “clamps” and clamping “the strands at the opposed ends of the device” in claim 1. Put shortly, Occlutech says that this tells the skilled addressee that protection is being claimed (at least under this patent) only in respect of a device similar in appearance to Figure 5A which uses clamps at both ends in order to secure the strands of braided metal so as to prevent them from unravelling. Its own products (which I will come to in more detail in a moment) are made in a different (and more expensive) way using what is best described as a mesh sock made out of metal wire in which there are cut strands only at one end. These are secured by welding rather than by the application of an external clamp. Both differences are said to be material and sufficient to take the products outside the scope of claims 1 and 16.
6. With that brief introduction to the dispute, I can turn to the detail of the patent specification. The patent in suit originates from a PCT international application filed on 10th July 1995 and published in January 1996. Paragraphs [0001]-[0003] of the description set out the purpose of the invention and its principal applications:-

“[0001] The present invention generally relates to intravascular devices for treating certain medical conditions. The devices in accordance with the invention are particularly well suited for delivery through a catheter or the like to a remote location in a patient's vascular system or in analogous vessels within a patient's body.

[0002] A wide variety of intravascular devices are used in various medical procedures. Certain intravascular devices, such as catheters and guidewires, are generally used simply to deliver fluids or other medical devices to specific locations within a patient's body, such as a selective site within the vascular system. Other, frequently more complex, devices are used in treating specific conditions, such as devices used in removing vascular occlusions or for treating septal defects and the like.

[0003] In certain circumstances, it may be necessary to occlude a patient's vessel, such as to stop blood flow through an artery to a tumour or other lesion. Presently, this is commonly accomplished simply by inserting, e.g. Ivalon particles, a trade name for vascular occlusion particles, and short sections of coil springs into a vessel at a desired location. These "embolisation agents" will eventually become lodged in the vessel, frequently floating downstream of the site at which they are released before blocking the vessel. In part due to the inability to

precisely position the embolisation agents, this procedure is often limited in its utility.”

7. This is followed by a description of other devices (e.g. balloon catheters) used to block patients’ vessels and their disadvantages. It goes on:-

“[0007] Accordingly, it would be advantageous to provide a reliable embolisation device which is both easy to deploy and can be accurately placed in a vessel.

[0008] According to the present invention, a collapsible medical device comprises a metal fabric formed of braided metal strands, the device having a collapsed configuration for delivery through a channel in a patient's body and a generally dumbbell-shaped expanded configuration with two expanded diameter portions separated by a reduced diameter portion formed between the opposed ends of the device, and clamps for clamping the strands of the opposed ends of the device.

[0009] A collapsible medical device having a dumbbell-shaped expanded configuration is disclosed in the international application WO-A-94112136.”

8. The dumbbell-shaped device disclosed in Boston Scientific is illustrated in that patent application by the Figures shown in the appendix to this judgment.
9. The consistory clause in paragraph [0008] contains the first reference to “the opposed ends of the device” and the “clamps for clamping the strands of the opposed ends of the device” which is the language of claim 1. The specification then turns to the material to be used and the process of heat treatment necessary to create the dumbbell-shape:-

“[0010] Such devices of the invention are formed of a metal fabric and have an expanded configuration and a collapsed configuration. The devices are collapsed for deployment through a catheter and, upon exiting the distal end of the catheter in a patient’s channel, will resiliently substantially return to their expanded configuration.

[0011] The device of the present invention can be formed from a metal fabric formed of a plurality of resilient strands, with the wires being formed of a resilient material which can be heat-treated to substantially set a desired shape. The fabric is then deformed to generally conform to a moulding surface of a moulding element, and the fabric is heat-treated in contact with the surface of the moulding element at an elevated temperature....after the heat treatment, the fabric is removed from contact with the moulding element and will substantially retain its shape in the deformed state. The fabric so treated defines an expanded state of a medical device which can be deployed through a catheter into a channel in a patient’s body.

[0012] The present invention will be described, by way of example, with reference to the accompanying drawings, in which:

Figures 1A and 1B depict a metal fabric suitable for use with the invention;

...

Figures 5A and 5B are a side view and an end view, respectively, of a medical device in accordance with the invention.”

10. Figure 5A is, of course, the figure which illustrates the “clamps (15)” referred to in claim 1. But the reference in paragraph [0002] to Figures 1A and 1B “each” depicting a metal fabric suitable for use with the invention also needs to be noted and will become relevant when I turn to the construction issues. The relevant Figures are reproduced in the appendix.
11. The next section of the specification concentrates in more detail on the metal fabric which is suitable for use in manufacturing devices in accordance with the invention:-

“[0013] The present invention provides a device and discloses a reproducible, relatively inexpensive method of forming devices for use in channels in patients' bodies, such as vascular channels, urinary tracts, biliary ducts and the like, as well as devices which may be made via that method. In forming a medical device, a metal fabric 10 is provided. The fabric is formed of a plurality of wire strands having a predetermined relative orientation between the strands. Figures 1 A and 1 B illustrate two examples of metal fabrics which are suitable for use.

[0014] In the fabric of Figure 1 A, the metal strands define two sets of essentially parallel generally helical strands, with the strands of one set having a "hand", i.e. a direction of rotation, opposite that of the other set. This defines a generally tubular fabric, known in the fabric industry as a tubular braid....

[0018] Figure 1B illustrates another type of fabric which is suitable for use. This fabric is a more conventional fabric and may take the form of a flat woven sheet, knitted sheet or the like. In the woven fabric shown in Figure 1 B, there are also two sets 14 and 14' of generally parallel strands, with one set of strands being oriented at an angle, e.g. generally perpendicular (having a pick of about 90°), with respect to the other set. As noted above, the pitch and pick of this fabric (or, in the case of a knit fabric, the pick and the pattern of the knit, e.g. Jersey or double knits) may be selected to optimise the desired properties of the final medical device.

[0019] The wire strands of the metal fabric should be formed of a material which is both resilient and can be heat treated to substantially set a desired shape....

[0020] One class of materials which meet these qualifications are so-called shape memory alloys. Such alloys tend to have a temperature induced phase change which will cause the material to have a preferred configuration which can be fixed by heating the material above a certain transition temperature to induce a change in the phase of the material. When the alloy is cooled back down, the alloy will "remember" the shape it was in during the heat treatment and will tend to assume that configuration unless constrained from so doing.

[0021] One particularly preferred shape memory alloy for use in the present invention is nitinol, an approximately stoichiometric alloy of nickel and titanium, which may also include other minor amounts of other metals to achieve desired properties.

.....

[0023] In preparation of forming a medical device in keeping with the invention, an appropriately sized piece of the metal fabric is cut from the larger piece of fabric which is formed, for example, by braiding wire strands to form a long tubular braid. The dimensions of the piece of fabric to be cut will depend, in large part, upon the size and shape of the medical device to be formed therefrom.

[0024] When cutting the fabric to the desired dimensions, care should be taken to ensure that the fabric will not unravel. In the case of tubular braids formed of NiTi alloys, for example, the individual wire strands will tend to return to their heat-set configuration unless constrained. If the braid is heat treated to set the strands in the braided configuration, they will tend to remain in the braided form and only the ends will become frayed. However, it may be more economical to simply form the braid without heat treating the braid since the fabric will be heat treated again in forming the medical device, as noted below.

[0025] In such untreated NiTi fabrics, the strands will tend to return to their unbraided configuration and the braid can unravel fairly quickly unless the ends of the length of braid cut to form the device are constrained relative to one another. One method which has proven to be useful to prevent the braid from unravelling is to clamp the braid at two locations and cut the braid to leave a length of the braid having clamps (15 in Figure 2) at either end, thereby effectively defining an empty space within a sealed length of fabric. These clamps 15 will hold the

ends of the cut braid together and prevent the braid from unravelling.

[0026] Alternatively, one can solder, braze, weld or otherwise affix the ends of the desired length together (e.g. with a biocompatible cementitious organic material) before cutting the braid. Although soldering and brazing of NiTi alloys has proven to be fairly difficult, the ends can be welded together, such as by spot welding with a laser welder.”

12. There are a number of points to note about these passages. Paragraph [0018] is a further reference to Figure 1B and to the flat woven or knitted sheet as a suitable fabric for use. Paragraphs [0024] and [0025] teach that the braided wire strands used in the tubular braid described in paragraph [0023] will tend to unravel at their ends unless constrained. The material described in paragraph [0025] which is illustrated in Figure 5A clearly envisages a length of the cut braid needing to be clamped at two locations (“at either end”). Mr Howe QC for AGA accepts (as the judge did) that the reference to numeral 15 in Figure 2 is a mistake for Figure 5A and would have been treated as such by the skilled addressee. This is clearly the case given that numeral 15 only appears in Figure 5A.
13. The other important point is the reference in paragraph [0026] to soldering, brazing and welding being alternative means of affixing the ends of the length of the braid together, compared with those described in paragraph [0025]. The judge relied on this to support his view that the clamps referred to in the earlier paragraph involved a different method of holding together the loose ends.
14. Paragraph [0027] deals with the use of a flat sheet of fabric such as that illustrated in Figure 1B:-

“[0027] The same problems present themselves when a flat sheet of fabric such as the woven fabric shown in Figure 1 B is used. With such a fabric, the fabric can be inverted upon itself to form a recess or depression and the fabric can be clamped about this recess to form an empty pocket (not shown) before the fabric is cut. If it is desired to keep the fabric in a generally flat configuration, it may be necessary to weld the junctions of the strands together adjacent the periphery of the desired piece of fabric before that piece is cut from the larger sheet. So connecting the ends of the strands together will prevent fabrics formed of untreated shape memory alloys and the like from unravelling during the forming process.”
15. This paragraph is relied upon by AGA to indicate that the teaching of the patent includes the use of the pocket method to form a suitable shape for moulding. This method will inevitably result in a device which has cut strands only at one end. If the resulting device (or this method of production) was intended by the patentee to be included in claims 1 and 16 then the reference to using two clamps in order to “clamp the strands at the opposed ends of the device” has to be read in a way which accommodates this part of the teaching.

16. The next section of the specification deals with the moulding process. The only aspect of this which needs to be noted for the purposes of the issues under appeal is that it envisages the ends of the wire strands of the tubular braid being secured against unravelling at the time when the section of cut braid is placed into the mould. This is made clear in paragraph [0041]. Again the reference to Figure 2 should be read as a reference to Figure 5A:-

“[0041] As noted above, the ends of the tubular braid should be secured in order to prevent the braid from unraveling. Each end of the metal fabric 10 is desirably received within a cavity 46 formed in one of the two end plates 40. If a clamp (15 in Figure 2) is used, the clamp may be sized to be relatively snugly received within one of these cavities 46 in order to effectively attach the end of the fabric to the end plate 40...”

17. I can pass over a large section of the specification which explains the effect of the heat treatment and the ability of the completed device to retain and revert to its moulded dumbbell-like shape even after being elongated during the process of insertion into the vessel or body cavity it is designed to occlude. The next reference to a clamp is in paragraph [0060]:-

“The clamp may serve to connect the device to a delivery system (not shown). In this case, the clamp may be generally cylindrical in shape and have a recess for receiving the ends of the wires to substantially prevent the wires from moving relative to one another, and a threaded outer surface. The threaded outer surface is adapted to be received within a cylindrical recess (not shown) on a distal end of a delivery device and to engage the threaded inner surface of the delivery device's recess.”

18. The specification concludes:-

“[0071] While a preferred embodiment of the present invention has been described, it should be understood that various changes, adaptations and modifications may be made therein without departing from the invention and the scope of the appended claims.”

19. The two devices manufactured and imported into the UK by Occlutech which are said to fall outside each of the claims in the patent in suit are described in the process and product descriptions (“PPDs”) served in the action as the old type and the new type and I shall refer to them accordingly. Both are designed to remedy atrial septal defects (“ASDs”). These are what are commonly referred to as holes in the heart which allow blood flowing through the left and right hand chambers of the heart to mix and so interrupt or contaminate the supply of blood with a low oxygen level which is intended for the lungs. ASDs include what are referred to as a patent foramen ovale (“PFO”). This is a gap in the wall of the channel between the chambers of the heart which exists during the stage of foetal development but fails fully to close after birth. ASDs are congenital but can be remedied by the insertion of the occluding devices. The difference between devices designed for ASDs and those

designed specifically for the treatment of PFOs lies primarily in the size of the central section of the device.

20. In his judgment Mann J summarised the main features of and differences between the Occlutech old and new types in terms of their production and moulding and I gratefully adopt his account. The sock which he describes in paragraph 8(ii) is illustrated in the PPDs by Figure 1 which is reproduced in the appendix below and the adaptor (described in paragraphs 9(v) and 12(iv)) by Figure 10:-

“8. The products in respect of which declarations of non-infringement are sought are described in a process and product description and the same description can be taken as applying to all the allegedly infringing products if different from those which are the subject of the declaration. The old and new are essentially the same apart from the method of fixing the loose strands of the devices. The common elements are as follows:

- i) A braided fabric formed from monofilament nitinol wires is used.
- ii) It is formed into a sock. The distal end (farthest from the open end of the catheter) is closed; the proximal end is open and terminates in some loose wires which are not braided, or not braided to the extent that they form a fabric.
- iii) The sock is placed into a mould conforming to the shape of the final intended product. The end with the ends of the strands protrudes through a hole at one end of mould.
- iv) The mould is then heated to a temperature sufficient to make the nitinol keep its desired shape. That shape in the picture is of two saucer like disks, one slightly smaller than each other, separated by a wider mid-piece, though the actual products that I have seen do not reflect that difference in shape. Nothing turns on that.
- v) The newly shaped product is then removed from the mould.

9. At this point the old and new products depart. The next stage, according to the description, is the fixing of the loose ends of the device - what was formerly the open end of the sock. According to the description, but as supplemented by further oral evidence, the following steps take place in relation to the old Occlutech device.

- i) A copper wire is wound around the loose ends of the strands at their ends to gather them together for the next phase.
 - ii) Then a nitinol sleeve in the form of a hollow cylinder and having an internal diameter slightly larger than the diameter of the bundle of nitinol wires is slid up the gathered wires and the assembly inverted to stop the sleeve falling off. Then the copper wire is removed. The wire is sufficiently loose to be able to be slipped off.
 - iii) The protruding wires are cut flush with the proximal end of the sleeve, by a laser beam. The assembly is retained in the inverted position.
 - iv) The bundle of wires is then subjected to microplasma welding to fuse the wires together and to the nitinol sleeve. “The ends of wires have been merged together with each other and with the proximal end of the sleeve to form a welded clot of nitinol.”
 - v) An adaptor “for delivery purposes” may then be fitted. It is cylindrical and its distal end is of a size to mate with the nitinol clot; the proximal bore is internally threaded. It is pushed over the clot of nitinol and spot welds applied by laser beam to deform inwardly the inner and outer walls of the adaptor. The adapter has an internal thread at its proximal end for fixing it on to the delivery wire.
10. It should be noted from this description that only one end of the device is subjected to this welding and sleeving process. The other end is the former closed end of the sock - the fibres pass continuously around it.
 11. For the new device the sock and moulding processes are essentially the same. The differences come after the moulding process.
 12. At this point the device is put in a template which has a hole through which the loose ends of the device protrude. Then the following steps take place:
 - i) The loose ends are cut almost, but not quite, flush with the face of the template, by using a laser beam. Short lengths are left protruding.

- ii) The loose ends are subjected to microplasma arc welding to fuse the wires to each other. They form a welded nitinol clot.
 - iii) At that point the device is in its final configuration save for the addition of an adaptor for delivery purposes.
 - iv) As with the old devices, the adaptor is a sleeve which fits over the clot and is threaded at the proximal end. It is pushed over the clot and weld spots are applied radially by means of a laser beam. This deforms the inner and outer walls of the adaptor.
13. Accordingly, as with the old devices, the welding and other operations go on at one end of the device only. The other end is still the closed end of the sock, formed by the fibres passing round and returning to the originally “open” end.”
21. Occlutech’s pleaded case on non-infringement specified a number of respects in which its old and new type devices differed materially from the claims in the patent in suit. But the judge concentrated on the following three:-
- (i) Are the Occlutech devices clamped in the sense described in claims 1 and 16 of the patent, given that the ends of the metal strands are secured together by welding?;
 - (ii) What do the words “clamps (15) are adapted to clamp the strands at the opposed ends of the device” in claim 1 mean? Are the Occlutech devices clamped in this way, given that the metal fibres all terminate at one end of the device rather than at both ends?; and
 - (iii) Are the Occlutech devices “dumbbell-shaped” as described in the patent specification?
22. Only the first and second of these issues have been argued on this appeal.
23. These issues of construction have taken us on a journey through some familiar territory. Article 69 of the EPC 2000 requires the extent of protection conferred by a European patent to be determined by the claims. That raises the question of how they should be interpreted and some guidance is contained in the Protocol. These issues and, in particular, their application to cases where the alleged infringer has arguably achieved the same effect as the patent by an equivalent means were considered in detail by the House of Lords in *Kirin-Amgen Inc v Hoechst Marion Roussel Ltd* [2005] RPC 9. Although it will be necessary to refer to some passages in Lord Hoffmann’s speech which are of particular relevance to the issues on this appeal, I propose to adopt the summary of the relevant principles (borrowed from the judgment of Lewison J) which was set out recently by this court in its judgment in *Virgin*

Atlantic Airways Ltd v Premium Aircraft Interiors UK Ltd [2009] EWCA Civ 1062 at paragraph 5:-

“[182] The task for the court is to determine what the person skilled in the art would have understood the patentee to have been using the language of the claim to mean. The principles were summarised by Jacob LJ in *Mayne Pharma v Pharmacia Italia* [2005] EWCA Civ 137 and refined by Pumfrey J in *Halliburton v Smith International* [2005] EWHC 1623 (Pat) following their general approval by the House of Lords in *Kirin-Amgen v Hoechst Marion Roussel* [2005] RPC 9. An abbreviated version of them is as follows:

- (i) The first overarching principle is that contained in Article 69 of the European Patent Convention;
- (ii) Article 69 says that the extent of protection is determined by the claims. It goes on to say that the description and drawings shall be used to interpret the claims. In short the claims are to be construed in context.
- (iii) It follows that the claims are to be construed purposively—the inventor's purpose being ascertained from the description and drawings.
- (iv) It further follows that the claims must not be construed as if they stood alone—the drawings and description only being used to resolve any ambiguity. Purpose is vital to the construction of claims.
- (v) When ascertaining the inventor's purpose, it must be remembered that he may have several purposes depending on the level of generality of his invention. Typically, for instance, an inventor may have one, generally more than one, specific embodiment as well as a generalised concept. But there is no presumption that the patentee necessarily intended the widest possible meaning consistent with his purpose be given to the words that he used: purpose and meaning are different.
- (vi) Thus purpose is not the be-all and end-all. One is still at the end of the day concerned with the meaning of the language used. Hence the other extreme of the Protocol—a mere guideline—is also ruled out by Article 69 itself. It is the terms of the claims which delineate the patentee's territory.
- (vii) It follows that if the patentee has included what is obviously a deliberate limitation in his claims, it must

have a meaning. One cannot disregard obviously intentional elements.

- (vii) It also follows that where a patentee has used a word or phrase which, acontextually, might have a particular meaning (narrow or wide) it does not necessarily have that meaning in context.
- (vii) It further follows that there is no general "doctrine of equivalents."
- (viii) On the other hand purposive construction can lead to the conclusion that a technically trivial or minor difference between an element of a claim and the corresponding element of the alleged infringement nonetheless falls within the meaning of the element when read purposively. This is not because there is a doctrine of equivalents: it is because that is the fair way to read the claim in context.
- (ix) Finally purposive construction leads one to eschew the kind of meticulous verbal analysis which lawyers are too often tempted by their training to indulge."

24. The focus of this guidance on what the skilled addressee would have understood the language of the claims to mean provides a useful compromise between the perhaps over-literal approach of an earlier generation of UK patent lawyers and the reliance in some countries on what Lord Hoffmann refers to as the essence of the invention in order to displace the consequences of that kind of interpretation. An earlier example of purposive construction of this kind can be found in the decision of the House of Lords in *Catnic Components Ltd v Hill & Smith Ltd* [1982] RPC 183 (on the question of what could be regarded as "vertical") which provides the genesis for much of the reasoning in *Kirin-Amgen*.

25. But the latter decision is important for its recognition that the purpose of the patent, whilst operating as an obvious contextual aid to construction, is not necessarily determinative of the scope of the claims. It is still important to look at the language of the claims in order to decide whether they were intended to encompass the entirety of the ideas expressed in the teaching. These points are set out by Lord Hoffmann in paragraphs 33-35 of his speech:-

"33. In the case of a patent specification, the notional addressee is the person skilled in the art. He (or, I say once and for all, she) comes to a reading of the specification with common general knowledge of the art. And he reads the specification on the assumption that its purpose is to both to describe and to demarcate an invention - a practical idea which the patentee has had for a new product or process - and not to be a textbook in mathematics or chemistry or a shopping list of chemicals or hardware. It is this insight which lies at the heart of "purposive construction". If Lord Diplock did not invent the

expression, he certainly gave it wide currency in the law. But there is, I think, a tendency to regard it as a vague description of some kind of divination which mysteriously penetrates beneath the language of the specification. Lord Diplock was in my opinion being much more specific and his intention was to point out that a person may be taken to mean something different when he uses words for one purpose from what he would be taken to mean if he was using them for another. The example in the *Catnic* case was the difference between what a person would reasonably be taken to mean by using the word "vertical" in a mathematical theorem and by using it in a claimed definition of a lintel for use in the building trade. The only point on which I would question the otherwise admirable summary of the law on infringement in the judgment of Jacob LJ in *Rockwater Ltd v Technip France SA* (unreported) [2004] EWCA Civ 381, at paragraph 41, is when he says in subparagraph (e) that to be "fair to the patentee" one must use "the widest purpose consistent with his teaching". This, as it seems to me, is to confuse the *purpose* of the utterance with what it would be understood to *mean*. The purpose of a patent specification, as I have said, is no more nor less than to communicate the idea of an invention. An appreciation of that purpose is part of the material which one uses to ascertain the meaning. But purpose and meaning are different. If, when speaking of the widest purpose, Jacob LJ meant the widest meaning, I would respectfully disagree. There is no presumption about the width of the claims. A patent may, for one reason or another, claim less than it teaches or enables.

34. "Purposive construction" does not mean that one is extending or going beyond the definition of the technical matter for which the patentee seeks protection in the claims. The question is always what the person skilled in the art would have understood the patentee to be using the language of the claim to mean. And for this purpose, the language he has chosen is usually of critical importance. The conventions of word meaning and syntax enable us to express our meanings with great accuracy and subtlety and the skilled man will ordinarily assume that the patentee has chosen his language accordingly. As a number of judges have pointed out, the specification is a unilateral document in words of the patentee's own choosing. Furthermore, the words will usually have been chosen upon skilled advice. The specification is not a document *inter rusticos* for which broad allowances must be made. On the other hand, it must be recognised that the patentee is trying to describe something which, at any rate in his opinion, is new; which has not existed before and of which there may be no generally accepted definition. There will be occasions upon which it will be obvious to the skilled man that the patentee must in some respect have departed from conventional use of

language or included in his description of the invention some element which he did not mean to be essential. But one would not expect that to happen very often.

35 One of the reasons why it will be unusual for the notional skilled man to conclude, after construing the claim purposively in the context of the specification and drawings, that the patentee must nevertheless have meant something different from what he appears to have meant, is that there are necessarily gaps in our knowledge of the background which led him to express himself in that particular way. The courts of the United Kingdom, the Netherlands and Germany certainly discourage, if they do not actually prohibit, use of the patent office file in aid of construction. There are good reasons: the meaning of the patent should not change according to whether or not the person skilled in the art has access to the file and in any case life is too short for the limited assistance which it can provide. It is however frequently impossible to know without access, not merely to the file but to the private thoughts of the patentee and his advisors as well, what the reason was for some apparently inexplicable limitation in the extent of the monopoly claimed. One possible explanation is that it does not represent what the patentee really meant to say. But another is that he did mean it, for reasons of his own; such as wanting to avoid arguments with the examiners over enablement or prior art and have his patent granted as soon as possible. This feature of the practical life of a patent agent reduces the scope for a conclusion that the patentee could not have meant what the words appear to be saying. It has been suggested that in the absence of any explanation for a restriction in the extent of protection claimed, it should be presumed that there was some good reason between the patentee and the patent office. I do not think that it is sensible to have presumptions about what people must be taken to have meant but a conclusion that they have departed from conventional usage obviously needs some rational basis.”

26. This case raises the same issue in relation to the references to clamps (plural) in claims 1 and 16 of the patent in suit and it has met with a divided response from the courts of the Contracting States in which the issue of infringement has so far been adjudicated upon. In The Netherlands and the UK the courts of first instance (The Hague District Court and Mann J) have ruled in favour of Occlutech by holding that the reference to clamping the “strands at the opposed ends of the device” in claim 1 does not cover the old and new type occlusion devices in which the strands are clamped at only one end. In Germany, however, the Düsseldorf Higher Regional Court (on appeal from the Civil Division of the Regional Court) has upheld the decision of the lower court that claims 1 and 16 are not limited to devices in which the ends of the wire strands of the material used are clamped together at each end of the device. They have decided that the language used has to be read as referring to the clamping of the opposed ends of the strands (rather than of the device) and that the

use of two separate clamps in each device was not an essential feature or limitation on the scope of the claims.

27. This approach to the construction of the claims by the Düsseldorf Court is expressed in the judgment to be based on the case of *Kunststoffrohrteil* [2002] G.R.U.R. 511, a decision of the Bundesgerichtshof which is cited by Lord Hoffmann in *Kirin-Amgen* (at paragraph 75) as confirmation that the German courts have adopted an approach similar to that in *Catnic* in relation to the application of Article 69 in cases where equivalents are in issue. Mr Prescott QC for Occlutech expressed some doubts about this and drew our attention to an article in the Yale Law Journal (*The Doctrine of Equivalents in Various Patent Regimes – Does Anybody Have It Right?:* 11 Yale J.L. & Tech 261 (2009)) co-authored by the late Pumfrey LJ and other distinguished judges including Dr Peter Meier-Beck, which is a comparative study of the approach to equivalents in the US, UK, Germany and Japan. The section on German law concludes with the following summary:-

“The German approach to the question of equivalents can be summarized as follows:

The main basis for the determination of the scope of patent protection is the patent claim and an understanding by a person skilled in the art of the technical teaching embodied in such a claim. For this purpose, a patent claim has to be interpreted in conjunction with both the description of the invention and the drawings. In doing so, the basic principles of function-aimed interpretation of the terms used in the patent claim, as well as a context-based interpretation, are to be followed. A contested embodiment which falls within the meaning of the claim so construed infringes the patent literally.

A patent can also be infringed if the contested embodiment does not fall within the “literal” scope of the patent claim. This extension in the scope of the patent is to bring about an adequate level of protection of the inventive achievement in a way that also ensures the highest possible level of legal certainty. This optimal balance is achieved by protecting only those variants that the patent claim (and not just the prior art) has made obvious to a person skilled in the art, on the priority date. That is the case, if the following questions 1 to 3 are answered in the affirmative and, in addition, question 4 is answered in the negative:

1. Does the modified embodiment solve the problem underlying the invention by means which have objectively the same technical effect?
2. Was the person skilled in the art enabled by her specialist knowledge on the priority date to find that the modified means would have the same effect?

3. While answering question 2, are the considerations that the person skilled in the art applies drawn from the technical teaching of the patent claim (so that the person skilled in the art took the modified embodiment into account as being an equivalent solution)?
4. Is the modified embodiment anticipated or made obvious by the state of the art?"
28. Assuming (as I do) that this represents a comprehensive summary of the German position on equivalents, it is immediately apparent that it does not contain anything similar to the third of the questions posed by Hoffmann J (as he then was) in *Improver Corp v Remington Consumer Products Ltd* [1990] FSR 181 as part of his re-statement of Lord Diplock's approach to construction in *Catnic*: i.e.
- “(3) Would the reader skilled in the art nevertheless have understood from the language of the claim that the patentee intended that strict compliance with the primary meaning was an essential requirement of the invention? If yes, the variant is outside the claim.”
29. On one view this is likely to deprive the skilled addressee of one possible explanation of the words used: i.e. that they have been deliberately chosen so as to narrow the scope of the claims over the teaching in order to accommodate the considerations described by Lord Hoffmann in paragraph 35 of his speech quoted earlier. But it is not feasible in the context of this appeal to carry out an exhaustive comparison of the relevant principles of German and Dutch law so as to be able to express a confident view as to whether the underlying principles at play in the two European decisions on infringement do or do not equate to what the House of Lords has stated as the correct English approach to that question. I therefore propose to examine the rival contentions as to the proper construction of claims 1 and 16 in the light of the principles set out in *Kirin-Amgen* and to consider AGA's reliance on the decision of the Oberlandesgericht in those terms.
30. One other interesting point also needs to be mentioned at this stage if only to dismiss it. In the judgment of The Hague court reference is made, and some reliance is placed, on a February 2003 letter from AGA's patent attorney to the examiner which appears to indicate that the feature of clamps at both ends of the device was included in claim 1 in order to avoid a novelty objection based on the prior art. The contents of the prosecution file appear to be admissible under Dutch law for the purpose of construing what the claims were intended to convey to the skilled addressee. Mr Prescott likened their contents to the parliamentary material which can be referred to under the principles set out in *Pepper v Hart* (1992) UKHL 3.
31. But whether or not this analogy is a good one, there is an issue between the parties as to the relevance of this material and the extent to which we should pay any regard to it for the purposes of this appeal. The contents of the file were not in evidence before the judge and there has been no application to adduce it as evidence on this appeal. It is not therefore possible to say whether the letter referred to by the Dutch court is properly representative of the contents of the file or should arguably be read in conjunction with other material.

32. There is also an issue of principle involved. In paragraph 35 of his speech in *Kirin-Amgen* quoted earlier Lord Hoffmann was distinctly discouraging about the relevance of the file although acknowledging that there is no clear English authority as to whether its contents should be regarded as material available to the addressee and likely to be looked at by him in deciding how to interpret the claims. At Court of Appeal level the position was referred to by Robert Walker LJ in *Rohm and Haas Co v Collag Ltd* [2001] EWCA Civ 1589 at paragraphs 40-42 as follows:-

“40. There seems to be no clear English authority on the point, even at first instance. In *Bristol-Myers Squibb Co v Baker Norton Inc* [1999] RPC 253, 274-5 Jacob J has given a useful summary of the problems associated with taking account of what he called prosecution history – that is, the vicissitudes of an application file's progress through the official system – as an aid to construction of the final specification. But Jacob J said that he did not have to decide anything about the point.

41. This court was shown a decision of the Supreme Court of the Netherlands, *Ciba-Geigy v Oté Optics* (13 January 1995) which contains a helpful statement of principle. In explaining that the Court of Appeal had gone too far in excluding all reference to the file, the Supreme Court said:

"Article 69, paragraph 1 of the EPC as interpreted in accordance with the protocol relating thereto does indeed purport (among other things) to ensure reasonable certainty for third parties, but it does not follow that the information from the granting file that is available to third parties may never be used in support of the interpretation given by the patentee to his patent. The requirement of reasonable certainty for third parties does, however, call for restraint in using arguments derived from the granting file in favour of the patentee. Consequently, a court will only be justified in using clarifying information from the public part of the granting file, when it holds that even after the average person skilled in the art has considered the description and the drawings, it is still open to question how the contents of the claims must be interpreted. In this connection one must also take into consideration that the risk of any ambiguities due to careless wording of the patent specification must in principle lie with the patentee."

42. Apart from the last sentence (which raises a different point, and on which Mr Floyd did not rely) I would treat this as persuasive guidance. The letter to the European Patent Office did not have the same status as published prior art identified in a specification, which is readily admissible. But it did contain

objective information about and commentary on experiments which were conducted in response to official observations, and it could be of assistance in resolving some puzzling features of the specification. Although the prosecution process may sometimes superficially resemble a process of negotiation between the applicant and its advisers and the officials who scrutinise the file, it is not the sort of commercial negotiation which is still rigidly excluded in the construction of a written contract (see *Investors Compensation Scheme v West Bromwich Building Society* [1998] 1 WLR 896, 913). Had it been necessary for the judge to take account of the letter in order to resolve the issue of construction, I consider that he would have been entitled to do so.”

33. In the absence of a Respondent’s Notice seeking to rely on the contents of the file as an additional ground for upholding the judge’s decision, we have heard no argument on this point and Mr Prescott QC disavowed any intention to rely on the material as part of his case on construction. I therefore propose to approach that issue (as the judge did) on the assumption that the skilled addressee would not have had the benefit of access to the file.

“Clamps”

34. Claim 1 and claim 16 refer to the use of “clamps” to clamp the strands of the metal used to form the device. In both the old and the new type devices Occlutech seals the loose ends of the wire mesh by welding them together. The nitinol sleeve used in the old type and the adaptor used in both the old and the new type are respectively attached to the bundle of wires by the micro plasma and by the laser welding referred to earlier but, on the judge’s findings, are not essential in order to hold the wires together. That function is carried out by the weld itself.
35. In these circumstances Mr Prescott submitted, and the judge accepted, that neither of the Occlutech devices infringe. He gave “clamp” the meaning suggested by Professor David Williams, Occlutech’s expert witness, of an object which exerts force upon two or more other objects in order to keep them together and rejected Mr Howe’s submission that it could include either a combination of a weld and an external fitting such as the sleeve or adaptor or either of them.
36. The judge noted that this meaning of the words is close to the typical dictionary definition. He referred to Webster’s Third New International Dictionary where the meaning given is:-

“A device (as a band or brace) designed to bind or constrict two or more parts together so as to hold them firmly in their relative position.”

37. The Oxford English Dictionary (OED) gives the word a slightly broader meaning:-

“A brace, clasp, or band, usually of iron or other rigid material, used for giving strength or support to flexible or moveable objects, or for fastening two or more things securely together”.

38. On this appeal Mr Howe criticises the judge for allowing an expert witness to express a view about the construction of the patent but nothing really turns on that in this case. It was common ground before Mann J that “clamp” is not a term of art and has to be given the ordinary meaning of the word which is most consistent with the relevant context in which it is used. One has, I think, to start by looking at the usual meaning of the word before deciding whether the patentee intended it to be given a special or extended meaning and this is precisely what the judge did.
39. It seems to me that he was right to say that a “clamp” is commonly used to describe something which binds together the other objects by applying to them some degree of external pressure or force. But I also think that whilst the primary or a-contextual meaning of the word denotes an external device applied to the wire ends in order to hold them together, the same word could, in a suitable context, be understood to carry an extended meaning which might include the use of a device which physically bound the strands together even if that was not the only means used to secure them. The OED definition would suggest that this is a possible use of the word. In order to decide how claims 1 and 16 should be read by the addressee in this regard, it is necessary to look more widely at the specification. This is what the judge did in paragraph 51 of his judgment:-

“Something held together by soldering, welding, gluing or similar mechanisms would not naturally, or at least not immediately, fall within that meaning. However, one has to consider whether the patent has an extended meaning going beyond physical compression by a particular object. In my view it is plain that, on the wording of the patent, it does not. This is apparent from the following:

- i) There is a small indication from the words in claim 1 itself - “clamps are adapted to clamp the strands”. The repetition tends to suggest that the word is used in its normal sense. By itself, however, this is not strong.
- ii) The point begins to look stronger because the claim contains a cross-reference to figure 5 A via the numerical reference to “(15)”. That figure appears in Appendix 2 to this judgment. It shows something which is fairly clearly representative of a clamp.
- iii) The more one reads the description and the embodiments the clearer this view becomes. This is particularly apparent from paragraphs 0025 and 0026, set out above. Paragraph 0025 refers to “clamps (15 in figure 2 [should be 5A]) ... [which] will hold the ends of the cut braid together ...”.
- iv) This is put pretty much beyond doubt by paragraph 0026 which in terms distinguishes other techniques, - “Alternatively, one can solder, braze, weld or otherwise

affix the ends ...”. Thus clamping is said not to indicate these alternative methods of fixing.

- v) Other references to clamps support this. Thus paragraph 41 suggests how a clamp can be sized. It is hard to see how this can refer to anything other than a clamp in the ordinary sense of the word, which excludes such things as soldering or welding.”

40. Mr Howe criticised certain features of this analysis. The treatment of the numerical reference in Figure 5A was, he said, inconsistent with the approach to numerals set out by this court in *Virgin Atlantic* at paragraphs 16-18. I agree that very little can be derived from Figure 5A for this purpose but the reason is that the Figure is not intended to be illustrative of what is capable of constituting a clamp. The numeral therefore adds nothing. What, however, clinched it for the judge was paragraph [0026] which, on his reading of the patent, contrasts clamps and clamping with soldering and welding and specifies the latter as an alternative to the use of “clamps”. On this basis the reference to a clamp in claims 1 and 16 cannot be read as including the welds applied to the new and old type Occlutech devices unless it was intended to bear a different and much wider meaning than that given to the same words in paragraph [0025]. Mr Howe put the latter argument to the judge without much success:-

“Mr Howe’s argument sought to turn these textual references on their head. He said that soldering, brazing and so on were taught in paragraph 0026 as “alternative methods of achieving [the objective of preventing unravelling] to clamping. Thus, this is a case where the Patentee has made a ‘dictionary definition of his specification’ and the word ‘clamp’ in the claims is to be construed as embracing these alternative disclosed methods of securing the ends of the strands.” I am afraid I do not follow this reasoning. The juxtaposition of paragraphs 0025 and 0026 demonstrate that the patentee has not provided a sort of dictionary definition of “clamp”. He has referred to clamps, and then referred to alternatives to clamps. I do not understand how this amounts to defining clamps to include those other “not clamps” (as it were).”

41. But his primary argument before us was more subtle. The judge’s view of what amounted to a clamp depends on looking at how the loose wire ends are first bound together to prevent fraying. He therefore distinguished between the clamping of the ends described in paragraph [0025] and the alternative method of welding the ends together referred to in paragraph [0026]. But that distinction cannot be translated into the claims if the stage at which the “clamp” is affixed is optional.
42. The patent (see paragraph [0041]) teaches that the braid ends must be secured to prevent unravelling at the time that the length of cut braid is placed into the mould for heating and shaping. That could be done at that point using a solder or weld as described in paragraph [0026]. Under claim 16 (the method claim) clamping takes place at the end and must therefore be capable of encompassing a device where the

ends have already been soldered or welded together at the moulding stage. The judge's construction of "clamp" does not allow for this.

43. I do not think that Mr Howe is right about this. The skilled addressee would understand that he was being told in paragraphs [0025] and [0026] how to secure the loose ends of the braid before placing the cut fabric into the mould. He would see that he could do this in either of the two ways described. The language of paragraphs [0025] and [0026] would indicate to him that a clamp meant the application of an external device to hold the strands together as opposed to fusing them together with solder or a weld. He would also keep this differentiation between the two methods of securing the ends in mind when reading the remainder of the specification and would interpret any subsequent references to a "clamp" (such as that in paragraph [0060]) to mean an external device of the kind described in paragraph [0025].
44. He would not, in my view, read the word "clamp" as including simply a weld or solder as described in paragraph [0026]. Although the loose ends have to be fastened together in one of the two ways described at the pre-moulding stage, the patent does not in terms tell the addressee that he can weld the strands together at the moulding stage and then add a "clamp" later. In paragraph [0060] it records that a clamp can be used to connect the device to the delivery system but that is not part of the invention and cannot be construed as a necessary additional step to be taken in cases where the ends have been sealed by a weld in accordance with paragraph [0026].
45. I therefore agree with the judge that a clamp does not include the other methods of fixing described in paragraph [0026] and that it excludes an external device which is placed over and physically attached to the welded ends after the completion of the moulding process. The judge thought that the adaptor (e.g.) on the new Occlutech device was not a clamp because although spot welded to the pre-welded ends of the strands, it does not clamp them in the sense of keeping them together. That is done by the earlier weld. I agree with that but what prevents it from being a perhaps over-literal approach is that the distinction made in the specification between clamping and welding at the pre-moulding stage is not displaced by any contra-indications in the subsequent paragraphs of the specification or in the claims.
46. Mr Howe's submission about timing rests principally on the fact that clamps and clamping are mentioned as the last feature of claim 16 and therefore indicate, he says, that the patentee envisaged the clamps would be fitted to the ends of the device even if previously welded together. But, in my opinion, the position of feature (e) has to be read and understood in the light of the specification as a whole. There is no express teaching that the time at which a "clamp" can be affixed is optional and no one, I think, suggests that claim 16 should be read as excluding from protection devices which are made in accordance with paragraph [0025] where the clamp is affixed prior to moulding. Claim 16 is therefore merely a statement of the essential elements in the process of creating a device in conformity (e.g.) with claim 1 and derives its content from that and the other product claims. I do not believe that the addressee would read it as displacing the distinction between clamping and welding which is inherent in those claims.
47. Like the judge I do not therefore consider that the claims extend to an external device attached by (e.g.) welding or soldering to ends which are effectively held in place by

an earlier welding process. The clamp has to be the primary and effective means of securing the loose ends.

Clamping the stands at the opposed ends of the device

48. Regardless of what constitutes a clamp, Occlutech rely on the fact that both claim 1 and claim 16 refer in terms to clamps (plural) which they say is consistent with the embodiment referred to in paragraphs [0025]-[0026] where the device being prepared for moulding consists of a braided sleeve cut at both ends. Had the specification stopped there in its teaching of what constitutes suitable material for producing a device in accordance with the invention I doubt whether there could have been any serious argument to the contrary. The material illustrated in Figure 1A, being open at both ends, necessitates clamps being attached “at the opposed ends of the device”. There is no alternative. But the matter becomes more complicated by the reference in paragraph [0027] to the use of a flat sheet of woven fabric which, when inverted as suggested in the teaching, will result in all the loose strands being gathered at one end of the device.
49. AGA’s case (which was accepted by the Oberlandesgericht) is that the teaching in paragraph [0027] has to be accommodated within the language of the claims or, put another way, that the skilled addressee would read the claims in the light of paragraph [0027] and understand the references to clamps and clamping “the strands at the opposed ends of the device” (in claim 1) as identifying the strands as the critical items to be clamped and not the opposed ends of the device. The latter would, AGA submit, have been read as merely descriptive and non-essential: i.e. an immaterial variant in the *Catnic* sense. This aspect of the case does therefore depend on whether the addressee will or should assume that the entirety of the teaching in paragraphs [0025]-[0027] was intended to be included within the claims.
50. Unless he has access to material from the file which gives him a particular insight into the thinking and motives of the patentee, the addressee has only the words of the patent to go on. These are the necessary starting point. Lord Hoffmann’s analysis in *Kirin-Amgen* (at paragraph 34) does not give equal weight to any possible construction of the words used. Rather, it assumes that they have been chosen with care and upon skilled advice. The circumstances in which the patentee is to be assumed to have departed from their conventional meaning are therefore likely to be rare and the skilled addressee will, in practice, give them an extended meaning only where the idea encompassed in the invention is difficult to define or where the language of the patent as a whole compels that conclusion.
51. Having read the specification, the addressee will know that one embodiment of the patent uses the tubular braid illustrated in Figure 1A but that the Figure 1B fabric was also suitable for use (see paragraphs [0012] and [0018]). The treatment of these two possible methods of applying the invention continues in paragraphs [0025]-[0028].
52. In the claims there is no express reference to what one might term a one-ended device. On the contrary, claim 1 refers to a device with clamps on “opposed ends” and does so by reference to Figure 5A which is the same reference as in paragraph [0025]. The fact that it does so via numeral (15) is, I think, immaterial in itself to the construction of the claim. The patentee is using that as a signpost to the relevant drawing: not as a limitation of its claim. But the result is that one is left looking at an illustration of a

device produced in accordance with paragraph [0025] rather than the paragraph [0028] pocket method.

53. From this the addressee is likely to discern that claim 1 is a reference to the embodiment which utilises the tubular braid and the judge held that this view was confirmed by the reference to braided metal strands in the claims. The reference therefore contrasts with the woven material referred to in paragraph [0018] and Figure 1B.
54. Mr Howe submitted that the judge was wrong to place any reliance on the difference between braided and woven fabrics for the purpose of construing the claims. Figures 1A and 1B are treated together in paragraph [0012] as each depicting a metal fabric suitable for use in the invention. This was, he said, an example of what Lord Diplock referred to in *Catnic* as the “meticulous verbal analysis” which can skew the reading of the patent. But I think the judge was right to take into account the fact that claim 1 does refer to the type of fabric used in the way described in paragraph [0025] which results in a device having two clamps. All that he was doing was to point out that claim 1 is consistent as a piece with that part of the teaching and inconsistent with the inclusion of the teaching contained in paragraph [0027].
55. Mr Howe’s primary argument is based on the terms of claim 16 and, in particular, feature (e). This talks of clamping “the opposite ends of the strands of the device with clamps” rather than clamping “the strands at the opposed ends of the device”. It therefore emphasises, he says, that the purpose of the clamping is to fasten together the loose strands regardless of the embodiment in which they are present. The plural (clamps) has therefore to include the singular in the case of a device made in accordance with the method described in paragraph [0027].
56. This was certainly the approach of the German court. They said:-

“... One must agree with the defendants that claims 1 and 16 of the patent in suit, seen from a philological point of view, teach several clamps (plural) and in addition to that prescribe that these clamps are adapted to clamp the strands at opposed ends of the device. This describes configurations in which one clamp each is present at the proximal and at the opposed – distal – end. Yet the average skilled person will not content himself with this mere linguistic understanding. He will understand that the ends of the strands are supposed to be bundled with the help of the clamps, which is why feature 2e) of claim 16 – as the plaintiff rightly pointed out in the oral hearing before the present Court – refers to a clamping of the opposed ends of the strands, and not of the device, regardless of whether the strands are left lying flat or if their ends are placed on top of each other by folding, because just by taking this measure, the two ends of the strands do not cease to exist. Since the method described therein is supposed to result in a device of the type inter alia protected by claim 1, the skilled person will assume that the technical meaning of claim 1 also includes embodiments in which both strand ends are placed on top of each other and are bundled at one end of the device only.

...

In the embodiment according to para. [0027], it only makes sense technically, in view of the function of the clamping which is to prevent the strand ends from unravelling, to provide clamps where free strand ends are present. Since this is only the case on one side of the device, and all strand ends can be grasped at once with one – single – clamp, only one and not several clamps are required. The plural “clamps” used in the claim does not stand in the way of this view. The skilled person does not glean from the wording that several clamps should be used in any case; in view of the embodiment described in para [0027], he will understand the term “clamps” as a generic term which specifies which type of device – i.e. clamps – is supposed to be used in order to prevent the strand ends from fraying....”

57. It is, of course, right that if one assumes that all aspects of the teaching (i.e. both paragraph [0025] and [0027]) were intended to be encompassed in the claims then the language falls to be construed accordingly. The reasoning of the German court proceeds on this assumption. The third *Improver* question was not asked and the possibility that the patentee has deliberately limited the scope of the claims over the teaching was not therefore considered. The resulting analysis is therefore open to the very criticism ventured by Lord Hoffmann in paragraph 33 of *Kirin-Amgen*: i.e. that it presumes that the patent claims as much as it teaches.
58. I do not consider that the formulation in feature (e) of claim 16 would cause the skilled addressee to take a different view of the scope of claim 1 from that which the natural meaning of the words of the prior claim would have given him. The consistencies of language between claim 1 and the teaching in paragraphs [0025]-[0026] would, for the reasons mentioned earlier, cause the skilled addressee to understand that protection was only being claimed for the embodiment which uses the tubular braid. He would therefore have read the reference to clamps (plural) as a distinctive and necessary feature of the invention. Claim 16 patents a method of forming a medical device in accordance with any one of the preceding claims. Although the precise verbal format of feature (e) is different from that of the equivalent words in claim 1, the addressee would not, in my view, have read them as having any different meaning. The inclusion of the words “opposite” and “clamps” (plural) would, I think, have confirmed to him that he was still looking at a claim to patent the method of producing what is illustrated in Figure 5A. The unambiguous language of claim 1 coupled with the similarities between the two claims makes any other construction highly unlikely.
59. Any lingering doubts which the addressee might have would be resolved by his knowledge from the patent specification that AGA was seeking a divisional patent based on the same application. This would indicate to him the possibility that the paragraph [0027] method was being hived off and would offer an explanation of why the claims in the patent in suit were limited to the teaching contained in paragraphs [0025] to [0026]. I understand that a divisional patent for an occluding device with only one clamp has in fact now been granted.

Conclusion

60. For these reasons, the judge was right in my judgment to conclude that claim 1 is to be construed as limited to a device which has clamps at both ends and that the old and new type Occlutech devices do not therefore infringe. I would therefore dismiss this appeal.

Sir Paul Kennedy :

61. I agree.

Lord Justice Pill :

62. I also agree.

Appendix

1. Patent in suit



Fig. 1A

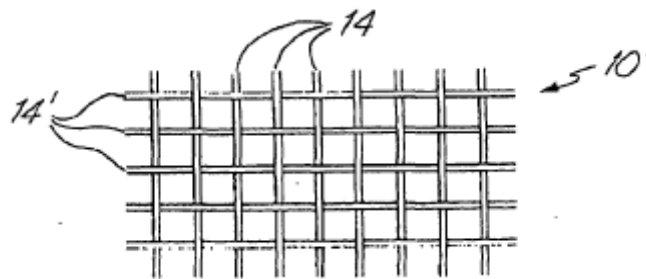


Fig. 1B

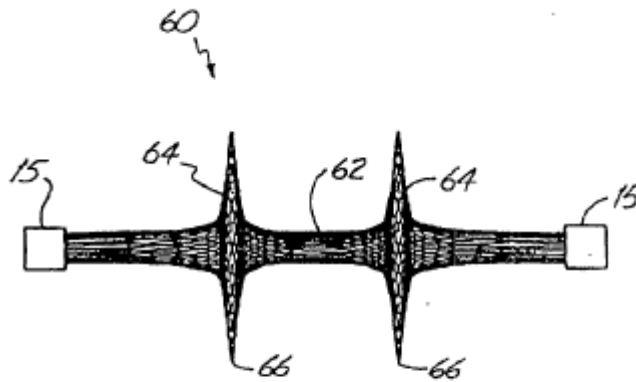


Fig. 5A

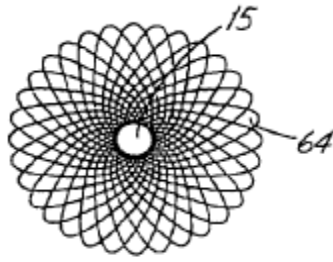


Fig. 5B

2. Occlutech PPD

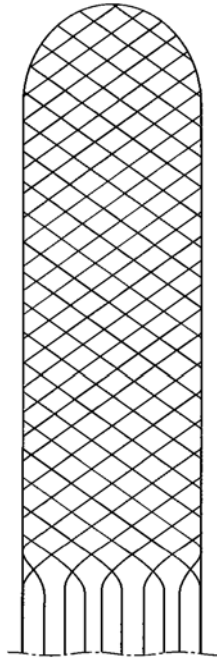


Fig. 1

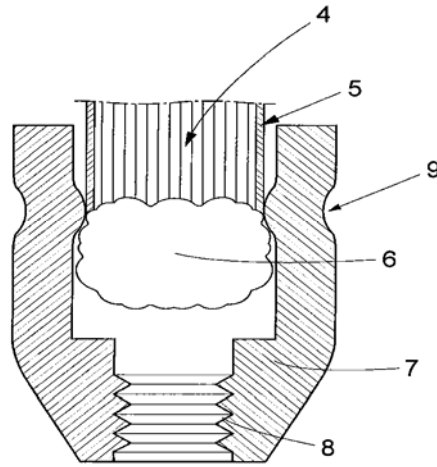


Fig.10

3. Boston Scientific

