

Neutral Citation Number: [2009] EWCA Civ 498

Case No: A3/2008/2828

IN THE SUPREME COURT OF JUDICATURE
COURT OF APPEAL (CIVIL DIVISION)
ON APPEAL FROM THE HIGH COURT OF JUSTICE
CHANCERY DIVISION (PATENTS COURT)
THE HON MR JUSTICE PATTEN
HC 06 C04452

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 16/06/2009

Before:

THE RT HON LORD JUSTICE WALLER
and
THE RT HON LORD JUSTICE JACOB

Between:

Ancon Limited

**Claimant/
Appellant**

- and -

ACS Stainless Steel Fixings Limited

**Defendant/
Respondent**

**(Transcript of the Handed Down Judgment of
WordWave International Limited
A Merrill Communications Company
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Tel No: 020 7404 1400, Fax No: 020 7404 1424
Official Shorthand Writers to the Court)**

Daniel Alexander QC and James St Ville (instructed by DLA Piper UK LLP)
for the Claimant/Appellant

Andrew Lykiardopoulos (instructed by Kuit Steinart Levy LLP)
for the Defendant/Respondent

Hearing date: 18 May 2009

Judgment

Lord Justice Jacob:

1. This appeal is from a judgment of Patten J of 21st October 2008, [2008] EWHC 2489 (Pat). On the morning of the hearing the third member of the court due to hear the appeal was unwell. So, with the parties' consent, we proceeded to hear the case with a two-judge court, the parties being willing to accept the risks of a disagreement, about which I say no more.
2. The Judge held Ancon's patent EP (UK) 0 882 164 valid but not infringed by ACS's 31/21 channel assembly. Ancon appeals the finding of non-infringement. There is no cross-appeal; so we proceed on the basis that the patent is valid.
3. Ancon say that the Judge construed claim 1 (the only claim that need be considered) too narrowly. ACS say he was right. So the whole question essentially turns on the proper construction of claim 1. In their skeleton argument for Ancon Mr Daniel Alexander QC and Mr James St. Ville tentatively advanced a further argument – that even if the claim as properly construed did not cover the ACS assembly, there was infringement nonetheless by virtue of the amendments made to Art 69 of the EPC and the Protocol thereto in 2000. In the event it is not necessary to consider this argument. All I would say is that has considerable difficulties both because our House of Lords has indicated it makes no difference (see *Kirin-Amgen* at [49]) and because a trawl through the *travaux préparatoires* to the EPC 2000 does not show a clear intention to change the law.

Principles of Claim Construction

4. The leading House of Lords authority on this subject is now *Kirin-Amgen v Hoechst Marrion Roussel* [2005] RPC 169. The earlier House of Lords case *Catnic v Hill & Smith* [1982] RPC 183 remains of assistance however and is of particular value here particularly because it is concerned with a similar sort of technology.
5. I summarised the applicable principles in *Technip France SA's Patent* [2004] RPC 46. They were approved in *Kirin-Amgen*, subject to a minor qualification (see *per* Lord Hoffmann at [33]). Pumfrey J adapted my earlier summary to take account of that criticism in *Halliburton v Smith* [2006] RPC 25 at [68]. What he said there is an accurate summary of the current law.

“(a) The first, overarching principle, is that contained in Art 69 itself. Sometimes I wonder whether people spend more time on the gloss to Art 69, the Protocol, than to the Article itself, even though it is the Article which is the main governing provision.

(b) Art 69 says that the extent of protection is determined by the terms of 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.

(c) It follows that the claims are to be construed purposively — the inventor's purpose being ascertained from the description and drawings.

(d) 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. The Protocol expressly eschews such a method of construction but to my mind that would be so without the Protocol. Purpose is vital to the construction of claims.

(e) 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.

(f) 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 Art 69 itself. It is the terms of the claims which delineate the patentee's territory.

(g) 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. Hoffmann LJ put it this way in *STEP v. Emson* [1993] RPC at 522 :

‘The well known principle that patent claims are given a purposive construction does not mean that an integer can be treated as struck out if it does not appear to make any difference to the inventive concept. It may have some other purpose buried in the prior art and even if this is not discernible, the patentee may have had some reason of his own for introducing it.’

(h) 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. A good example of this is the *Catnic* case itself — ‘vertical’ in context did not mean ‘geometrically vertical’, it meant ‘vertical enough to do the job’ (of supporting the upper horizontal plate). The so-called ‘Protocol questions’ (those formulated by Hoffmann J in *Improver v Remington* [1990] FSR 181 at p.189) are of particular value when considering the difference of meaning between a word or phrase out of context and that word or phrase in context. At that point the first two Protocol questions come into play. But once one focuses on the word in context, the Protocol question approach does not resolve the ultimate question — what does the word or phrase

actually mean, when construed purposively? That can only be done on the language used, read in context.

(i) It further follows that there is no general ‘doctrine of equivalents.’ Any student of patent law knows that various legal systems allow for such a concept, but that none of them can agree what it is or should be. Here is not the place to set forth the myriad versions of such a doctrine. For my part I do not think that Art. 69 itself allows for such a concept — it says the extent of protection shall be determined by the terms of the claims. And so far as I can understand, the French and German versions mean the same thing. Nor can I see how the Protocol can create any such doctrine.

(j) 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.

(k) Finally purposive construction leads one to eschew what Lord Diplock in *Catnic* called (at p.243):

‘the kind of meticulous verbal analysis which lawyers are too often tempted by their training to indulge.’

Pedantry and patents are incompatible. In *Catnic* the rejected ‘meticulous verbal analysis’ was the argument that because the word ‘horizontal’ was qualified by ‘substantially’ whereas ‘vertical’ was not, the latter must mean ‘geometrically vertical.’”

[69] I would diffidently add three observations of my own. The first is merely the trite principle that the addressee of the specification is the person skilled in the art, who approaches the document with the common general knowledge. Secondly, there may be obscurities and difficulties in a claim that cannot be resolved by an appeal to context. It is very rare that some sensible meaning cannot be attributed to the words used in a patent claim, but where a claim permits alternative interpretations it is possible to be left with no alternative but to take the most straightforward. Finally, and most importantly, over-meticulousness is not to be equated to carefulness. Care in working out what the patentee was aiming at when he chose the words he used is absolutely necessary.

The Specification of the patent in suit

6. Since Art 69 (as amended) provides that the description and drawings shall be used to interpret the claims, it is important, before going to the latter, to gain a full understanding of the inventor's description of his invention in his specification. Patten J provided a clear exposition of the description. I borrow it with gratitude:

[6] Channel assemblies have been in use in the construction industry for some time. Typically they are made up of a metal channel with lugs or restraining anchors which is cast into the concrete structure of a building. The channel has shaped sides with an open aperture on its face into which the head of the bolt can be inserted. The bolt is moved along the channel to its required position and then turned 90° so as to lock against the internal walls of the channel. The assembly can then be used to fix on to the structure of the building components such as brackets to support masonry or some other form of external cladding.

[7] These fixings must therefore be able to support extremely heavy loads and the evidence is that they can carry weights of up to ¾ tonne which is the weight of a small car.

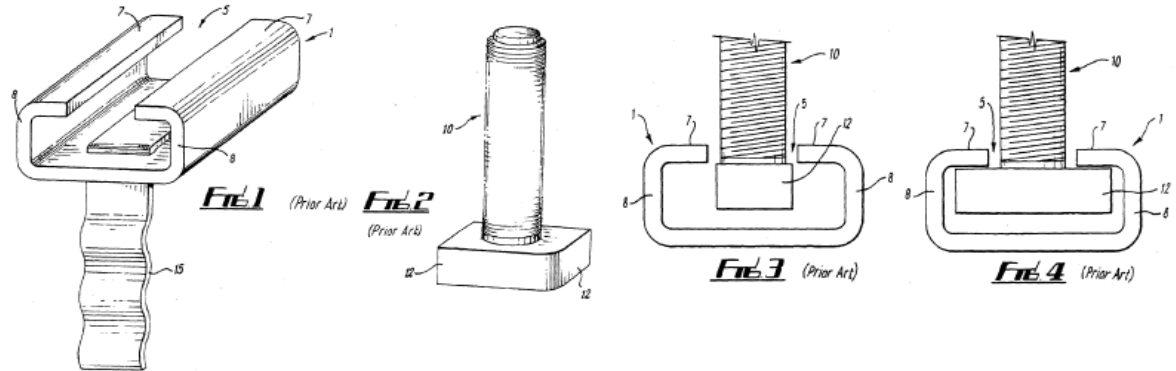
[8] The Patent describes the invention as relating to “a channel assembly which is adapted to be cast into or otherwise attached to a building structure”. It explains by reference to the assemblies shown in Figures 1-4 that channel assemblies have been used for many years for fixing ancillary components to a building structure. The channels are either surface mounted or cast into a concrete face and “generally have a rectangular-shaped cross-section with an open slot 5 between two lips 7 which are turned inwards from generally parallel side walls 8”.

[9] The Patent then goes on to explain at [0003-0004] the problems with the existing systems:

“[0003] The channel 1 is used in conjunction with a bolt 10 with a generally T-shaped head having two wings 12. The bolt head fits into the open slot 5 in the channel 1 and is turned through 90° in a clockwise direction which locks the bolt 10 in position (the tips 12a of the wings 12 abut against the side walls 8 to prevent further rotation of the head). Conventionally, the fit of the head in the channel 1 is fairly loose. This can allow significant movement of the bolt 10 in the channel 1 under shear loads. Under tensile load the lips 7 of the channel 1 can deflect outwards and the wings 12 of the bolt 10 bend because the load is transferred from the head of the bolt 10 to the lips 7 of the channel 1 at a location remote from the sides 8 of the channel 1.

[0004] Under tensile load, the channel 1 behaves as a beam between the bolts securing the channel 1 to the structure or between anchorage lugs 15 which secure the channel 1 in the concrete.”

[10] These features are illustrated in Figures 1-4 below:



[11] In paragraphs [0006-0011] the Patent describes the invention as follows:

“[0006] According to the present invention there is provided a channel assembly in accordance with claim 1.

[0007] The sides of the head (or a portion thereof) are preferably inclined at substantially the same angle as the side walls of the channel.

[0008] The fixing and channel preferably co-operate (preferably by a cam action) to force the fixing against the means for restraining it upon rotation of the fixing in the channel.

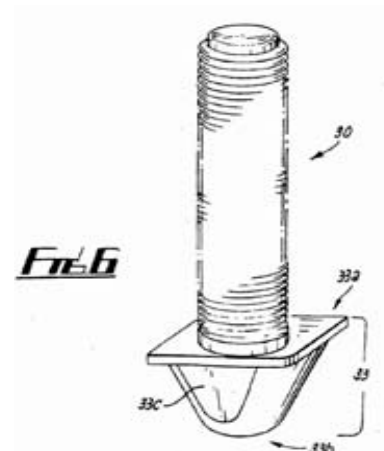
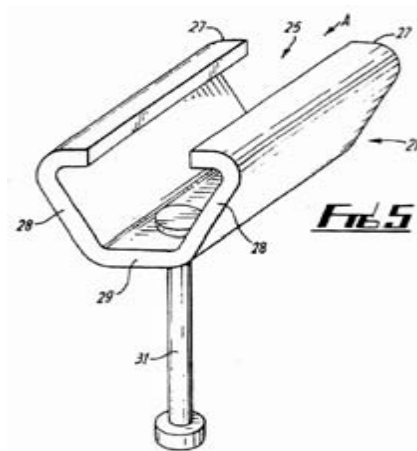
[0009] Thus the invention also provides a method of securing a fixing in a channel assembly as defined above, the method comprising providing a channel assembly as defined above, locating the fixing in the channel, and rotating the fixing in the channel to engage the sides of the head and the side walls of the channel such that a camming action forces the head of the fixing against the lips of the channel.

[0010] The invention also provides a fixing for use in the channel assembly as defined above.

[0011] The head of the fixing is of an elliptical cone. In the embodiment comprising an elliptical cone, the rotation of the head in the channel optionally forces the sides of the head at its largest radius against the side walls of the channel, and can also force the head against the lips of the channel. This can reduce the extent of play of the fixing in the channel, and

allow a stronger fixing than if the bolt is movable in the channel.”

[12] The two key features used to achieve the effect described in [0011] are therefore (1) the shape of the channel which has sides which “incline inwardly towards a spine” compared with the examples in the prior art which are rectangular in shape and (2) the head of the bolt which is described in [0016] as having a generally frusto-conical shape in side view with tapered sides. These are references to Figures 5 and 6 in the Patent which illustrate the first embodiment of the design and is a more detailed description of the head of the fixing which in [0011] is simply referred to as “of an elliptical cone”.

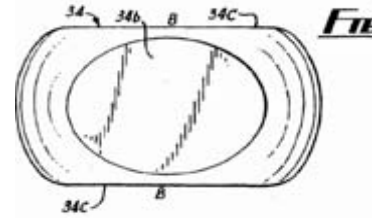
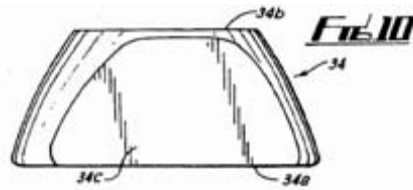


[13] In [0017-0018] the Patent explains the relationship between the shape of the head and that of the channel:

“[0017] The angle of the tapered sides of the head 33 at its widest point approximately equals the angle of inclination of the sides 28 of the channel 21. At the base 33a of the head 33 there is a plate which is similar in plan view to the head of the prior art bolt 10. The head 33 has two flattened areas 33c on opposing sides to enable the head 33 to be inserted into the slot 25. Once in the slot 25, the head 33 can be turned clockwise through 90° but the plate prevents further rotation in the channel as described for the prior art.

[0018] Rotation of the head 33 in the channel 21 induces a camming effect between the head 33 and the channel 21 which forces the base 33a of the head 33 against the inner surfaces of the lips 27. This not only ensures that the rotated bolt 30 is restricted in its axial movement by the lips 27, but also transfers any axial load from the bolt to the channel 21 at the corners between the lips 27 and the side walls 28.”

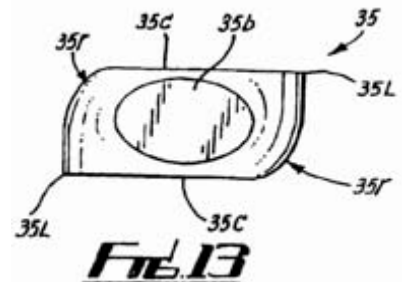
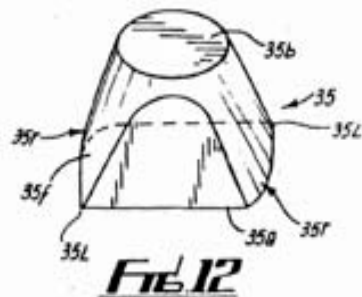
[14] There are two further embodiments. Paragraph [0019] teaches a modified form of the head “in the form of a truncated elliptical cone” in which the base plate (33a in Figure 6) is removed. This is illustrated in Figures 10 and 11 below:



[15] Paragraph [0019] says that:

“...The cross-section through the head 34 is generally elliptical as shown in Fig. 11. The head 34 has flattened areas 34c as previously described for the head 33 which allows the head 34 to fit into the slot 25 of the channel 21. Upon rotation of the head 34 in the channel 21, the head 34 is forced upwards in the channel towards the slot 25 by the camming action of the inclined sides of the head 34 and channel 21 respectively, and the base 34a of the head 34 is firmly locked against the inner surface of the lips 27.”

[16] Figures 12 and 13, which are reproduced below, illustrate the third embodiment which is a further variant of the truncated elliptical cone described in Figures 10 and 11.



[17] This version of the head (which, like the other two, is designed to fit into the channel illustrated in Figure 5) also has flattened areas on two sides and a flattened top. But it differs from the one shown in Figure 10 (34). Paragraphs [0020-0021] state that:

“[0020]whereas the head 34 is generally symmetrical about a line B-B joining the mid points of its flattened areas 34c so that the vertices between the curved and flat portions

are generally rounded, the head 35 has two diametrically opposed rounded corners 35r and two diametrically opposed right angled corners 35L at its base 35a. The head 35 is shaped such that the sides incline smoothly from the base 35a to the tip 35b. As previously described, the head 35 has flattened areas 35c on opposing sides.

[0021] When fitted to the shank of a bolt, the head 35 can fit into the slot 25 of the channel 21 as previously described. Upon clockwise rotation of the head 35 in the slot 25, the sides 28 of the channel 21 contact diametrically opposed sides of the head 35, such that the head 35 can be turned when the rounded sides 35r are in contact with the sides 28 of the channel 21, but once the corners 35L of the head 35 are in contact with the sides 28 of the channel 21, further rotation is resisted by the generally flat sides 35F adjacent the respective corners 35L. The surface area of the head 35 available to abut against the side walls 28 of the channel 21 is increased as compared to the surface area available on the bolt 30; this improves resistance to further rotation, and increases the camming force which drives the base 35a against the lips 27 when the head 35 is rotated in the channel 21.”

[18] The advantages claimed for the invention in the Patent are a higher load capacity within a given deflection limit and a lower metal volume for any given overall performance. Although containing less metal, the fit of the bolt head into the channel transfers load to the channel at a location very close to the side walls which can reduce the deflection caused by the bending of the lips of the channel under tensile load. In turn, the shape of the channel with its inclined sides is said to transfer the load more directly to the anchorages than would be the case with the traditional triangular shaped channel thereby further reducing the possibility of deflection. There is also a corresponding reduction in the amount of metal required to form the channel.

7. It is not disputed that these advantages are in fact achieved by the invention. It is said, however, that though they are also achieved by the accused embodiment as well as the patentees own product both fall outside the claims of the patent.

Claim 1

8. As I have said, the case turns on claim 1. This reads:

“1. A channel assembly (21) adapted to be attached to a building structure, said channel comprising a spine (29), two side walls (28) and lips (27) defining a slot (25) in the channel and adapted to restrain a fixing in the channel, said spine (29) being provided with anchors (31) for casting into concrete, said

side walls (28) being inclined inwardly towards the spine (29) and further including a fixing (30) having a head (33) with inclined sides characterised in that the head (33) has a generally elliptical cone shape.”

9. It is common ground that the ACS assembly has all the features of claim 1 other than that the head of the fixing (I am going to call it a bolt) “has a generally elliptical cone shape.” The ACS bolt looks like this from on top:



Thus, and there is no real dispute about this, it is just like an example of fig 13 of the patent but with the top of the head filed down so that there is no ellipse on the top.

10. All turns on what Lord Hoffmann called the compulsory question: “what would a person skilled in the art have understood the patentee to have used the language of the claim to mean?” (*Kirin –Amgen* at [69]).
11. “Elliptical cone shape” is, as a matter of pure geometry, something of a nonsense. An ellipse is a 2-dimensional shape, a cone 3-dimensional. Indeed to a geometer an ellipse is a conic section. So even to a geometer, and even without the word “generally” the patentee must be trying to define something which is not exactly or precisely geometrical. But the patent is not directed to a geometer – it is directed to a practical designer and manufacturer of fixings for buildings – much the same sort of person as the Catnic patent was aimed at (Lord Diplock described him as a “builder” but really it would be a manufacturer of components to be used by a builder, just as here).
12. To gain an idea of what such a skilled reader would have understood the patentee to convey by “generally elliptical cone” one needs to think like him. He would know about the prior art bolts and channels. He would know that bolts had been square headed and rectangular headed, fitting into the kind of rectangular cross-section channel shown in fig. 1 of the patent. He would know that rounded corners on these rectangular heads had been provided. This is because if you use a head which is much smaller than the channel it may turn as you tighten up from the outside. If you provide a head which is nearly as wide as the channel it will not turn but on the other hand is not as easy to slide along the channel to get it in position. Putting a rounded corner on enables you slide it along and then turn it.
13. Figure 2 of the patent shows one rounded corner but in reality there were two, diametrically opposite each other – we have a sample. With a rectangular head whose longer side is just a little less than the width of the channel, the rounded corner enables you to slide the bolt in from the end and then to turn it 90⁰ whereupon the

sharp corner engages the side of the channel and the bolt will turn no more. That will automatically happen as you screw the nut up.

14. There is nothing else of significance in the common general knowledge. It is with that that the skilled man would read the patent. He would see the channel shape and pictures of a bolt with a wholly novel shaped head – three kinds. He would appreciate that all three kinds were treated by the patentee as covered by the words now in dispute. He would read a description of how the bolt head and channel co-operated in the claimed assembly. As the bolt is turned, two things happen simultaneously. First the corners (particularly those of fig 13) would prevent the head simply rotating in the channel – like the rounded corners of the prior art. Secondly as the head turned there would be the camming action by which it was forced forward against the inside of the channel. He would never have seen anything like it before. And he would be told of the advantages thereby achieved.
15. In that context, what would he understand the phrase to mean? What head-shape is the patentee trying to convey to him? There are two aspects, “elliptical” and “cone shaped” though the phrase is a composite. As far as cone-shaped is concerned, it is obvious that the patentee is not in fact calling for a mathematical cone shape. The top has to be cut off or it would hit the bottom of the channel. Claim 8 of the patent (“wherein the cone shape is a truncated cone shape”) makes that even clearer.
16. Mr Andrew Lykiardopoulos for ACS accepted that the reader would understand that the patentee is not limiting himself to a perfect geometrical ellipse – nor is he calling for a perfect cone shape. But, he submitted, the reference to generally elliptical called at the least for the presence in the head of at least one portion which is more or less oval. He supported this construction with the following points:
 - (a) All three of the drawings do show a generally oval portion of the head. Even fig 13 shows an oval at the top of the head. As he put it “The oval shape is always retained.”
 - (b) The patentee specifically discusses some departures from exact geometrical shapes. In particular in relation to the first embodiment (fig. 6) he refers to “Two flattened areas 33c on opposing sides” and he refers to truncation of the cone (“in the form of a truncated cone”). This shows the sort of departures contemplated. But as far as “elliptical” is concerned, no departure is mentioned and it cannot have been contemplated.
 - (c) True it is that the heads of the patentee’s embodiments provide smooth camming. That does not mean that anything which will achieve that must be “generally elliptical”.
 - (d) The skilled man would recognise the sharp and rounded corners of the fig 13 embodiment as coming from the prior art – though there they were the same in all cross-sections because the bolt was essentially a rectangular block. He would not have called that “generally elliptical” so a similar cross-section of the bolt of the patent would not be “generally elliptical” if there were no oval part on the top.
 - (e) The authorities show that one cannot disregard the language chosen by the patentee. “Purpose is not the be all and end all” (*Technip, Halliburton*); “a patent

may for one reason or another, claim less than it teaches” and “the language he has chosen is usually of critical important” (*Kirin-Amgen*). So once you have a head which in any ordinary use of language does not have an ellipse, you are outside the meaning of the claim. It is not good enough merely to show that the alleged infringement has, as is said in another context, all the right curves in all the right places: something like an ellipse must also be present.

(f) If the patentee had wanted to say that something more was covered he easily could have done so, for instance by saying the head was “generally rectangular with curved corners and inclined sides.”

17. I am unable to accept these submissions. First and foremost there is nothing in any of them which has regard to the purpose of the features of the claim. The skilled man in considering what a patentee meant by any specified feature will have regard to that purpose. So here he would see that the purpose of the shape is to achieve the camming action into the corners of the channel. The shape of the top of the bolt, which does not come into contact with the channel is immaterial to this. So, he would reason, the important aspects of the “generally elliptical cone shape” are those parts of the bolt which co-operate with the channel in the whole assembly - the sides of the bolt not the top. The “business” bits of the bolt are the sides. This forces his attention on the cross-sections throughout the bolt – that is what the patentee is trying to convey by his words “generally elliptical”. And considering particularly fig.13 the skilled reader would see that the phrase has a very loose meaning – it is enough that there are what might be called “vestiges” of a true ellipse to do the necessary camming.
18. Mr Lykiardopoulos’s point (a) (“ellipse always shown”) is misplaced because an oval is not present throughout most cross-sections of the bolt shown. Only very near the top and at the top is there such a cross-section. So a complete elliptical or oval shape is essentially not present in what is shown. Indeed, so far as it is present, it performs no useful function.
19. Point (b) (other departures from geometry mentioned but not one from elliptical) is a lawyer’s argument and non-purposive. It is not unlike that advanced by the defendants in *Catnic* (“extending vertically” must mean truly vertical and not merely substantially so because, by contrast, the upper and lower plates were claimed as “substantially parallel” to each other). It is an example of a “meticulous verbal analysis in which lawyers are too often tempted by their training to indulge”, *per* Lord Diplock at p.243). It is an appeal to literalism, condemned by Lord Hoffmann in *Kirin-Amgen* at [41]-[42].
20. Point (c) (“achieving camming by other means”) is wrong. The ACS bolt cams in just the same way as fig.13 – it is essentially a filed down version of it.
21. Point (d) (cross-section same as prior art – not “elliptical” so not elliptical here) does not help. Yes, the skilled man would recognise in fig. 13 that the cross-section at the bottom was the same as in the prior art. And I do not suppose he would have described that prior art as “elliptical” or “generally elliptical.” But how he would have described the prior art is not the question – he would be trying to see what the patentee meant and he did use that phrase to describe that cross-section.

22. Point (e) is correct in point of law – you cannot ignore or depart from the claim language. But one is not doing that when trying to ascertain what the skilled reader would understand the patentee to have meant by the claim language he used.
23. Point (f) (could have used language which did the job) is a familiar kind of argument. Nearly always (indeed perhaps always) it can be run and often is whenever a point of construction of any kind of document is in issue. “If the draftsman had meant that, he could easily have said so” is a phrase we hear day in and day out. It seldom assists and does not do so here.
24. Moreover it is a particularly weak argument here. For Mr Lykiardopoulos’ suggested claim also suffers from geometrical problems. The fig 13 head, for example, is so far from rectangular that one can imagine similar geometrical-type arguments as those advanced here – that the ACS bolt is not “generally rectangular” at all.
25. I would add this. The patentee here was faced with a familiar problem. He was trying, in the words of Lord Hoffmann at [34] “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.” That is particularly hard when you are trying to describe a complicated shape. By and large you need to start from some point of reference to a known sort of shape (here ellipse and cone) to get going on such a task. That is what the patentee was obviously doing when he chose his composite phrase “generally elliptically shaped cone”. It would be wrong in those circumstances to suppose that he was taking anything like a strictly geometrical approach.
26. Of course it might have been possible to attempt a claim in functional terms – “so shaped that it will cam ...” or something like that. But such claims also have their difficulties and some patent offices can be resistant to them on the grounds of undue width. I speculate no further.
27. Where then did the Judge go wrong? He said:

The difficulty I have with Mr Alexander’s approach is that it gives no real recognition to the patentee’s reference in the claims to the bolt head being elliptical. It is clear from the specification that in the first embodiment the shape of the head is an elliptical cone without qualification (see paragraph [0011]). The word “generally” comes into use when one gets to the second and third embodiments which introduce a degree of truncation; flattened side areas; and two right-angled corners. Although these modifications do not eliminate the elliptical shaped head of the fixing, they do compromise it in geometrical terms and give rise in the text of the specification to the use of the word “generally”. It is, however, clear from this that the phrase “generally elliptical cone shape” is used to describe shapes, all of which retain the essential feature of an ellipse. In the context of the specification as a whole, it can have no other meaning.

The error was in saying that the shapes shown in the patent all “retain the essential feature of an ellipse.” They do not in any relevantly technical sense, if by “feature of

an ellipse” one means a complete oval shape. For, unlike the “Brighton Rock” of a seaside candy, the oval shape does not run through what is shown: save for very close to the top, the cross-sections are not complete ovals – they have the vestiges of an oval.

28. In the result I agree with the Opposition Division of the European Patent Office when it said, in relation to an opposition to this patent:

“3. In contrary to the Opponent’s opinion the feature “a generally elliptical cone shape” also is sufficiently clear. It is clear for a skilled person that, in contrary to a strict elliptical cone shape, with the expression “generally elliptical” the cross-section of the cone should include any rounded non-circular form. The restriction to “a elliptical cone shape” would be an undue restriction of the scope of protection, having regard to the disclosure of the patent in suit.”

29. Two matters remain. First it was suggested that the experts had each agreed in evidence that the ACS bolt was not “generally elliptical.” I am not convinced that they did in the necessary sense of dealing with the word in the context of the description and drawings and understanding what it is that the patentee was intending to convey. But, more significantly, this was a question for the Court. The function of experts is to aid the court’s understanding of the technology, not to construe the claims.

30. Finally I should mention the point taken by way of a respondents’ notice, a point which was argued but faintly and was one which we did not feel it necessary to call upon Mr Alexander to deal with in reply. It was that the ACS bolt did not function in the same way as one with a true elliptical cone because it has a very slight bevel at its base with the result that it does not fit quite snugly in the corners. There is nothing in this for two reasons – first it is so close to a snug fit that there is no technical difference and second Mr Lykiardopoulos recognised that this point only went to infringement of claim 6, a point which does not matter if claim 1 is infringed - which I think it is.

31. So I would allow the appeal.

Lord Justice Waller:

32. I agree.