

OPINION UNDER SECTION 74A

Patent	GB 2397560
Proprietor(s)	Giram UK Ltd
Exclusive Licensee	
Requester	Mr W J Newell, on 19 December 2006
Observer(s)	Baker & McKenzie LLP
Date Opinion issued	20 March 2007

The request

1. The comptroller has been requested to issue an opinion as to whether:

(a) GB 2397560 (“the patent”) is valid, i.e. is novel and inventive, with regard to the following documents:

- (i) GB 2364971 (GIRAM)
- (ii) A sheet designated page 8 attached to the request, having an upper photograph showing wheelchair restraint systems entitled “Unwin Safety Quattro Design (Prior Art)” and a lower drawing of a restraint system termed “Current Quattro state of the art in UK”.
- (iii) A photocopy of a pamphlet entitled “User Manual” for an “Unwin Safety Systems Quattro Q/4K” type restraint system, together with a further photocopy of two pages of the manual, in the form of a single A4 sheet, with one of the photographs of a restraint system having additional boxed explanations of specific parts, functions and actions of the illustrated system.
- (iv) An invoice dated 18 January 2002 relating to a sales order for a quantity of Unwin products including Quattro Q/4K restraint systems.

and:

(b) if the patent is valid, would it be infringed by any of three designs of seat belt retractor and track fitting assemblies of wheelchair restraint systems, designated A, B and C in the form of drawings on a single sheet provided by the requester.

Observations

2. Observations in response to the request were filed on behalf of the proprietor on 31 January 2007 maintaining that the patent is valid and infringed.
3. Observations in reply were filed by the requester on 16 February 2007 maintaining its case.

The documents

4. (i) GB 2364971 (Giram)

This document was not considered pre-grant, but its US equivalent – patent number US 6287060 – is referred to in the patent itself and was cited by the examiner to demonstrate lack of inventive step.

5. Rule 77D states:

(1) The comptroller shall not issue an opinion if . . .

(a) . . .

(b) the question on which the opinion is sought appears to him to have been sufficiently considered in any proceedings.

6. There is therefore an issue as to whether the “question” in respect of this document has been “sufficiently considered”. The requester argues that the two documents are not the same, for instance they have different publication dates, but has not pointed out any material differences between their disclosures. I note that Rule 77D does not refer to whether a particular “document” has been considered. I therefore attach no significance to the fact that the US family member was considered pre-grant and the GB family member has been referred to in this opinion request. Accordingly, for the purposes of this opinion request I shall treat them as one and the same.

7. Reconsideration of a document cited pre-grant is not however precluded if a new case is based on it. In this opinion request, it is used as a basis for both novelty and inventive step attacks. Pre-grant, although the US document formed the basis of an inventive step attack only, it is clear that, if the examiner had considered that it was of sufficient relevance to form the basis of a novelty attack, he would have done so. Thus, I consider that the questions as to whether the patent is novel or inventive in respect of Giram have been sufficiently considered in pre-grant proceedings.

8. On this basis, I consider that I cannot issue an Opinion based on Giram under Rule 77D(1)(b).

(ii), (iii) and (iv)

9. Regarding the sheet designated page 8, there is no evidence that this sheet or the photograph and drawing therein have been made available to the public, or if they were made available, when. It will therefore not be possible for me to reach a firm conclusion regarding this document.

10. However, the User Manual has a date indication of 01/02 and can be accepted as having been made available to the public in advance of the priority date of the patent, this being supported by the invoice which specifically refers to the type Q/4K restraint system. However, there is no evidence to suggest that the additional A4 photocopy with the supplementary explanations applied to one of the photographs formed part of the standard User Manual; thus, there is no indication that this supplementary information has ever been made available to the public, let alone before the priority or filing dates of the patent.

11. Thus, the only document which was clearly published before the priority date of the patent is the User Manual **without** the additional A4 photocopy with the supplementary explanations. For completeness however, I shall consider the disclosures of all of these documents below.

The patent

12. GB 2397560 was filed on 15 December 2003, claiming priority from US application US 10321678 filed on 18 December 2002, was A published on 28 July 2004 and granted on 22 March 2006. It is currently in force.

13. The patent relates to a wheelchair restraint assembly which secures to a slotted vehicle floor-mounted track to form a restraint system. The assembly comprises a seat belt retractor, optionally with a lap belt attachment bracket, coupled to a track fitting which is engageable in a track slot. The retractor contains a belt with a karabiner at its end to attach to a wheelchair. The retractor is movable about the fitting so that, together with selection of a particular track slot, the restraint system can accommodate a large range of wheelchair positions, a plurality of such retractor and fitting assemblies being used to restrain a wheelchair from untoward movement in the vehicle.

14. Earlier types of restraint allowed for freedom of movement of the retractor almost completely around the fitting but also allowed free movement in the vertical plane which resulted in the retractor resting on the vehicle floor when not in use. Giram provided a development whereby a projecting part of the retractor, i.e. a tongue, is coupled to the fitting via an intermediate angle

bracket such that the freedom of movement almost fully around the fitting is maintained but the retractor is retained spaced above the vehicle floor when not in use, to avoid collection of dust and dirt.

15. The system of the patent was developed to maintain not only the freedom of movement of the retractor almost fully around the fitting and the spacing at rest above the vehicle floor but additionally to provide a system of overall decreased height together with decreased longitudinal extent to reduce interference with movement in the vehicle. Another stated benefit is the reduction in parts required. This is achieved by the retractor tongue being directly coupled to the fitting with no intermediate body.

16. The granted patent has three claims as follows:

- 1 *A wheelchair restraint system for use in a passenger carrying vehicle comprising a longitudinal floor mounting track, anchor means releasably mountable at a selected position on said mounting track, and a seat belt retractor means mounted on said anchor means, wherein said retractor means is pivotally mounted directly on said anchor means, for movement in a single plane which is substantially horizontal and parallel to said floor mounting track.*
- 2 *The restraint system of claim 1 including a lap belt attachment bracket mounted on said anchor means so as to overlie said retractor means.*
- 3 *A wheelchair restraint system substantially as herein described with reference to Figures 3 of the accompanying drawings.*

Construing the claims

17. The authority on claim construction is Hoffman LJ in *Kirin-Amgen and others v Hoechst Marion Roussel Limited and others* [2005] RPC 9. From this, I need to place a purposive construction on each claim, interpret it in the light of the description and drawings as required by Section 125(1) and take account of the Protocol to Article 69 of the EPC. This means I must determine what a person skilled in the art would have understood the patentee to have used the language of the claim to mean.

Section 125(1) of the Act states that:

“For the purposes of this Act an invention for a patent for which an application has been made or for which a patent has been granted shall, unless the context otherwise requires, be taken to be that specified in a claim of the specification of the application or patent, as the case may be, as interpreted

by the description and any drawings contained in that specification, and the extent of the protection conferred by a patent or application for a patent shall be determined accordingly.”

While the Protocol on the interpretation of Article 69 of the EPC states that:

“Article 69 should not be interpreted in the sense that the extent of the protection conferred by a European patent is to be understood as that defined by the strict, literal meaning of the wording used in the claims, the description and the drawings being employed only for the purpose of resolving an ambiguity found in the claims. Neither should it be interpreted in the sense that the claims serve only as a guideline and that the actual protection conferred may extend to what, from a consideration of the description and drawings by a person skilled in the art, the patentee has contemplated. On the contrary, it is to be interpreted as defining a position between these extremes which combines a fair protection for the patentee with a reasonable degree of certainty for third parties.”

18. With reference to claim 1 of the patent, the wording relating initially to the track, the anchor means and the seat belt retractor means is clear and unexceptional. However, the wording on the final three lines starting “wherein said retractor means . . .” requires careful consideration and I concur with the requester that it is open to more than one interpretation. Firstly, the phrase “retractor means pivotally mounted directly on said anchor means” requires some clarification. The description and drawings in the patent clearly show that part of the retractor, i.e. the tongue, is coupled to the track fitting (the anchor means) by means of a bolt without the interposition of a bracket. Thus, a purposive interpretation of the phrase is that the retractor means is coupled to the anchor means *without any intermediate entity*. As an issue relevant to this interpretation, the requester refers to inconsistencies in the description in respect of the relationship between the tongue and the retractor. The description on page 3, lines 11 and 12, relating to a prior art system, refers to “floor attachment means 2” which appears to refer to the track fitting assembly, and then states that the “means 2 comprises a tongue 3”, thus implying that the tongue does not form part of the retractor but is a separate item. However, the description, on page 3, lines 21 and 22, and page 4, line 5, clearly refers to the “tongue of the retractor” in respect of both the system of US 6287060 and that of the patent. The drawings support this latter construction. From this, I can conclude that the first reference is merely inexact and that the later references clearly demonstrate that the tongue is intended to constitute a part of the retractor and thus the “retractor means” of claim 1. Accordingly, I consider that claim 1 is intended to cover constructions wherein any portion of the retractor, which can include a projection such as a tongue, is coupled to an “anchor means”, i.e. the track fitting, without the interposition of a further body.

19. The requester refers to the phrase “for movement in a single plane which is substantially horizontal and parallel to said floor mounting track” in claim 1 as being unclear and capable of several interpretations, the major issue centring on the fact that the described and illustrated retractor is a three-dimensional body and thus cannot occupy merely a single plane. I agree, especially since the extent of the retractor in the vertical sense is significant in comparison with its locus of movement. The requester points to the illustrated embodiment and puts forward a first interpretation that the phrase is intended to mean that the retractor means is pivotable about a vertical axis and has a primary surface, i.e. a bottom flat portion designated 20 in the description and drawings, movable in a generally horizontal plane. The requester also puts forward an alternative and broader interpretation of the phrase in that each point on the retractor means remains in its own horizontal plane during retractor movement which can be provided by the retractor means being pivotable about a vertical axis without reference to any primary surface.

20. Before I consider these interpretations, I take note of the reference in the phrase to a “horizontal” plane. This word places an unsupportable limitation on the ambit of the phrase in two respects. Firstly, such defined plane is dependent upon the construction of the vehicle, especially its floor which could well be other than merely planar. Secondly and additionally, the orientation of the plane is dependent upon the orientation of the vehicle during use, i.e. if the vehicle is on a flat or sloping surface. In this respect, I consider that although the track is three-dimensional with a generally vertical extent, this is appreciably less than that of the retractor and relatively minor in comparison with its extent in the horizontal sense. From this, I consider that reference thereto alone would provide sufficient understanding of the geometry of the claimed system without the need of such a word as “horizontal” which is dependent upon the orientation of the vehicle.

21. If the description in the patent on page 4, lines 12 to 14, which refers to embodiments of the invention wherein the tongue can be bent “so that the plane of surface 20 is not parallel to the plane of the track” were to be taken into account, I would be led to accept the second and broader interpretation put forward by the requester. However, there are two reasons why I do not accept the broader interpretation. Firstly, an avowed intention of the patent is for the height of the retractor above the track to be reduced; this would not necessarily be achieved by a retractor and track fitting assembly provided by the broader interpretation. Secondly, it is clear that the final wording of claim 1 was developed from its original wording specifically to distinguish the system of the claim from the prior art, especially Giram which refers to movement of the retractor “in a single plane approximately 45 degrees to the horizontal track”. This necessarily leads me to the narrower interpretation of the phrase at issue despite the presence of the “bent tongue” embodiments in the description which I consider to have been inadvertently retained when claim 1 was amended. I thus construe the passage as “*for movement about a*

pivot in a locus parallel to the plane of the track and oriented such that it has a major surface also parallel to the plane of the track” and I will refer to this when considering the issue of inventive step.

Novelty

22. Although I have indicated above that only the User Manual was available to the public, I will also consider the disclosures provided by the supplementary page 8 and the additional A4 photocopy.

23. The User Manual contains instructions with regard to the setting up and usage of restraint systems together with a series of photographs. The instructions, in themselves, do not provide any significant information relating to the particular construction of the restraint system beyond that provided by the photographs. These show a system which appears to be identical with that described in Giram i.e. a track fitting engaging in a slotted track and coupled to an angle bracket by means of a bolt, the angle bracket at its other end being coupled to a retractor tongue also by means of a bolt, the retractor carrying a belt with a karabiner at its free end for attaching to a wheelchair. The photographs suggest, together with the instructions, that the retractor has freedom of movement to take up selected positions almost completely around the fitting to accommodate different wheelchair positions similar to Giram and the patent.

24. However, the User Manual does not indicate (a) that the angle bracket can be dispensed with, (b) that the bracket can be flat rather than angled, and (c) that the joint between the fitting and the bracket **only** provides the freedom of movement of the retractor around the fitting, with the joint between the bracket and the tongue being fixed, as featured in Giram. Although the two joints together obviously provide the required freedom of movement, there is no indication in the User Manual that it is the joint between the fitting and the bracket **alone** which allows relative pivotal movement. Furthermore, there is no clear evidence that the Unwin type Q/4K system is fully based on Giram. Although the requester refers to “*the rigid bolted-on extension of the tongue*” provided by the Unwin Safety Quattro floor fitting which I assume is intended to denote the joint between the tongue and the angle bracket, this is not clearly indicated by the User Manual.

25. Thus, the User Manual not only does not provide further disclosure relevant to the subject of the claims of the patent in comparison with the acknowledged prior art in the patent, but it is, in effect, less relevant. In respect of the feature in claim 1 of the patent of the retractor means being pivotally mounted directly on the anchor means, the User Manual clearly depicts an angle bracket between the tongue and the track fitting identical to the assembly of the acknowledged prior art referred-to in the patent. This emphasises a clear distinction between the retractor and track fitting assembly

of the User Manual and that claimed in claim 1 of the patent. Notwithstanding the question of interpretation of the feature in claim 1 of the locus of movement of the retractor about the track fitting, as a result of the distinctions provided by the presence of an angle bracket and the lack of clear indication that the joint between the bracket and tongue is rigid in the assembly in the User Manual, I consider that the User Manual does not provide a disclosure that attacks the novelty of claim 1 of the patent.

26. Turning now to the supplementary page 8, neither the photograph nor the drawing therein discloses or infers information beyond that provided by the user manual. Both the photograph and the drawing show a construction of a restraint system which appears to be identical to that provided by Giram but again without any indication of which joint or joints are rigid or allow for relative pivotal movement. Notwithstanding the issue of availability to the public, page 8 does not provide a disclosure that attacks the novelty of claim 1 of the patent.

27. In respect of the additional A4 photocopy of part of the User Manual, the explanatory information added to the picture of the retractor and track fitting assembly provides a disclosure that indicates that the joint between the bracket and the retractor tongue is fixed. This places the photocopy on par with the disclosure provided by Giram. However, the assembly is clearly shown to include the angle bracket. Again, notwithstanding the issue of availability to the public, the photocopy does not provide a disclosure that attacks the novelty of claim 1.

28. Accordingly, since they are fully dependent upon claim 1, I consider that claims 2 and 3 are also novel with regard to the disclosures provided by the User Manual, the supplementary page 8 and the additional A4 photocopy.

Inventive Step

29. The approach that I shall take in deciding whether there is the presence of an inventive step in the claims is to follow the test of *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd* [1985] RPC 59. In this test I need to determine the claimed inventive concept and what the common general knowledge of the skilled addressee was at the priority date of the patent. This necessarily will include a determination of who this addressee is. I must then identify the differences between the matter cited as being known and the invention and then to decide whether, when viewed without knowledge of the invention, those differences would have been obvious to that skilled addressee.

30. The first step of the test is to identify the claimed inventive concept. In determining this I am aided by the introduction to the patent which appears to set out the most relevant art at that time, in form of a reference to US

6287060, together with the stated advantages conferred by the modification of the system set out in that document by the removal of the intermediate angle bracket.

31. With reference to the disclosures provided by the User Manual, the supplementary page 8 and the additional A4 photocopy, I take the inventive concept to be the removal of the intermediate bracket such that the tongue of the retractor physically adjoins the track fitting to provide a single joint which allows the retractor to undergo pivotal movement relative to the track fitting in a locus parallel to the plane of the track and with a major surface parallel to the plane of the track.

32. Next, I must consider who the skilled addressee should be and what the common general knowledge was at the relevant time. Although the field of art is quite specific, I consider that a skilled addressee would be familiar with the more general aspect of load securing in or on a vehicle and not just wheelchairs inside a specially adapted or designed vehicle. However, such a person would be guided by advances in this specific form of load securing which would generate its own particular problems and requirements, such as ease of access around the wheelchairs and the need to provide securing equipment which does not impede the wheelchair users. Thus, the skilled addressee would, I consider, tend to follow the line of development discussed in the preamble and particular description of the patent such that it forms the common general knowledge.

33. The third step is to determine the differences between the matter cited as being known and the claimed invention. The differences between the inventive concept and the information presented by the User Manual are the coupling of the retractor, by means of its tongue, to the track fitting without the intermediary of the angle bracket and the mounting of the retractor on the track fitting for movement in a locus parallel to the plane of the track and oriented such that it has a major surface also parallel to the track plane.

34. The fourth step is to determine whether the differences between the invention and the nearest prior art would have been obvious to the skilled addressee when viewed without knowledge of the invention.

35. The patent states in the preamble and particular description that the removal of the intermediate angle bracket provides a two-fold benefit. Firstly, it provides a reduction of height of the retractor above the vehicle floor whilst retaining the freedom of movement of the retractor about the track fitting. Secondly, it provides a reduction in the overall longitudinal length of the retractor and track fitting assembly. The patent goes on to state that these changes facilitate the use of larger or wider wheelchairs and reduce interference to movement, which I take to be that of personnel and wheelchairs, in the vehicle.

36. The requester puts forward the view that the prior art device, which I presume refers to the system as described in Giram, and the Unwin Safety Quattro system only utilises the bracket as a “non-pivotal” extension to be added to the tongue forming part of an off-the-shelf retractor unit, this being an economical and convenient expedient. The requester goes on to submit that, if starting from scratch, a design engineer would by preference make the extension and tongue integral. If a problem and solution approach were to be taken, the requester contends that the same consideration would result, since the problem of simplifying the design of a component previously adapted from a convenient off-the-shelf component would be overcome by the provision of a one-piece tongue and extension to reduce component count and machining and assembly steps.

37. The requester further asserts that it is not inventive to flatten out the angle bracket to reduce height and that replacement of the extension by a one piece tongue obviates the need for access to the connecting bolt, which I presume refers to that for the bracket–tongue joint, in order to meet the well-known requirement of height reduction for reducing clutter and trip hazards.

38. I do not accept the requester’s reasoning in respect of these arguments. Firstly, the change made to the retractor and track fitting assembly is not a straight replacement of two mutually bolted parts by a single component but the removal of one of the parts, i.e. the angle bracket. Thus, the consideration of a “designed from scratch” assembly merely simplifying an assembly which originally used an off-the-shelf component is not supported since the assembly of the patent can also utilise such a component, i.e. the retractor, which, to all intents and purposes, remains as before. In respect of the User Manual and the supplementary page 8, the persuasiveness of the requester’s assertions is further reduced in respect of the lack of clear indication that the tongue is rigidly bolted to the angle bracket.

39. I am also not persuaded by the requester’s contention that the modification provided by the assembly of the patent is merely equivalent to the uninventive flattening of the angle bracket and that the consequential height reduction is a well-known requirement. Firstly, as indicated above, I do not consider that the assembly of the patent is a result of merely replacing two jointed parts by a single part but that it results from the removal of one of the parts. The second issue raised is whether or not the achievement of height reduction is in answer to a well known need.

40. The progression shown by Giram over the preceding art was in respect of the need to prevent the retractor from contacting the vehicle floor when not in use. I find no evidence to indicate that the Unwin Safety Quattro system was designed for other purposes than that of Giram. Although there are no reasons given for the bracket to have a pronounced angle, from the

photographs in the User Manual I can assume that it provides an orientation of the retractor which roughly corresponds to the desired direction of extension of the associated belt for securing the karabiner to a convenient part of a wheelchair.

41. Neither the acknowledged prior art nor the User Manual makes any reference to the problem of personnel and wheelchair movement being impeded by such retractors when supported by their track fittings in respect of their height and length. Therefore, this invites the question which can be expressed such that if this problem was known before the invention, why has such a modified retractor and track fitting assembly not been produced and used. Although, from an initial viewpoint, the removal of the angle bracket could appear to be a somewhat trivial modification, in the absence of any explicit or implicit indication prior to the invention of the need to reduce height and longitudinal extent, I consider that such modification would not be obvious to a skilled addressee in this field.

42. In addition to the above, I find it difficult to accept that the skilled addressee would necessarily alight on the specific locus of movement of the retractor relative to the track fitting in comparison with the acknowledged prior art and the User Manual.

43. I therefore conclude that claim 1 of the patent involves an inventive step over the User Manual and also the supplementary page 8 and the additional A4 photocopy notwithstanding the issue of availability to the public. Since claims 2 and 3 are wholly dependent on claim 1, I also consider them to be inventive with respect to these documents.

Infringement

44. Coming now to the question of infringement, I refer to the three designs referenced A, B and C each of which depicts a seat belt retractor and track fitting assembly. Design A shows a retractor with a protruding flat plate which can be said to be a "tongue", the tongue having a further plate welded to it; the plate is bolted to the track fitting to allow retractor movement about the track fitting. The plate is bent in a manner similar to the angle bracket, although not at such a pronounced angle (15 to 20 degrees), so that the retractor is oriented at an angle to the horizontal but has a locus of movement about a pivot axis of the track fitting which is substantially perpendicular to the plane of the track.

45. Design B shows a retractor with a tongue bolted to the track fitting without any intermediate body. The tongue is bent to provide an orientation of the retractor at an angle similar to Design A and its locus of movement about the track fitting is identical to that of Design A since the bolt is substantially perpendicular to the plane of the track.

46. Design C again shows a retractor with a tongue bolted to the track fitting without any intermediate body. However, here the tongue is flat and the bolt, although apparently perpendicular to the tongue, is shown as extending at an angle of 15 to 20 degrees to a perpendicular to the plane of the track.

47. Section 60(1) states:

Subject to the provisions of this section, a person infringes a patent for an invention if, but only if, while the patent is in force, he does any of the following things in the United Kingdom in relation to the invention without the consent of the proprietor of the patent, that is to say –

(a) where the invention is a product, he makes, disposes of, offers to dispose of, uses or imports the product or keeps it whether for disposal or otherwise;

(b) where the invention is a process . . .

(c) where the invention is a process . . .

Section 60(2), states:

Subject to the following provisions of this section, a person (other than the proprietor of the patent) also infringes a patent for an invention if while the patent is in force and without the consent of the proprietor, he supplies or offers to supply in the United Kingdom a person other than a licensee or other person entitled to work the invention with any of the means, relating to an essential element of the invention, for putting the invention into effect when he knows, or it is obvious to a reasonable person in the circumstances, that those means are suitable for putting, and are intended to put, the invention into effect in the United Kingdom.

48. Before I refer to each design in turn, I need to consider two issues raised by the observer and requester respectively. Firstly, the observer refers to the depicted orientation angle of the retractor in each drawing and questions whether such distinct angle would occur in practice when the retractor belt is not extended for coupling to a wheelchair. However, although each drawing shows the belt as being taut, I consider that this has no relevance to the retractor angle. Whatever the condition of the belt, the retractor angle is clearly determined by the support of the retractor on the track fitting by means of the bolted joint. To take this point further, if such support could not be accepted as providing the depicted angle in practice for

each of these designs, then the like support for the retractor of the patent would not prevent the retractor from potential contact with the vehicle floor. Thus I can dismiss this argument.

49. Secondly, the requester puts forward two alternative lines of reasoning to contend that all three designs do not infringe claim 1. The first line is that if the interpretation of claim 1 in respect of the retractor movement is the first “narrow” interpretation, i.e. that the retractor is oriented such that a primary surface is generally “horizontal”, the designs fall outside the ambit of claim 1. The second line is that if the second, “broader” interpretation is followed, i.e. that the retractor can have a canted orientation albeit retaining a locus of movement in a plane parallel to the track plane, although the designs could be viewed as falling within the ambit of claim 1, the patent is invalid. I have interpreted the relevant part of claim 1 in the narrower sense and have found the patent to be valid. Thus, I will take into account the first line of reasoning in respect of each design.

50. I will firstly deal with Design B since this design is the closest to the retractor and track fitting assembly of claim 1 of the patent. In claim 1, the initial features are set out as a wheelchair restraint system comprising a longitudinal floor mounting track, anchor means, i.e. the track fitting, releasably mountable at a selected position on the track and a seat belt retractor means mounted on the anchor means. Although Design B does not show a track, it is clear that the depicted assembly is designed to cooperate with such a track; the assembly also clearly shows the track fitting and the retractor. Design B also clearly depicts a further feature of claim 1 of the retractor tongue being pivotally mounted to the track fitting without an interposed body. Finally, the design shows the bolt securing the tongue to the track fitting as being substantially perpendicular to the intended plane of the track. Thus, the locus of movement of the retractor is that required in claim 1. However, the tongue is bent thus providing a canted orientation of the retractor. Although this design effectively reads onto the passage on page 4, lines 12 to 14, of the description of the patent, I have indicated earlier that this passage is not relevant to the interpretation of claim 1.

51. The observer has put forward the argument that, although it is clear that the retractor is shown at a clear angle to the “horizontal”, i.e. the track plane, it still falls within the ambit of “substantially horizontal”, this contention being reinforced by reference to the doctrine of equivalents, a copy of a treatise relating to this doctrine having been provided with the Observations. Accordingly, I need to consider two issues, firstly, the extent of the retractor deviation from a non-canted orientation allowed for by the term “substantially” and secondly, whether the assembly of Design B has the same technical effect as that provided by an assembly according to claim 1 of the patent.

52. It is accepted in engineering manufacture and construction that

absolute perfection is unattainable and that some deviation is unavoidable. However, the term “substantially” is used to denote that, whilst such deviation will necessarily occur, the intention is for the ideal to be approached as closely as possible within the constraints of cost and available equipment to achieve the desired result. Even without the provision of the term “substantially”, some deviation from the absolute was accepted as encompassed by a claimed invention in *Catnic Components Ltd and another v Hill and Smith Ltd* [1982] RPC 183, where Lord Diplock stated that “*variation in unessential features of the claimed invention may not be sufficient to take a product or process outside the protection of the claim*”. In this instance, a lintel having a support member claimed as “extending vertically” was held to have been infringed by otherwise identical lintels in which the support member was 6 to 8 degrees from the vertical. Such deviation was considered to produce a negligible reduction in the vertical support provided by the member. This leads to the consideration as to whether the deviation from the track plane, which measured from the drawing as approximately 15 to 20 degrees, can be accepted as being encompassed by the term “substantially”. It is difficult to arrive at a viewpoint on this question in isolation.

53. In *Minnesota Mining and Manufacturing Co. and anr. V Plastus Kreativ AB and anr.* (BLC/64/95; upheld on appeal [1997] RPC 737), Jacob J referred to a specific term in a claim and stated that the term encompasses variants which the skilled reader would have realised would have no material effect upon the way the invention worked and excludes those that would have been thought to have a material effect. Thus, the question comes down to whether the operation of the assembly of Design B, with regard to the orientation of the retractor relative to the track fitting, in comparison with that as determined from a purposive interpretation of claim 1 of the patent, can be considered as being materially different. Thus, the key question is whether this deviation is an unessential feature and has negligible effect on the operation of the retractor and track fitting assembly.

54. Each of the three designs clearly depicts the retractor oriented at a clear angle to the track plane; in addition, Design B is entitled “ONE PIECE ANGLED” and Design C is entitled “ANGLED MOUNTING”. These expressions lead me to conclude that the clear intention of each design is to provide a retractor oriented at an angle to the track plane. As a consequence, Design B can only be interpreted as intentionally having the retractor oriented at an angle to the track plane.

55. In order to address this issue further, I need also to study the specific manner of operation of this design of assembly and compare it with the manner of operation of assemblies which fall within the ambit of claim 1 of the patent. Although the locus of movement is the same, the extent of the assembly of Design B perpendicular to the track plane is appreciably greater, when taken in relation to the size of the retractor, than that provided by an

assembly of claim 1. This can be readily ascertained from a study of Figure 4 of the patent. Figure 4 shows an assembly based on claim 1 of the patent alongside an assembly according to Giram. Although the stated angle of the intermediate bracket in Giram is 45 degrees, Figure 4 depicts an angle very close to that depicted in Design B. Even with the bracket in the Giram comparative assembly replaced by a tongue bent to a like angle, the resultant orientation and height of the retractor would be, to all intents and purposes, the same. Thus, I can only conclude that the assembly of Design B does not address the avowed intention of reducing the height of the retractor and track fitting assembly of claim 1 of the patent and that the canting of the retractor does have a significant effect on the operation of the assembly.

56. Before I conclude my determination as to whether the assembly of Design B falls within the ambit of claim 1 of the patent, since the observer has referred to the doctrine of equivalents, I need also to refer to such in relation to the principle of purposive construction. In *Kirin-Amgen*, Hoffmann LJ stated that *“it is important to distinguish between, on the one hand, the principle of purposive construction which gave effect to the requirements of the Protocol and on the other hand, the guidelines for applying that principle to equivalents, which are encapsulated in the Protocol questions. The former is the bedrock of patent construction, universally applicable. The latter are only guidelines, more useful in some cases than in others”*. He reinforced this statement by indicating that Protocol questions are not a substitute for trying to understand what a skilled addressee would have understood the patentee to mean by the language of the claims. Thus, the primary consideration is that set out in the preceding paragraph, i.e. that the operation of the assembly of Design B is clearly distinguished from that provided for by a purposive interpretation of the retractor orientation in claim 1 of the patent. Thus, I consider that the assembly of Design B does not fall within the ambit of the features of the retractor means and anchor means of claim 1 of the patent. It follows that the use of this assembly with the track of claim 1 would clearly not meet fully the requirements of claim 1.

57. Turning now to Design A, the only difference from the assembly of Design B is that the tongue is flat and has a bent plate welded to it, the plate being bolted to the track fitting. Although these two plates are initially two separate items, the step of welding them together essentially causes them to become a single entity since subsequent separation would be nigh on impossible without such damage as to render either item unusable in future instances. Therefore, I conclude that the intention is for these two plates, once welded together, to be considered as a unitary item. Design A also has the orientation of the retractor to all intents and purposes the same as that of Design B. Similar considerations therefore apply and I conclude that the assembly according to Design A also does not fall within the ambit of the retractor means and anchor means of claim 1 of the patent. It also follows that the use of this assembly with the track of claim 1 would clearly not meet

fully the requirements of claim 1.

58. Finally coming to Design C, the difference from Design B is that the tongue is flat such that the bolt securing it to the track fitting is not perpendicular to the intended plane of the track. Thus, this design reads not only onto the initial features of claim 1 of the patent but also onto the feature of the retractor means being pivotally mounted directly on the track fitting. However, the orientation of the retractor with respect of the track plane is, to all intents and purposes, the same as for Designs A and B and the angle of the bolt to the intended plane of the track results in a locus of retractor movement which is not in a plane parallel to the track plane. In respect of the first issue, I have already concluded that such deviation from the orientation of the retractor of claim 1 of the patent renders the assemblies of Designs A and B as not falling within the ambit of the assembly of claim 1. Thus, the assembly of Design C also does not fall within this ambit.

59. However, I will also determine whether or not the assembly of Design C is materially distinct from the assembly of claim 1 of the patent in respect of the second issue which hinges on the same basic consideration as that for the orientation of the retractor, i.e. whether or not the plane of the locus of retractor movement falls within the ambit of “substantially parallel”. This issue follows the same line of reasoning as that concerning the orientation of the retractor, using those authorities provided by Lord Diplock, Jacob J and Hoffman LJ in *Catnic Components Ltd, Minnesota Mining and Manufacturing Co.* and *Kirin-Amgen* respectively, in that I need to study the specific manner in which this design of assembly operates and compare this with the manner of operation of assemblies which fall within the ambit of claim 1 of the patent.

60. The locus of movement of a retractor encompassed by claim 1 of the patent is not only parallel to the track plane but also can be through almost, if not, a full circle which would provide a near universal freedom of positioning in the plane of movement which can occur without there being any problem of the retractor coming into contact with the vehicle floor. The interpretation I have placed on the relevant part of claim 1 “*for movement about a pivot in a locus parallel to the plane of the track*” clearly allows this freedom. The locus of movement of the retractor in the Design C is such that not only is it in a plane at an angle to the track plane, if such universal freedom of positioning were to be attempted, the retractor would inevitably have contact with the floor, especially if the bolt tightness was such to allow retractor movement under the influence of its own weight. It could be argued that, in view of this possibility, this design can be thought of as a “backward” move in relation to the progressive development of such restraint systems as set out in the referenced prior art in the patent. However, in this respect I note from the drawing that a part of the track fitting which appears to provide locking to the track protrudes upwardly from the fitting body in contrast to the like parts depicted in the other two design variants. This leads me to consider whether

such protrusion has been intentionally provided to limit the extent of retractor positioning about the pivot axis in order to prevent contact with the floor. Therefore, either the assembly of Design C does not have the freedom of positioning provided by the claimed invention or it does not preclude potential contact with the vehicle floor.

61. In the light of these material differences in the operation of the assembly of Design C compared with assemblies of claim 1 of the patent, I consider that the assembly of Design C does not fall within the ambit of the features of the retractor means and anchor means of claim 1. Again, it follows that the use of this assembly with the track of claim 1 would clearly not meet fully the requirements of claim 1.

62. Finally, I turn to the concluding part of the requester's submissions which relate to the question as to whether an assembly according to, for instance, Design B but having the retractor canted at an angle of 5 degrees to the track plane could potentially infringe claim 1 of the patent. Therefore, the question to be answered is "can 5 degrees canting of a retractor be considered to fall within the ambit of substantially parallel". To consider this, I need to refer again to *Catnic Components Ltd* and the question as to whether such deviation from being parallel with the track plane has negligible effect. As stated earlier, a major desire of the patent is the reduction in height of the retractor above the vehicle floor. Thus, the basic question becomes "will the height of the retractor when canted at 5 degrees be appreciably different from that with a major surface parallel to the track plane". From a study of the drawings in the patent and depicting design B, I conclude that the increase in height of the retractor resulting from a canted orientation of the retractor of 5 degrees is small not only in comparison with that resulting from the angle depicted in the design but also in comparison with the vertical extent of the retractor. I thus conclude that an assembly according to design B but with a canted orientation of the retractor of 5 degrees would fall within the ambit of the retractor means and anchor means of claim 1.

63. Since I have considered that the assembly of Design A is functionally equivalent to that of Design B and that operation would also be the same, it follows that an assembly according to Design A but with a canted orientation of the retractor of 5 degrees would also fall within the ambit of the retractor means and anchor means of claim 1.

64. With reference to Design C, I need also to compare the functioning and operation of such a modified assembly according to Design C with that of assemblies according to claim 1 of the patent. Earlier, I discussed the consequences of a retractor locus of movement in a plane at 15 to 20 degrees to that of the track in respect of the freedom of movement. However, from a study of the drawings in the patent and that of Design C, I consider that the problems generated by the larger angles would not occur with an angle of 5

degrees and that an assembly having such a smaller retractor orientation angle would have a like freedom of movement as that according to claim 1. Thus, I conclude that an assembly according to Design C but with a canted orientation of the retractor of 5 degrees would also fall within the ambit of the retractor means and anchor means of claim 1.

65. These three designs do not explicitly include the longitudinal track required by claim 1 and hence such assemblies alone cannot infringe claim 1 under Section 60(1). However, I conclude that they would fall foul of Section 60(2). This consideration also holds for the addition of the lap belt attachment bracket provided by claim 2.

Opinion

66. I conclude that:

1. The patent GB 2397560 is valid in the light of the documents submitted by the requester.
2. The supply etc. of assemblies according to Designs A, B and C would not infringe the patent.
3. The supply etc. of assemblies according to Designs A, B and C but with a retractor orientation angle of 5 degrees (or indeed less than 5 degrees) would infringe the patent.

Application for review

67. Under Section 74B and Rule 77H, the proprietor may, within three months of the date of issue of this opinion, apply to the comptroller for a review of the opinion but only on the grounds set out in Rule 77H(5)(b).

NOTE

This opinion is not based on the outcome of fully litigated proceedings. Rather, it is based on whatever material the persons requesting the opinion and filing observations have chosen to put before the Patent Office.

Roger Binding
Examiner