

PATENTS ACT 1977

APPLICANT Acumen Design Associates Ltd.

ISSUE Whether patent application
GB1514027.0 complies with sections
14(5)(b), 1(1)(a) and 18(5)

HEARING OFFICER H Jones

DECISION

Introduction

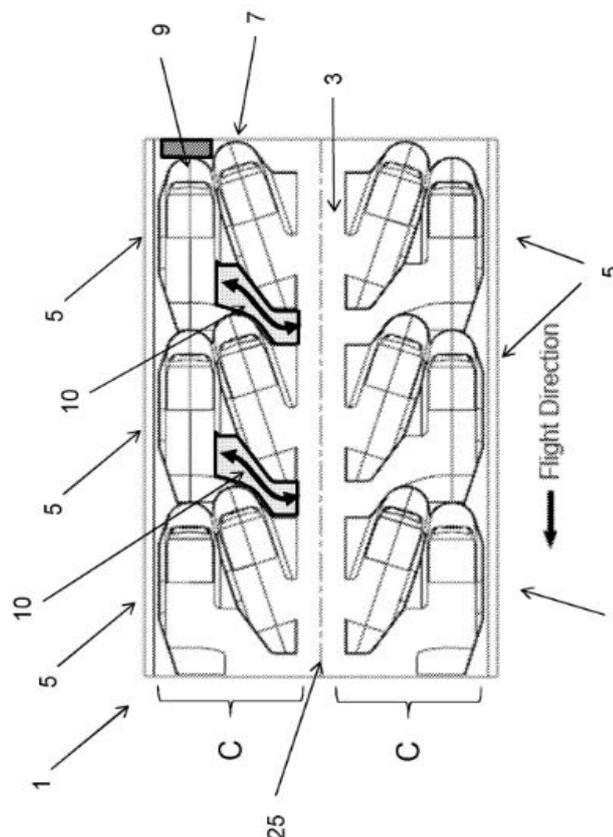
- 1 The present application is divided out from parent application GB2519893 which relates to passenger accommodation found in aircraft cabins. The passenger accommodation is of the type wherein seating can be readily converted to a bed configuration and the specification explains how it is necessary when arranging seating within an aircraft cabin to ensure maximum efficiency of space utilisation while enabling the accommodation to be properly accessible. The parent application has proceeded to grant.

- 2 The original claims of the parent application included claims to a passenger seating arrangement within an aircraft cabin comprising a multiplicity of pairs of seat units, together with a single claim, claim 11, to a seating assembly for use in an aircraft cabin comprising a pair of seat units. During prosecution of the parent application an objection under section 14(5)(b) (clarity of claims) was raised against claim 11 on the ground that the claim sought to define the invention by result. The claim was subsequently deleted in order to expedite grant of the parent and is now the only independent claim (claim 1) of the divisional application.

- 3 In a combined search and examination report on the divisional application issued in February 2016, the examiner raises a novelty objection based on US2012/223186 and WO2011/141134, a clarity objection against claim 1 and an objection of conflict with the parent application. The examiner maintains the view set out in the parent application that the claim seeks to define the invention by result achieved. He explains in his pre-hearing report that since the claim is directed to a seating assembly per se, he has restricted his interpretation of the claim to features apparent and defined within a pair of seat units without recourse to how they may fit within an aircraft cabin or positioned relative to other seat pairs, and in doing so has found the claim so construed to lack novelty. The applicant disagrees with all of these objections and requested a hearing to decide the matter, the hearing being held on 5 January 2017, with the applicant represented by Mr James Ford and Ms Sarah Phillips of Abel & Imray.

The invention

- 4 The general concept of the divisional application is directed towards an aircraft seating unit suitable for an aircraft cabin wherein the seating unit allows an angled pathway to exist between an aisle and the seat unit furthest from the aisle. In order to achieve this layout the relationship between the pairs of seat units must be quite specific. Each seat assembly has a pair of seat units, the first seat unit bordering an aisle to one side and a second seat unit positioned to the other side of the first seat unit. This second seat unit could be a window seat and can extend parallel to the longitudinal axis of the aircraft cabin. When a series of seat assemblies are positioned such that the second seat units are placed end-to-end, a passageway is formed between the aisle and the second seat around the foot of the first seat. The invention is best illustrated by reference to fig. 1a of the drawings reproduced below.



- 5 At the hearing Mr Ford explained the need to seek protection for not only the array of seating units within an aircraft cabin as claimed in the parent but also the seat units themselves, as claimed in the present application. Claim 1 reads as follows:

1. A seating assembly for use in an aircraft cabin, the seating assembly comprising a pair of seat units, each seat unit being configurable between a seating configuration and a flat-bed configuration, each seat unit having a longitudinal axis, and the pair of seat units comprising a first seat unit for bordering an aisle to one side, and a second seat unit positioned to the other side of the first seat unit, and wherein the second seat unit is adapted to be installed in the cabin such that the longitudinal axis of the second seat unit is parallel to the longitudinal axis of the aircraft cabin, and wherein the longitudinal axis of the first seat unit is angled relative to the longitudinal axis

of the second seat unit, such that when the seat assembly is located in an aircraft cabin with corresponding, identical, seat assemblies in the rows directly behind and in front of the seat assembly, with the second seat units in each of those seat assemblies having their longitudinal axes in-line with one another and being arranged end-to-end, a passenger access path for linking the second seat unit with the aisle is provided, the passenger access path passing between the first seat unit of the seat assembly and the first seat unit of the seat assembly in the row either in front or behind, at least part of that passenger access path being angled relative to the longitudinal axis of the second seat unit.

- 6 In his skeleton arguments submitted before the hearing, Mr Ford observed that the examiner's finding of lack of novelty arises only as a result of his decision to ignore certain features of the claim which are said to render its scope unclear. He suggested that it would be appropriate for the hearing to deal with the issue of clarity first before moving on to deal with the issue of novelty if that became necessary. The examiner agreed with this approach at the hearing and this decision is set out in such a way.

Argument and Analysis

Clarity

- 7 The examiner has based his main objection on section 14(5)(b) of the Act which states:

14(5) The claim or claims shall-

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

(b) be clear and concise;

(c) be supported by the description; and

(d) relate to one invention or to a group of inventions which are so linked as to form a single inventive concept.

- 8 The examiner argues that the claims are unclear as they are couched in terms of a definition by result, the examiner additionally referring to *Electrical and Musical Industries Ltd v Lissen Ltd*¹ as an authority. Mr Ford draws reference to the Office's [Manual of Patent Practice](#) and in particular to paragraph 14.120 dealing with claims which attempt to define the invention, or a feature thereof, by a result to be achieved.
- 9 It is not necessary to review the case of *Electrical and Musical Industries Ltd v Lissen Ltd* in any great detail, rather it is sufficient in this instance to note that both the examiner and the applicant agree on the relevant point made in relation to clarity of claim (lines 26-29, page 39):

The function of the claims is to define clearly and with precision the monopoly claimed, so that others may know the exact boundaries of the area within which they will be trespassers. Their primary object is to limit and not to extend the monopoly.

- 10 Paragraph 14.120 of the Manual reads as follows:

14.120 The area defined by the claims must be as precise as the invention allows. As a general rule, claims which attempt to define the invention, or a feature thereof, by a result

¹ [1939] 56 RPC 23

to be achieved should not be allowed. However, they may be allowed if the invention can only be defined in such terms and if the result is one which can be directly and positively verified by tests or procedures adequately specified in the description and involving nothing more than trial and error. In *No-Fume Ltd v Frank Pitchford Co Ltd*, 52 RPC 231, a claim to an ash receptacle for smokers in which the dimensions of certain parts were such that smoke from objects thrown into the receptacle did not emanate from the receptacle was allowed on the grounds that the invention could be realised by dimensions other than those disclosed, by experiments not involving inventive ingenuity. However, claims of this kind are generally undesirable and it should be noted that the No-Fume claim was allowed solely because the invention did not admit of precise definition independently of the result achieved. Any claim which includes a subordinate clause prefaced by words such as "so that" or "the arrangement being such that" requires special consideration from this point of view.

- 11 The examiner has established that claim 1 is of a form that the Manual says requires special attention, the so-called "result to be achieved" in this case being the formation of a path between the aisle and the second seat unit when a series of seating assemblies are placed end-to-end. The examiner suggests that a manufacturer of seat units/assemblies could only decide whether he would be infringing claim 1 by undertaking experiments involving the relative positioning of seat assemblies and assessing the gap between them, for example through tessellation testing. He suggests also that it would be perfectly possible to define the seat assembly in a way which avoided reference to the result achieved, for example by reference to the angle between the pair of seat units, the longitudinal position of one seat unit relative to the other, i.e. the degree of offset, and the tapering of the seat units.
- 12 Mr Ford argues that the nature of experiment required to determine whether the result is achieved would be quite straightforward to a person skilled in the art, pointing out that a tessellation test can be easily implemented in CAD software available to aircraft seat designers or performed manually with paper cut-outs of pairs of seat units. Mr Ford demonstrated at the hearing how straightforward a test involving paper cut-outs would be. Mr Ford also argues that simply because a claim can be defined another way without reference to the intended result does not necessarily imply that the claim is unclear. The requirement of the Act is that the monopoly claimed should be clear and not that it be clearer than any other possible variation.
- 13 Although the Manual suggests that claims which attempt to define the invention by result to be achieved should not be allowed, it also says that such claims may be allowed in circumstances where the invention can only be defined in such terms and if the result is one which can be directly and positively verified by tests or procedures adequately specified in the description or known to the person skilled in the art. Paragraph 14.120 notes that the claim in the *No-Fume* case was allowed.
- 14 In the present case, I am persuaded by Mr Ford's argument that the question of whether a passenger access path is provided by the arrangement of seating assemblies specified in claim 1 can very easily be answered by simple test, whether this be by use of CAD software, by manipulation of paper cut-outs or even performed mentally.
- 15 On the question of whether the invention can be defined without reference to result then I agree with the examiner that this is clearly possible in this case. However, Mr

Ford argues that this should not matter provided that the scope of what is claimed is clear.

- 16 Although we did not discuss this at the hearing, I note that the European Patent Office guidelines for examination of claims which seek to define the result to be achieved differ slightly to those of the IPO set out at paragraph 14.120 of the Manual. The EPO guidelines² at Part F, Chapter VI, paragraph 4.10, say that such claims “may be allowed if the invention either can only be defined in such terms or [my emphasis] cannot otherwise be defined more precisely without unduly restricting the scope of the claims”, while also saying that the result to be achieved should be one which can be directly and positively verified by tests or procedures adequately specified in the description or known to the person skilled in the art, i.e. “the result is one which can be directly and positively verified by tests or procedures adequately specified in the description or known to the person skilled in the art and which do not require undue experimentation.” Mr Ford argues that defining the invention in any other way than currently presented would unduly restrict the scope of monopoly sought, and I tend to agree with him on this point.
- 17 The fundamental requirement that a claim must satisfy is, as Mr Ford points out, that which is set out in the Act, namely whether it is clear. In my view, and on the specific facts of this case, I consider that the seating assembly arrangement is clearly set out such that the result to be achieved by the particular arrangement can easily be verified by a person skilled in the art. I agree with Mr Ford that claim 1 meets the requirements of section 14(5)(b). While I accept the general proposition that claims which attempt to define the invention by result achieved can be unclear, I do not find this to be true in the present case. The claim in this case is directed to a seating assembly comprising a pair of seat units (i.e. a first seat unit and a second seat unit), where the longitudinal axis of the first seat unit is angled relative to the longitudinal axis of the second seat unit, the seat assembly being configured in such a way that an access path is formed around the first seat unit to the second seat unit when the second seat units in multiple seat assemblies are placed end to end. The presence of an access path can be easily verified.

Novelty

- 18 As was agreed at the hearing, having found claim 1 to be clear then the novelty argument based on the identified prior art falls away. I confirm that none of the prior art documents discloses a seat assembly configured in the way described above.

Conflict

- 19 The examiner bases his objection on section 18(5) of the Act, which states that:

18(5) Where two or more applications for a patent for the same invention having the same priority date are filed by the same applicant or his successor in title, the comptroller may on that ground refuse to grant a patent in pursuance of more than one of the applications.

- 20 The guidance at paragraph 18.95 of the Manual says that the tests for determining under section 18(5) whether two UK applications relate to the same invention are the same as deciding under section 73(2) whether a UK patent conflicts with a European patent (UK). It notes that the phrase “for the same invention” under both section 18(5) and section 73(2) is regarded as embodying the long-standing principle that the

² https://www.epo.org/law-practice/legal-texts/html/guidelines/e/f_iv_4_10.htm

same monopoly should not be granted twice over – thus it covers not only the situation where respective applications contain claims explicitly including all of the same features (including the case where these claims are dependent on quite distinct main claims) but also where the claims differ in their wording but their scope does not differ in substance.

- 21 No additional authorities were relied upon by the examiner during the examination process. Mr Ford referred to *Arrow Electric Switches Ltd's Applications*³ and *Kimberley-Clark Worldwide Inc's Patent*⁴ in his skeleton arguments and to *SeeReal Technologies' Application*⁵ and *Optinose AS's Application*⁶ at the hearing.
- 22 The potential for conflict under section 18(5) arises from the applicant's decision to delete claim 11 from the parent application in order to expedite grant and then to submit the same claim as part of the present divisional application. The divisional application has the same priority date and was filed by the same applicant as the parent. When examining the parent application, the examiner evidently considered that the seating assembly of claim 11 related to the same inventive concept as the passenger seating arrangement set out in claim 1 because he did not object to plurality of invention. In his objection under section 18(5), the examiner says that he does not consider that the characterising features of the two claims differ substantially from one another and that the overlap between them is minimal. I note that the examiner did not consider the claims to be coterminous when part of the parent application or else he would have raised an objection under section 14(5)(b) to lack of conciseness (see Manual, paragraph 14.141).
- 23 In his skeleton arguments Mr Ford suggests that it would be perverse and against the principles of natural law to prevent protection for allowable subject-matter, i.e. claim 11, just because the applicant was forced to delete it from the parent. Having reviewed the file, I am satisfied that there is no evidence to indicate that the applicant was forced to delete claims from the parent application as Mr Ford suggests.
- 24 Having reviewed the authorities cited by Mr Ford, it seems that all of them deal with a situation where a first invention (A) is claimed in a first application, a second invention (B) is claimed in a second application, and some combination of the two inventions, either B+A or A+B, is claimed in one or both of the applications. In *Arrow*, for example, there is a claim to a switch (A) in the parent application and claims to an operating means (B) in the divisional applications, and one of the claims in the divisional application is directed to an operating means plus the switch (B+A). It was held initially that the claim to B+A fell within the scope of a claim to A in the parent application and that this gave rise to conflict. The principle established on appeal was that in order to avoid conflict of claims there should be no claim to B in the parent application and that only one of the parent and divisional applications can have a claim to A+B (or the equivalent, B+A). This same principle was applied in *Kimberley-Clark*, *SeeReal* and *Optinose*. I note that the hearing officer's decision in *Kimberley-Clark* refers to a further two authorities, namely *Maag Gear Wheel and Machine Co Ltd.'s Patent*⁷ and *Marley Roof Tile Co. Ltd.'s Patent*⁸. In *Marley*, the Court of Appeal said that a claim to a product having certain physical properties was equivalent to a

³ 61 RPC 1 (1944)

⁴ [BL O/279/04](#)

⁵ [BL O/261/12](#)

⁶ [BL O/026/12](#)

⁷ [1985] RPC 572

⁸ [1994] RPC 6

product-by-process claim where the process yielded a product having the same physical properties. In *Maag*, the question of conflict turned on the particular construction to be given to a claim and to what extent a seemingly broad term in the claim should be construed in the light of only a single, specific example in the specification.

25 In the present case, claim 1 of the parent is directed to a passenger seating arrangement in an aircraft cabin comprising a multiplicity of identical pairs of seat units, and claim 1 of the divisional application is directed to a single pair of seat units. Claims 1 and 2 of the parent are set out below:

1. A passenger seating arrangement in an aircraft cabin, the seating arrangement comprising a multiplicity of substantially identical pairs of seat units, the pairs of seat units being located directly behind one another, each seat unit having a longitudinal axis, and each pair of seat units comprising an aisle-seat unit bordering an aisle to one side, and a non-aisle-seat unit positioned to the other side of the aisle-seat unit, all the aisle-seat units facing in the same, first, direction, all the non-aisle-seat units facing in the same, second, direction, 15 each seat unit being configurable between a seating configuration and a flat-bed configuration, the longitudinal axes of the non-aisle-seat units being arranged in-line with one another and being substantially parallel to the longitudinal axis of the aircraft cabin, and wherein the longitudinal axis of the aisle-seat unit of each pair of seat units is angled relative to the longitudinal axis of the non-aisle-seat unit, so as to provide a passenger access path linking the non-aisle-seat unit of a pair, with the aisle, at least part of the passenger access path being angled relative to the longitudinal axis of the non-aisle seat unit.

2. A passenger seating arrangement according to claim 1, wherein the non-aisle-seat units are arranged substantially end-to-end.

26 It seems to me that the question of conflict becomes an issue only if claim 1 of the divisional application is construed as including more than one pair of seat units. However, I have already found this not to be the case because the reference to further seats in front and behind the single pair of seat units is included only by way of allowing the passenger access path to be identified. It can be seen that claim 1 of the parent contains all of the features of claim 1 of the divisional application. In addition, claim 1 of the parent also provides a passenger seating arrangement in an aircraft cabin, the seating arrangement comprising a multiplicity of seating units. Adopting the terminology of *Arrow* one might say that the parent is claiming B+A and that the divisional application is claiming A. The parent does not include a claim to a pair of seat units *per se* (A) and the divisional application does not include a claim to a passenger cabin having multiple pairs of seat units (B+A), so it is my view that the question of conflict does not arise.

27 A final observation. The fact that the invention now claimed in the divisional would have been perfectly acceptable if included in the parent does not automatically mean that it must conflict if claimed in a second application. Put another way, the absence of plurality does not necessarily mean the presence of conflict. Section 14(5)(d) of the Act requires that a claim or claims "shall relate to one invention or to a group of inventions which are so linked as to form a single inventive concept". The Act thus recognises that one application may acceptably contain several different inventions so long as they fall within the same inventive concept. This is in contrast to section

18(5) which, as quoted above, is concerned with whether or not the same invention is present in two or more applications. Thus it is entirely possible for features 'A' & 'B' to relate to the same inventive concept while relating to different inventions.

Conclusion

- 28 I find that the claims before me clearly define the matter for which the applicant seeks protection. I additionally find that there is no conflict, at present, between the parent and the divisional application. I further find the divisional application to be new in light of the cited prior art. The divisional application is remitted back to the examiner so that he may complete his examination.

H JONES

Deputy Director, acting for the Comptroller