

PATENTS ACT 1977

APPLICANT Dr M'dimoir Quaw

ISSUE Whether patent application GB1304570.3
discloses new subject-matter contrary to
section 76(2)

HEARING OFFICER H Jones

DECISION

Introduction

- 1 Patent application GB1304570.3 was filed on 14 March 2013 in the name of Dr M'dimoir Quaw, an unrepresented applicant. It has a priority date of 4 February 2013 and was published as GB2510435 A on 6 August 2014.
- 2 The original 'compliance period', that is the period by the end of which the application needs to comply with all the requirements of the Patents Act 1977 ("the Act") and the rules, ended on 30 July 2020. This period was extended to end on 30 September 2020 upon Dr Quaw's request.
- 3 During the examination process, numerous examination reports were issued setting out the examiner's objections to the application, which the applicant sought to rectify by filing amendments and observations. By the time the examination report dated 31 July 2020 was issued, an objection to added matter had formed the basis of many of these rounds of correspondence. This report maintained the objection to added matter (along with objections to clarity and support).
- 4 Dr Quaw filed amended claims in reply on 30 September 2020, the final day of the extended compliance period. Two versions of these claims are present on file: one document comprising three pages and another comprising two pages, but there is no material difference between the two versions. For the avoidance of doubt the three-page claims document has been considered here.
- 5 In the final examination report letter issued on 9 October 2020, the only outstanding objection presented by the examiner was to added subject-matter, and the examiner proposed a claim that he considered allowable. It was made clear that for the application to proceed, a further extension to the compliance period would be required.
- 6 Dr Quaw responded to this final examination report with his letter dated 30 November 2020 (two months after the expiry of the compliance period) where he agrees with the examiner's suggested claim 1 and requests that the matter be resolved at a hearing. Dr Quaw did not request a further extension to the compliance

period, and the time period for doing so has now expired. Dr Quaw explained at the hearing that he had requested to be heard because he was no longer able to amend the application.

- 7 The hearing took place on 4 February 2021 via telephone conference. I thank Dr Quaw for the clear presentation of his arguments during the hearing.

Issue to be decided

- 8 The issue to be decided is whether the amended claims dated 30 September 2020 contain added matter contrary to section 76(2) of the Act. The relevant part of the Act reads as follows:

76 (2). No amendment of an application for a patent shall be allowed under section ...18(3) ..if it results in the application disclosing matter extending beyond that disclosed in the application as filed.

- 9 Guidance on applying section 76 can be found in *Bonzel and Schneider*¹, where Aldous J described the task of determining whether additional matter was disclosed by an amendment as being:

- a) *to ascertain through the eyes of the skilled addressee what is disclosed, both explicitly and implicitly in the application.*
- b) *to do the same in respect of the patent as granted [or the amended application in this case].*
- c) *to compare the two disclosures and decide whether any subject matter relevant to the invention has been added whether by deletion or addition. The comparison is strict in the sense that subject matter will be added unless such matter is clearly and unambiguously disclosed in the application either explicitly or implicitly.*

- 10 This was summarised in *Richardson-Vicks Inc.'s Patent*² as:

“the test of added matter is whether a skilled man would, upon looking at the amended specification, learn anything about the invention which he could not learn from the unamended specification.”

- 11 If it is decided that the claims do not add matter then the application must be granted because the examiner has reported (in his October 2020 letter) that there are no other objections outstanding. On the other hand, if it is decided that the claims do add matter then the application must be refused because the examiner was not satisfied that the requirements of the Act had been complied with by the compliance date - the applicant accepts this to be the case by implication of having not argued against the examiner's July 2020 objections but instead filed amended claims with the aim of overcoming those objections. Therefore, I do not need to decide whether the objections raised by the examiner in July 2020 were valid or not, nor has Dr Quaw asked me to do so.

¹ *Bonzel and Schneider (Europe) AG v Intervention Ltd* [1991] RPC 553

² *Richardson-Vicks Inc's Patent* [1995] RPC 586

12 For completeness, section 20(1) of the Act is set out below:

20(1). If it is not determined that an application for a patent complies before the end of the prescribed period with all the requirements of this Act and the rules, the application shall be treated as having been refused by the comptroller at the end of that period, and section 97 below shall apply accordingly.

The invention

13 The invention relates to an electrical generation system which transforms heat into electrical energy. Thermal energy is acquired from a heat source and focussed into a beam of radiation. The beam is caused to irradiate a target particle in a generator arrangement. The irradiated target particle forms an ionised gas within the generator and a magnetic field is applied to the gas. The kinetic energy of the gas is transferred into electrical energy via the induction of an electrical current in coils of the generator.

14 Amended claim 1 dated 30 September 2020 is the only independent claim and is reproduced below:

1. A Thermal to Electrical Energy Converting System comprising a radiating means, which is embodied by at least one circular or elliptical cross-sectioned radiator in thermal communication with a geothermal high-temperature reservoir, or a chemical reaction-driven high-temperature reservoir, or a nuclear reaction-driven high-temperature reservoir, or some combination of at least two of the three mentioned types of high-temperature reservoir, to produce radially-diverging thermal radiation flux:

the mentioned system further comprises at least one curved reflector or at least one refractor for collimating or concentrating the mentioned thermal radiation flux into a beam;

and a receiving means further comprising at least one electrically capacitive member, or at least one electrically resistive member, so as to generate an electrical potential-difference across its terminals, or an electrical current through a load, due to irradiation of the mentioned receiving means, by the mentioned beam.

Arguments

15 The examiner asserts that there are three points of added matter in this claim:

- 1) the inclusion of "...some combination of at least two of the three mentioned types of high temperature reservoir...", i.e. a combination of a geothermal, a chemical reaction-driven or a nuclear-reaction driven reservoir.

- 2) the requirement of "...at least one curved reflector or at least one refractor for collimating or concentrating" the thermal radiation flux, specifically it being a reflector or a refractor.
- 3) the final section of the claim relating to the generation of an electrical potential difference or current "...due to irradiation..." of the receiving means by the beam.

- 16 On point 1, the examiner argued that there is no discussion in the application as filed of more than one heat source being used – only a single high-temperature reservoir is disclosed.
- 17 In response, Dr Quaw contended that this was not the case and that the amendment to include this feature in the claim was to recognise the possibility that heat from a single source may be generated in more than one way. He gave the example of a nuclear reaction potentially creating a chemical reaction in addition to the nuclear reaction, with the combined heat of both reactions forming the output of the reactor.
- 18 In relation to point 2, it was argued by the examiner that the application as filed required both a reflector and a refractor (i.e. both a collimator and a focussing means), and that having only one of these features extended the scope of the application beyond that which was originally filed.
- 19 Dr Quaw again disagreed with the examiner in an argument based around figure 13 and the final paragraph of the description, which he said alluded to an alternative embodiment where a naturally collimated beam of light from the sun is focused onto the target, thus not requiring a collimator.
- 20 Regarding the final point, discussion at the hearing concentrated on the examiner's suggestion that "ionisation" needs to occur in order to generate an electrical current or potential difference, not simply by "irradiation" as set out in the claim.
- 21 Dr Quaw asserted that it is the irradiation that causes the ionisation depicted in the figures of the application. When challenged that an electrical current can be generated in a number of ways other than through ionisation, Dr Quaw accepted that the claim as currently worded could cover the generation of electricity in other ways.
- 22 Since the description as filed strictly contemplated the generation of electricity through ionisation of a target material, I consider that the absence of any reference to ionisation in the amended claim discloses matter not contained in the application as filed.

Conclusion

- 23 I find that the claims on file at the end of the compliance period contained subject matter that was not present in the application as filed, which is contrary to section 76(2) of the Act. The application must therefore be refused under section 20(1) as a result of not satisfying the requirements of the Act at the compliance date.

Appeal

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

HUW JONES

Deputy Director, acting for the Comptroller