



PATENTS ACT 1977

APPLICANT	Rytons Building Products Limited
ISSUE	Inventive step
HEARING OFFICER	Peter Mason

DECISION

Introduction

- 1 This decision concerns patent application GB 1916812.9 “A cavity weep hole duct made of metal” in the name of Rytons Building Products Limited, and primarily whether the invention, as defined by the claims, comprises an inventive step as required by section 1(1)(b) of the Patents Act 1977 (herein after the “Act”). The application was filed on 9 December 2019 claiming priority to 6 November 2019 and was published on 12 May 2021.
- 2 In their examination report dated 17 February 2021 the examiner presented their view the independent claims did not involve the inventive step required by section 1(1)(b) of the Act, in respect to cited prior art documents. The examiner has additionally presented their view that the claims are not clear and not supported as required by section 14(5)(b) and 14(5)(c) of the Act. No amendments have been offered since the exam report dated 17 February 2021, and the agent has been unable to convince the examiner that the claims are inventive, clear and supported. At this impasse, the agent has accepted the examiner’s suggestion to refer the application to a hearing officer.
- 3 The hearing took place on 8 November 2021 where the applicant was represented by Mr David Fry of Agile IP LLP. Also present was my assistant senior patent examiner Sean O’Connor. Skeleton arguments were submitted prior to the hearing, for which I am grateful.

Preliminary matters

- 4 The examiners objection relating to clarity and support concerns the use of the term ‘fire-rated zinc’ and finds basis in the premise that ‘fire-rated’ relates to an industrial standard which is liable to change over time. The industrial standard referred to by the examiner and the applicant, European Commission paper 96/603/EC, does not prescribe any specific properties beyond limiting a composition of organic material to

the term 'fire rated' that could alter over time. The paper merely list zinc and all zinc alloys as 'fire rated'. Consequently, the term adds no particular restriction to the claim, and does not introduce any ambiguity as far as I can tell. I have therefore set this matter aside.

- 5 The only substantive matter before me is whether the invention involves an inventive step with respect to the cited prior art. Therefore, if I find that the claimed invention comprises an inventive step with respect to the prior art, I will return the application to the examiner to complete the substantive examination.

The Invention

- 6 The application relates to a cavity weep hole duct that may be used in high-rise buildings where improved fire resistance is required.
- 7 The claims have been amended since filing and are now presented, as filed on 15 December 2020. There are two claims relating to an apparatus and a method, the claims read;

Claim 1. A cavity weep hole duct having a unitary body with an open wall along a vertical edge and a channel extending at least part of the way along a horizontal edge, wherein the body is made from fire-rated zinc.

Claim 2. A method of manufacturing the duct of claim 1, comprising the process of diecasting.

- 8 During the hearing Mr Fry requested the decision to be issued in regard of claim 2, with claim 1 deleted. I have no concerns acceding the request and therefore my decision will be based on the following claim;
- 9 A method of manufacturing a cavity weep hole duct having a unitary body with an open wall along a vertical edge and a channel extending at least part of the way along a horizontal edge, wherein the body is made from fire-rated zinc, comprising the process of diecasting.

The law - Inventive step

- 10 Section 1(1) of the Act sets out the requirements which need to be met for a patent to be granted:
- 11 A patent may be granted only for an invention in respect of which the following conditions are satisfied, that is to say –

(a) the invention is new;

(b) it involves an inventive step;

(c) is capable of industrial application;

(d) the grant of a patent for it is not excluded by subsections (2) and (3) or section 4A below;

and references in this Act to a patentable invention shall be construed accordingly.

- 12 Section 3 of the Act sets out how inventive step is determined:
- 13 An invention shall be taken to involve an inventive step if it is not obvious to a person skilled in the art, having regard to any matter which forms part of the state of the art by virtue only of section 2(2) above (and disregarding section 2(3) above).
- 14 Matter which “forms part of the state of the art by virtue only of section 2(2)” is all matter which was made available to the public before the priority date of the application in question. In this case all matter published before 6 November 2019.
- 15 It is well-established that the approach to adopt when assessing whether an invention involves an inventive step or not is to follow the steps originally set out by the Court of Appeal in *Windsurfing*¹ and reformulated by the Court in *Pozzoli*² :

(1)(a) Identify the notional “person skilled in the art”

(1)(b) Identify the relevant common general knowledge of that person

(2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it

(3) Identify what, if any, differences exist between the matter cited as forming part of the “state of the art” and the inventive concept of the claim or the claim as construed

(4) Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?

Arguments and analysis

- 16 The issue I must now consider is whether the invention as defined by the claims comprises an inventive step as required by section 1(1)(b) of the Act. As such, I will follow the reformulated *Windsurfing* steps set out above.

Step 1 - Identify the notional person skilled in the art and their common general knowledge.

- 17 The examiner considers the skilled person to be a manufacturer or installer of cavity weep hole ducts and their common general knowledge would include knowledge of materials commonly used in construction. Mr Fry asserted that the skilled person is a manufacturer of ventilation products and components, where these products and components include; ducts, vents, grilles, etc. Mr Fry refuted the claim that the skilled person would have a knowledge of materials commonly used in general construction, and insisted that the common general knowledge, in regard to materials used, would be limited to those materials used in ventilation only. Mr Fry

¹ *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd*, [1985] RPC 59

² *Pozzoli SPA v BDMO SA* [2007] EWCA Civ 588

added that the skilled person would additionally have knowledge of typical plastic and metal manufacturing techniques relating to the manufacture of plastic and metal ventilation products and components.

- 18 In my mind the skilled person would be familiar with the materials and manufacturing techniques associated with cavity weep holes as well as similar products including; cavity trays, ducts, vents, grilles, etc. related to the ventilation of a cavity wall space. Therefore, in agreement with Mr Fry, the skilled person would be a manufacturer of ventilation products and associated components. Consequently, the skilled person would be familiar with typical materials and typical manufacturing techniques relates to this class of product.

Step 2 - Identify the inventive concept of the claim in question or if that cannot readily be done, construe it

- 19 In regard to step (2) the examiner has restricted their consideration to claim 1 and provides no analysis of the inventive concept relating to claim 2.
- 20 During the hearing Mr Fry identified the underlying inventive concept to lie in the replication of a known plastic weep hole duct in a fire rated form such that they would meet modern building regulations. This is achieved by forming a known plastic weephole duct from zinc, or zinc alloys, using die-casting. I agree with Mr Fry's identification of the inventive concept.

Step 3 - Identify what, if any, differences exist between the matter cited as forming part of the "state of the art" and the inventive concept of the claim or the claim as construed

- 21 The examiner cites GB 2174192, US 3429084 and WO 8808905, each of which clearly disclose the constructional features of the present invention but appear to be silent in respect to the use of zinc. This is not contested by Mr Fry. However, the examiner further alleges that diecasting is merely one of a number of suitable methods of manufacturing metal weep hole ducts that the skilled person would readily think to use. From this I am able to infer that the examiner acknowledges that none of the cited prior art documents discloses a method of manufacturing comprising diecasting. I agree with these two distinctions between the application and the prior art.

Step 4 – Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention

- 22 GB 2174192 and US 3429084 state the respective product may be formed of metal or plastics, whilst WO 8808905 discloses that the product may be formed from galvanised iron, power-cast metal such as silumine or other metals. This is the extent of the cited prior art disclosure with respect to the use of metals.
- 23 It is clear to me that using galvanised iron and powder casting both, clearly, teach away from diecasting zinc. Furthermore, whilst I appreciate that diecasting is a well-known manufacturing method for metal components, I am unable to establish, from

the documents in front of me, whether diecasting is a well-known manufacturing technique for construction ventilation products and components.

- 24 Therefore, in light of the documents in front of me, the invention as set out in paragraph 8 above provides an inventive step in light of the specific process of manufacture. Therefore, it is not necessary for me to consider the other distinction.

Conclusion

- 25 I find that the claims comprise an inventive step as required by section 1(1)(b) of the Act. I therefore refer the application back to the examiner to conclude the proceedings.

Appeal

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

Peter Mason

Deputy Director, acting for the Comptroller