



BL O/147/05

27 May 2005

PATENTS ACT 1977

BETWEEN

Marks & Clerk plc

Claimant

and

Oystertec plc

Defendant

PROCEEDINGS

Application under section 72 of the Patents Act 1977
for the revocation of patent number GB 2314392

HEARING OFFICER

R C Kennell

DECISION

Introduction

- 1 The grant of the patent in suit, GB 2314392 entitled “Joint”, was announced in the “Patents and Designs Journal” on 19 July 2000. The patent is concerned with a plumbing joint suitable for use in central heating systems. The present application to revoke the patent was filed on 4 March 2002 by a firm of patent agents, Edward Evans Barker (“EEB”), trading since 1 April 2004 as part of Marks & Clerk plc. The application was accompanied by a statement of case setting out the grounds for revocation.
- 2 The patent was originally applied for on 6 June 1997 in the name of Artform International Limited, but the application was then assigned successively to Lancashire Fittings Limited, to Easyrad Limited, and then to the named inventor Paul Anthony Davidson, to whom the patent was eventually granted. The patent was assigned to the defendant Oystertec plc (“Oystertec”) on 6 February 2001. Oystertec were still named on the register as the proprietor at the time the application for revocation was made, and still remain the registered proprietor.

The grounds for revocation

3 The claimant seeks revocation under sections 72(1)(a), (c) and (d) of the Act on the grounds that:

- the alleged invention as claimed in “at least claims 1 to 14 and 15” of the patent is not new, or alternatively is obvious and does not involve an inventive step, having regard to German Offenlegungsschrift No 2052034 published on 25 November 1971 (“the OLS”) and European Patent No 0039476 published on 17 April 1985 (“the EP”) and (for lack of inventive step) common general knowledge;
- the specification of the patent does not disclose the alleged invention clearly enough and completely enough for it to be performed by a person skilled in the art; and
- the matter disclosed in the specification of the patent extends beyond that disclosed in the application for the patent as filed.

The history of the proceedings

4 The revocation proceedings have not proceeded smoothly, for reasons which I will briefly explain. At the outset, before filing a counter-statement the defendant disputed the entitlement of EEB to bring proceedings in its own name without disclosing the name of anyone for whom they might be acting. This dispute was settled in favour of EEB by a preliminary decision of the comptroller on 25 July 2002 and an appeal by the defendant against this decision was dismissed by the Patents Court on 31 October 2002.

5 The defendant Oystertec then filed a counter-statement on 28 November 2002 in which it proposed amendments under section 75 of the Patents Act 1977. Supplementary statements were subsequently filed by the claimant and defendant, and, after an extension of time had been allowed, the claimant filed its evidence on 31 March 2003.

6 At this point the proceedings became complicated by the existence of parallel entitlement proceedings in the Patents Court, as a result of which the defendant requested and was allowed an extension of time for filing its evidence. The defendant eventually filed its evidence on 21 November 2003. The claimant filed its evidence in reply on 10 February 2004, and also raised concerns about the defendant’s application to amend the patent and its evidence.

7 Attempts by the Patent Office to arrange a substantive hearing of the application for revocation then foundered because of uncertainty as to who was now the proprietor of the patent. Oystertec wrote through its solicitors Berg & Co (who had acted for them in the court proceedings) on 4 March 2004 saying that since the court’s final judgment on 19 December 2003 had returned the patent to a previous proprietor, Easyrad Limited (“Easyrad”), it intended to take no further part in the proceedings. However, the Office noted that Oystertec remained the registered proprietor, and wrote to the parties and to Easyrad on 17 March 2004 to seek clarification of the position.

8 I will not attempt to go through every detail of the substantial correspondence which ensued,

but the position as I understand it is that the court judgment did not order legal transfer of the patent to Easyrad but ordered Oystertec to pay “equitable compensation”. Oystertec says it is unwilling to do this, but is prepared to recognise Easyrad’s better claim to proprietorship; it has therefore offered either to formally assign the patent to, or buy it from, Easyrad, but these offers have been refused. Oystertec does not believe that it is a proper person to defend the proceedings but is prepared to cooperate with Easyrad.

- 9 The only communication received from Easyrad was via solicitors DLA representing the minority shareholders in the firm. DLA say their clients will accept an assignment from Oystertec, but will require a court order to do so - they would not however then wish to participate in the revocation proceedings. No other communication has been received from Easyrad or anyone purporting to act for it, or from the inventor Mr Davidson to whom the Office also wrote as having a possible interest in Easyrad.
- 10 The claimant was agreeable to a decision being made on the basis of the papers on file (see letter dated 11 August 2004, enclosing a number of further documents for consideration). In the absence of anyone on the defendant’s side who appeared to have any interest in the proceedings, the Office proposed in a letter of 29 September 2004 to treat them as undefended and sought submissions from the parties as to costs. No further correspondence was received from the defendant, but the claimant maintained a request for costs.

The documents to be considered

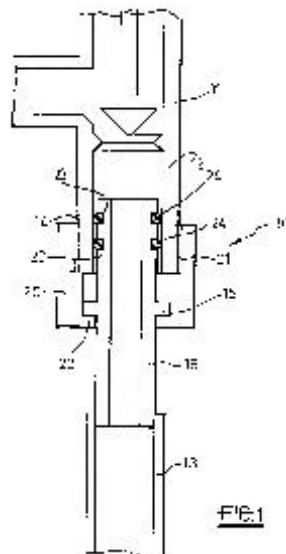
- 11 Although the application for revocation is not now being defended, I must consider whether the claimant has made out a case and whether it is contradicted by any of the documents available to me on the file of the proceedings. I will however proceed on the basis that the defendant no longer wishes to amend the specification (and as I explain below I do not think the amendments that it has previously proposed under section 75 are allowable anyway). Except where specifically mentioned, my analysis below therefore relates to the patent in the form in which it was granted (taking account of the corrections in GB 2314392 C published on 29 October 2001).
- 12 The evidence before me consists of witness statements in chief and in reply from George Phillips for the claimant, and witness statements in chief from Ian Walch and Michael Robert Harrison for the defendant. Mr Phillips and Mr Walch are providing evidence as experts. Mr Harrison is a partner in the firm of patent agents Harrison Goddard Foote, who have been responsible since October 1997 for the prosecution of the patent application.
- 13 Mr Phillips is an independent consulting engineer with 45 years experience of contracting and consultancy in various areas of building services including plumbing; he says that he does not know any of the parties in a business or social capacity. Mr Walch has been a senior manager with the building services design and installation company Lorne Stewart plc, for 13 years and has particular responsibility for the specification of products including central heating systems. He says that he has in the course of his work dealt with Oystertec following a chance meeting with the inventor Mr Davidson, and has attempted so far with little success to get Lorne Stewart’s designers to specify the Figure 3 product - which he regards as very

innovative and offering substantial benefits over what was already on the market - in plumbing systems.

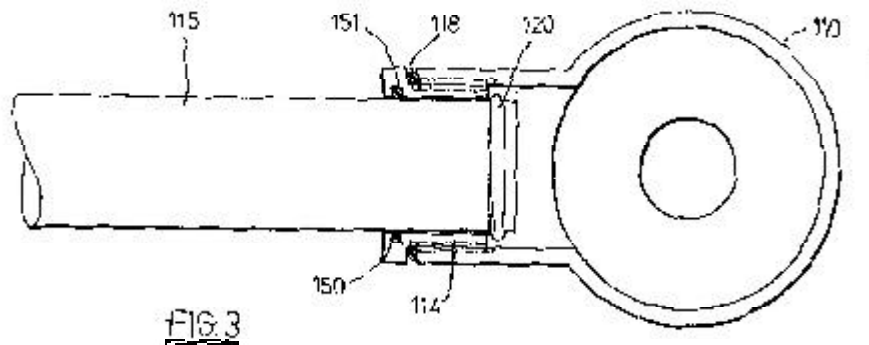
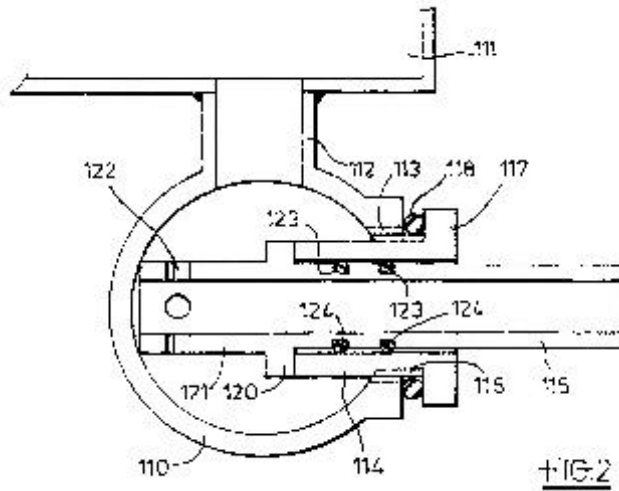
- 14 I consider that the evidence of both Mr Phillips and Mr Walch is admissible. However, without the assistance provided by cross-examination I can only take the evidence at face value and give it such weight as appears appropriate in all the circumstances. I am broadly satisfied that Mr Walch is giving an objective view despite his previous involvement with Mr Davidson and with Oystertec. That said, I suspect that some of his conclusions on the relationship between the patent and the prior art may be coloured by his enthusiasm for Oystertec's products, and I have treated this aspect of his evidence with caution.
- 15 The letter filed with the claimant's letter includes a skeleton argument, prepared in expectation of a hearing, on the ground of added matter, and a copy of a letter dated 11 May 2004 to the European Patent Office in connection with a co-pending European patent application. I should say that I do not place any great reliance on the arguments in this letter, save for the elaboration (which I discuss below) of what the claimant believes to be common general knowledge in the art.

The amendments made before grant

- 16 Before dealing in detail with the arguments submitted, it will be helpful to examine the differences between the application as filed and granted. The patent is concerned with a joint for connecting a pipe to a hollow structure so that relative axial movement between them is possible. It is particularly suitable for connecting vertically extending water feed and return pipes to the valves of a central heating radiator so as to enable the radiator to be raised to disengage it from the means which normally hold it to the wall, and can be used in conjunction with other forms of joint so as to allow the radiator to be both lifted and swung outwardly to allow access to the wall behind for maintenance or decoration without the use of tools and without needing to loosen any plumbing connection.
- 17 The specification of the patent as filed on 6 June 1997 shows three specific joint constructions. Figure 1



is stated to show “a cross-section through the joint of the invention”, and is used to connect a radiator valve 11 having a tubular inlet (or outlet) 12 with a return) pipe 13. Figures 2 and 3



are stated to show “cross-sections through two forms of joint with which the joint of Figure 1 might be used”.

18 Claims 1- 4 of the application as filed (with my addition in brackets of the reference numerals in the corresponding figures) read :

“1. A joint for connecting a pipe (13) with a hollow structure having a tubular inlet (12) thereto comprising a tubular member (15) adapted to engage the inlet and having an outwardly directed circumferential flange (16) spaced from its inner end and a sleeve member (20) adapted to be secured with said inlet and having an inwardly directed circumferential flange (22) at its outer end and adapted to overlie the outwardly directed flange on the tubular member, and an O-ring seal (24) between the tubular

member and internal surface of the inlet, the inwardly directed flange of the sleeve member being outwardly spaced from its connection with the inlet to permit axial movement of the tubular member relative to the inlet.

2. A joint according to claim 1 wherein the sleeve member has an internally threaded portion (21) at its inner end adapted to engage a threaded bore (14) on the outer surface of the tubular inlet.

3. Joints according to claim 1 or claim 2 when fitted between vertically extending feed and return pipes and the valves of a central heating radiator.

4. Joints according to claim 3 in combination with joints connecting the radiator valves by pipes with hollow pipe receiving structures secured to the radiator and each comprising a sleeve member (114) adapted to be secured to the hollow structure, a tubular member (115) adapted to extend through the sleeve member and an O-ring seal (124, 151) between the sleeve member and tubular member, the tubular members being connected with said pipes”.

- 19 The joints specified as part of the combination of claim 4 include the constructions of Figures 2 and 3 in which the pipe receiving structure is a hollow sphere 110 and is rotatable with the sleeve 114 around the tubular member 115, so as to allow the radiator to be swung outwards as mentioned above as well as lifted vertically by the joint of Figure 1. In Figure 2 the sleeve is screwed into the hollow structure and abuts against a flange 120 on the tubular member, which also has an extension 121 abutting the inner wall so that the member is constrained against axial movement. In Figure 3 the tubular member is in the form of a thin-walled tube with a deformed end constituting the flange 120 and the O-ring seal 151 is provided in a groove on the sleeve; there is nothing in Figure 3 corresponding to the extension piece 121 in Figure 2, from which it would appear that the tubular member is axially movable although this is not specifically mentioned in the description.
- 20 Claims 5-13 are all dependent back to claim 4 and relate to subsidiary features of the constructions of Figures 2 -3. No claim is made to any of the constructions of the Figures themselves or to the invention as described.
- 21 Amendments to the claims along the lines of those eventually granted were published with the application on 24 December 1997, and further amendments were made during prosecution of the application before the Patent Office.
- 22 Claims 1 - 4 of the granted patent (as corrected in GB 2314392 C published on 29 October 2001) read as follows (with my additions in brackets which particularise the integers of claim 1 in the same way as the claimant does in the application for revocation, and also identify the corresponding features in Figure 3, which as explained below is the construction of particular interest to the defendant):

“1. A joint (a) for interconnecting a pipe or other tubular element with a hollow structure having a threaded tubular inlet thereto, (b) the joint comprising a tubular

ended member (115) associated with the pipe (c) an annular sealing member (114) provided with first and second sealing means, (d) said first sealing means (118) being for sealing engagement between said annular sealing member and said inlet and (e) said second sealing means (151) being for sealing engagement between said annular sealing member and said tubular member, (f) said annular sealing member having a threaded portion for engagement with said threaded tubular inlet, (g) said second sealing means engaging an outer surface of the tubular member (h) whereby sealing engagement may be effected between said sealing member and said tubular member over a plurality of relative axial positions therebetween, (i) the tubular member being provided with an outwardly directed circumferential flange (120) to limit the extent of relative axial movement between said tubular member and said sealing member.

2. A joint according to claim 1 wherein the annular sealing member has an internally threaded portion at its inner end adapted to engage a threaded bore on an outer surface of the tubular inlet.

3. A joint according to claim 1 or claim 2 when fitted between a vertically extending feed pipe or return pipe and a valve of a central heating radiator.

4. A joint according to claim 3 connecting the radiator valve by a pipe with a hollow pipe receiving structure secured to the radiator, the joint comprising a sleeve member adapted to be secured to the hollow structure, a tubular member adapted to extend through the sleeve member and an O-ring seal between the sleeve member and an O-ring seal between the sleeve member and tubular member, the tubular member being connected with the pipe.”;

claim 4 is therefore no longer a claim to a combination of two different joint constructions.

23 Claims 5 - 13 are unchanged, and new claims 14 and 15 have been provided as follows:

“14. A joint according to claim 1 and substantially as hereinbefore described.

15. A joint substantially as hereinbefore described with reference to any of Figures 1, 2 and 3 of the accompanying drawings.”

24 The description is unchanged except for the replacement of statements corresponding to claims 1 - 4, so as to correspond with the new claims. In particular, the specific description of Figures 1 - 3 still states that Figure 1 constitutes a joint according to the invention and that Figures 2 - 3 are joints with which it may be used.

Arguments and analysis

Added subject matter

25 It will be convenient to deal first with this ground, since it follows naturally from the explanation above of the amendments and seems to me to be central to the case for

revocation. The claimant contends that the amended claim 1 recites a number of features neither present in claim 1, nor disclosed in the specification as originally filed, and omits a number of features that were originally disclosed as essential to the invention. In the result, the claimant says, the original inventive concept has been changed so that claim 1 now covers a joint as exemplified in Figure 3 (but not Figure 2), rather than Figure 1 as was originally the case. (I observe that in Figure 2 the O-rings constituting the second seal are located in grooves on the tubular member 115 rather than on the annular sealing member 114 as required by integer (c) of claim 1.) The claimant believes that the amendments originated because the inventor was in late 1997 trying to exploit a joint of the Figure 3 type and realised that the claims as originally filed would not give him effective protection for it.

26 The defendant does not dispute that the intention behind the amendments was to protect the construction of Figure 3. Indeed Mr Harrison states in his evidence (paragraph 3) that when he looked at the claims of the patent application, he appreciated that claim 1 did not clearly cover the Figure 3 embodiment. However, the defendant considers that it would have been implicit to the skilled person that the Figure 3 joint could be used as a stand-alone joint, even though not expressly mentioned, and that it was therefore entitled to amend the claims so as to cover that implicit disclosure. In the view of the defendant, it was entitled to claim something that had already been claimed in a different way - in claim 4, as a combination with the Figure 1 joint - and that it was in any case entitled to broaden the claims provided that, as was the case here, no new matter was added. The defendant makes the point that third parties were not affected and would, by virtue of the publication of the amended claims, have been aware of the subject matter for which protection was sought from the earliest date on which they had access to the contents of the patent application.

27 Mr Harrison recollects in his witness statement that he was trying to follow as closely as possible the wording of the original main claim whilst adapting it to cover the Figure 3 embodiment. He notes that the examiner clearly considered whether the amended main claim was supported by the description as originally filed, since he raised objections in this regard before allowing the claim to proceed to grant after further amendment. Mr Walch says in his witness statement that he was asked to consider whether the amendments “introduced information which the skilled person would not have thought contained in the application as filed” and concludes that it would be implicit to a skilled person that the Figure 3 joint could be used independently of the Figure 1 joint, and that by placing a Figure 3 joint either side of the valve, all the promised advantages could be realised.

28 I do not dispute that the skilled reader would realise that the joint of Figure 3 could be used as a stand-alone construction, or that third parties will have had the earliest possible notice of the defendant’s intentions by virtue of the early publication of amended claims. However, I think that misses the point. Rather, the question which I have to decide is not whether there is matter in the specification which might be capable of constituting an invention in its own right, but whether the amended claim relates to a different invention from that originally contemplated. That much is quite clear from the case law to which the claimant has directed me in the statement and the skeleton argument, including *Bonzel v Intervention Ltd* [1991] RPC 553, *Southco v Dzus* [1990] RPC 587 (upheld at [1992] RPC 299), *Harding’s Patent* [1988] RPC 515 *Raychem Ltd’s Application* [1986] RPC 547, *Windsurfing v*

Tabur Marine [1985] RPC 59, and *Glatt's Application* [1983] RPC 122. I do not think it is necessary for me to examine these cases in detail. The tenor of the various judgments comes over quite clearly from such wording as "covering something which quite plainly was never in the contemplation of the invention as described in the specification" (*Glatt*, page 127 lines 10 - 12), "going well beyond the scope of mere amendment and putting forward an essentially different concept" (*Windsurfing*, page 82 lines 23 - 25) and "whether in fact one has got the invention which was promised in the original application" (*Harding*, page 528 lines 14 - 15).

- 29 I can find nothing in the original specification to suggest that the joint of either Figure 2 or Figure 3 was to be used other than in combination with the joint of Figure 1. It is not disputed, and it is apparent on the face of that document that claims 1 and 2 and the corresponding statement of invention on page 1 do not embrace Figures 2 and 3 (the threading required by claim 2 - an internal thread on the sleeve and an outer thread on the tubular inlet - applying only to the Figure 1 construction). No specific claim is made to these joints *per se*, and there is no "omnibus" claim relating to any of the drawings from which an intention that they were to form part of the monopoly might be inferred. The description makes clear in the opening paragraph that the invention is concerned with a joint which is intended to make possible *axial* movement between a pipe and a hollow structure, and it explains at page 4:

"The joints of Figure 1 when provided between both vertically extending feed and return pipes and the valves of a radiator enable the radiator to be raised to disengage it from means normally holding it to a wall therebehind.

Preferably the valves are connected with the radiator by further joints permitting rotational movement of the radiator relative to its valves to give access to the wall normally behind the radiator for decorating or maintenance purposes. Examples of such valves will now be described with reference to Figures 2 and 3.";

and the tubular member 115 in Figure 2 (although not that of Figure 3) is expressly stated to be constrained against axial movement.

- 30 In the light of this I cannot think that the reader of the original specification would have been in any doubt whatsoever that Figure 1 related to the invention and that Figure 3 did not, being intended merely for combination with Figure 1 to secure rotational as well as axial movement. I am therefore satisfied that the amended claims do not merely claim the original invention in a different way but claim a concept quite different from that originally put forward as the invention. I do not consider that the change of claim 4 from a combination of two types of joint to one only of the joints is simply claiming the same invention in a different way. **The result in my view is that the amendments result in the patent disclosing matter extending beyond that disclosed in the application as filed in contravention of section 76(2) of the Act, and that the case for revocation succeeds on that ground.**

The amendments proposed under section 75

- 31 Although, as stated above, I am assuming that the defendant no longer wishes to amend the patent under section 75, I will for completeness briefly mention at this point the amendments already offered. I do not think it is necessary for me to refer to them in detail: they have the effect of limiting claim 1 by the incorporation of further features with a view to avoiding the prior art, the deletion of claims 4 - 13, and the amendment of claim 15 and the description to make clear that of the embodiments only Figure 3 relates to the invention.
- 32 Since this merely cements further the construction of Figure 3 rather than Figure 1 as representing the invention, it cannot avoid the above objection of added matter. **Therefore even if I were minded to exercise discretion I do not consider that they are allowable.** I do not propose to consider the amendments any further.

Patentability: novelty and inventive step

The parties' allegations

- 33 On this ground, the claimant alleges in paragraph 3 of its statement that the invention as claimed in "at least claims 1 to 14 and 15" is either disclosed by the OLS and the EP or is obvious having regard to these documents and to common general knowledge, but the supporting argument in the statement is essentially directed to claims 1, 14 and 15. No specific arguments are advanced with respect to the subject matter of claims 2 - 13, and in paragraph 14 of the statement the claimant says (see the insufficiency ground below) it cannot place any meaningful construction on claims 4 -13 and therefore makes no submission on them. Given this, and my conclusion above on added matter, I propose to confine consideration of the patentability limb of the claimant's case to claims 1, 14 and 15.
- 34 It is not disputed that elements (a), (b), (e), (f), (g) and (h) of claim 1 are present in each of the OLS and the EP. The question I have to decide in relation to claim 1 is whether features (c) and (d), insofar as they relate to the first sealing means between the tubular member and the annular sealing member, and feature (i) (the circumferential flange to limit the extent of axial movement between these members) are disclosed in these documents or are obvious modifications in the light of the common general knowledge of the skilled man at the priority date of the patent.
- 35 The OLS is directed to a compensating screw connection enabling a radiator to be connected to a heating pipe or removed therefrom for maintenance purposes, so that stresses do not occur between the radiator and the pipeline. As shown in the sole embodiment

this is achieved by cylindrical sleeve 8 pipeline via mating displaceable within which is fitted plug 3 and a union connections. The stuffing box seals

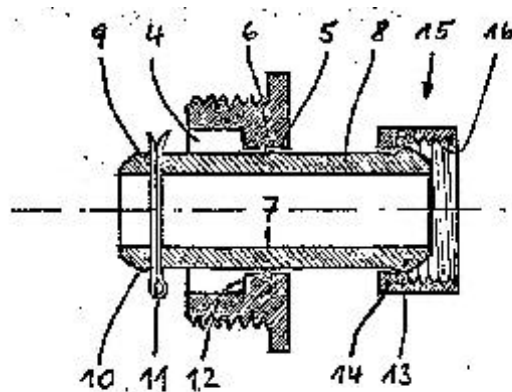


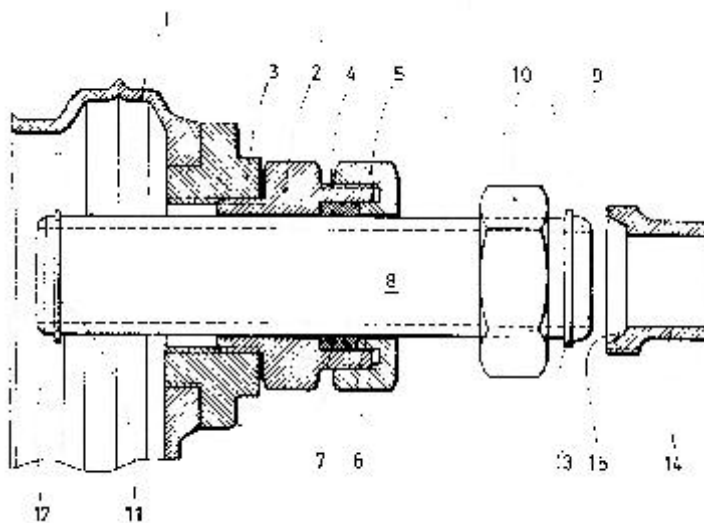
Fig. 2

means of a which seals to the surfaces 9, 15 and is a stuffing box 2 between a radiator nut 5 by screw packing 7 of the against the

cylindrical surface of the sleeve 8 . A locking ring 12 is provided in a groove on the sleeve 8 to prevent it from being unintentionally pulled out of the plug 3 during installation.

36

The EP also discloses a device which allows a connecting member to be displaced longitudinally relative to the radiator connecting plug. It specifically refers to the OLS and is intended to provide a simpler and more compact form of connection part stuffing as to allow a valve to be fitted in place shorter of the axially type of valve conventional without having to shorten the pipe between the radiator and the valve. As shown in the sole embodiment



a socket 8 is connected to a valve by means of a union nut 15 and is longitudinally displaceable within a radiator connecting plug. The plug is screw-threaded for connection to a radiator and is provided with a groove 6 holding an O-ring gasket 7 which provides a seal with the socket 8, and with a flange 3 for the attachment of tools. The flange 3 is stated in the introductory passage of the description to have a “sealing surface for the radiator” but there is no further disclosure of how the seal is constituted. The patent recommends that the connecting socket should be prevented from slipping out of the plug, and suggests that in the very simplest case this can be achieved by a locking pin 11 mounted in radial holes in the socket.

- 37 The claimant argues that all the elements of claim 1 of the patent are present in the construction of the OLS, the inlet, tubular member, annular sealing member and circumferential flange being constituted by the plug inlet 3, the sleeve 8, the assembly of element 2 and nut 5, and the locking ring 12 respectively. On this basis the claimant says that the first sealing member is constituted by “the metal-to-metal seal (unnumbered) inherently present between element 2 and the screwed plug inlet 3 of radiator 1” and the second by the packing 7. For the required sealing engagement between the second sealing member and the tubular member over a plurality of relative axial positions, the claimant refers to passages in the description which amongst other things refer to the displaceability of the sleeve. If for any reason the OLS does not anticipate claim 1, the claimant argues that the differences are obvious modifications having regard to common general knowledge at the relevant time.
- 38 The claimant alleges a similar correspondence between the elements of the EP and claim 1 of the patent as in the case of the OLS, except that feature (d) is present by virtue of “the metal-to-metal seal (unnumbered) between the sealing surface provided on radial flange 3 of plug 1 and the radiator”, and there is no disclosure of a circumferential flange to limit the extent of axial movement between the tubular member (the socket 8) and the annular sealing member (the radiator connecting plug). However, the claimant suggests that since the EP refers to the OLS, it would have been obvious to replace the pin 11 by the locking ring shown in the OLS which, as stated above, it regards as a circumferential flange.
- 39 In relation to claims 14 and 15, the claimant alleges that, insofar as they relate to the joint in Figure 3 of the patent in suit, they differ from the joint in the EP only in that the circumferential flange is provided by deforming the tubular member (at 120) and an O-ring

seal (118) is provided between the tubular member and the annular sealing member. However the claimant believes that these would be obvious modifications in the light of common general knowledge at the earliest priority date of the patent.

- 40 I do not find the claimant's allegations entirely clear as to what constitutes feature (d) - the "first sealing means" - in the cited specifications. The statement seems to be suggesting a seal between two co-operating flat faces on the members to be connected. However, in the statement in reply at paragraphs 13 and 14, the claimant argues either that the first sealing means is present in each of the OLS and the EP by virtue of the threaded connection between the members; or that it would have been obvious for a plumber to provide a further sealant such as a PTFE tape, or for a manufacturer to provide a washer or an O-ring, to ensure fluid tightness. I note that in the OLS a thickening appears between the abutting faces of element 2 and inlet 3, but I will proceed on the basis (as is suggested in the evidence from both parties) that this is a matter of draughtsmanship only and not the disclosure of a distinct but otherwise unmentioned sealing member.
- 41 The defendant provides little beyond bare denial without explanation, other than as mentioned below, to counter the claimant's allegations in relation to the unamended patent. Possibly this is because most of its fire is concentrated on justifying the amendments which it was proposing under section 75.

The evidence of Mr Phillips and Mr Walch

- 42 I have considered this carefully, especially those portions which are directed to the relationship between the patent in suit and each of the OLS and the EP, namely paragraphs 8.1 - 8.2, 10.3, 13.2 - 13.11, 14.2 - 14.10 and 15.12 - 15.17 of Mr Phillips' witness statement in chief, paragraphs 22 - 32 of Mr Walch's witness statement, and sections 2.6 - 2.12 of Mr Phillips' witness statement in reply which deal with the said paragraphs of Mr Walch's statement.
- 43 Mr Phillips accepts that there are differences between the patent and the prior art. Thus in his view, the OLS is by virtue of the use of a stuffing box intended primarily for cast iron style radiators with large connections (over 1 inch) whereas the patent is concerned with steel panel radiators with 3/4 or 1/2 inch connections; and the patent is "drafted around" the use of copper tube rather than steel tube as for the EP. On the matter of the first sealing member, Mr Phillips observes that in both of the OLS and the EP the type of thread on the male member which is screwed into the radiator is not disclosed, but says it could be either a taper thread, where the thread depth tapers along the threaded section, or a parallel thread, where the depth remains unchanged. Mr Phillips says that a taper thread becomes tighter as the male member is screwed in, but would in practice need to be sealed by winding hemp or PTFE tape around the male thread (hemp thread requiring the additional use of jointing paste; but because it does not result in a tighter fit as it is screwed in, a parallel thread would be sealed by a gasket - or less commonly an O-ring - between the flat mating faces of the fittings.
- 44 Mr Walch at paragraphs 22 - 32 of his witness statement says that in practice some form of

sealing would need to be introduced to make the joint between the sealing member and the radiator inlet watertight, such as PTFE tape wound around the thread or the use of sealing paste or grease. However he believes that this would have been a disincentive to use the prior art devices and that it would not have been obvious at the priority date of the patent to modify either the OLS or the EP to arrive at the invention of the patent. Whether this is so is a question for me to decide, and whilst I note Mr Walch's view, I do not find it of particular assistance in the absence of further explanation.

- 45 As to the presence or otherwise of a circumferential flange, Mr Phillips appears to regard the locking ring 12 in the OLS, the locking pin 11 and an integral flange as in the patent in suit as alternative means available to the skilled man for preventing the axial movement of the tubular member, and at paragraphs 2.8.5 - 2.8.7 of his witness statement in reply says that the flange does not have to be integral with the tubular member and that the ring 12 in the OLS could constitute a flange. Mr Walch however believes that the flange must be a raised ridge formed out of the material of the tubular member (thus excluding the OLS construction), and that he regards the deformed pipe end in Figure 3 of the patent in suit to be a much simpler provision than the locking pin 11 of the EP which requires the accurate drilling of retaining holes and has the potential to obstruct the flow of fluid.

Claim 1 - Novelty

- 46 The novelty argument is advanced with regard only to the OLS and in my view it depends on whether the locking ring 12 constitutes a "circumferential flange to limit the extent of relative axial movement" and - absent the disclosure of any other sealing means - whether the screw thread between the element 2 and the plug 3 constitutes a "first sealing means". As to the former, as explained above Mr Phillips and Mr Walch disagree on whether a flange has to be integral with the underlying member. In the absence of further elaboration I see no reason why this should be necessary, and I believe that the skilled man reading the OLS would regard the locking ring 12 as functionally constituting a flange to limit the axial movement of the sleeve 8.
- 47 However, as to the term "sealing means" I am of the view that this would be would ordinarily be understood as something making the joint fluid-tight. Having regard to the evidence, neither Mr Phillips nor Mr Walsh appear to regard the screw thread in the OLS as sufficient on its own to achieve fluid-tightness, and I do not believe that the person skilled in the manufacture and fitting of pipework particularly for central heating radiators would regard the screw thread as constituting a sealing means. In any case, it would seem to me more likely that the skilled man would regard the screw thread as a distinct integer from the first sealing means since it constitutes a separate integer (f) of the claim. **The novelty objection therefore fails.**

Claim 1 - Inventive step

- 48 In order to avoid using hindsight I shall follow the well-known four-stage procedure in *Windsurfing v Tabur Marine* [1985] RPC 59 of (1) identifying the claimed inventive concept, (2) identifying the common general knowledge at the priority date, (3) identifying

the differences between the cited matter and the alleged invention, and (4) deciding “whether, without any knowledge of the invention, those differences constitute steps which would have been obvious to the skilled man or whether they require any degree of invention”. I believe that my analysis above (see paragraphs 34 - 39) has sufficiently covered (1) and (3).

49 As to step (2) the common general knowledge alleged by the claimant is (i) the provision of an O-ring, an annular washer or a thread sealant in a threaded connection between two fluid conveying-members, (ii) the provision by flaring, casting, flanging or machining of an outward projection, such as a circumferential flange, on or near the end of a tube to hold it captive, and (iii) the common practice in mechanical engineering to provide a circumferential flange or one or more spaced, outwardly directed projections on an element to limit relative axial movement between it and some other element. The aforementioned letter to the European Patent Office (see paragraph 15 above) includes a wide range of examples of these. The defendant says, in relation to (i), that threaded connection is being used in a joint which is fundamentally different from those hitherto known to those skilled in the art; to (ii), that flaring is conventionally used to anchor a pipe, whereas here the flange is not part of the connection and merely forms a safety stop; and to (iii), that this is remote from the subject matter of the specification. In the absence of further explanation from the defendant (see also paragraph 51 below), I accept the claimant’s contentions on common general knowledge.

50 Also, both Mr Phillips and Mr Walch are in agreement that in practice one of the options open to the skilled man would be to provide a sealant such as PTFE tape or hemp around a male thread. Indeed, it seems to me that this would be no more than part of the normal skills of a fitter or heating engineer installing central heating systems. Mr Walch makes no comment on the alternative possibility suggested by Mr Phillips of using a gasket to seal the mating faces of a joint, but I see no reason to doubt the latter’s view that this would also be an option open to the skilled man, who might equally be a manufacturer of pipework as well as a fitter or installer. In my view each of these alternatives is sufficient to constitute a “first sealing means” as required by claim 1, and each was part of the common general knowledge available to the skilled man at the priority date of the patent.

51 On the use of a circumferential flange, Mr Walch’s evidence does not to my mind yield anything to back up the defendant’s view of what is or is not common general knowledge in the art or to contradict Mr Phillips’ view that an integral flange (as in the patent), a locking ring or circlip (as in the OLS) and a locking pin (as in the EP) are alternatives available to the skilled man, depending on the tools available, to limit the movement of the tubular member. Indeed if the locking pin in the EP is disadvantageous because, as the defendant suggests, it will obstruct the flow of fluid, there would be an incentive to use an alternative.

52 On step (4) of the *Windsurfing* analysis, I am satisfied that in the result that the differences between claim 1 and the cited constructions (see paragraphs 37 and 38) would have been obvious modifications for the skilled man to make. I am not persuaded otherwise by Mr Walch’s arguments, given without further explanation, that the need for a sealant would be a disincentive to use the prior art devices and that the products of the patent are a

considerable advance on both current practice and on the OLS and the EP. **It follows therefore that claim 1 lacks inventive step in regard to each of the OLS and the EP.**

Claims 14 and 15

- 53 The claimant also argues that claims 14 and 15, insofar as they relate to Figure 3, also lack inventive step over the EP since the only differences are the flange 120 formed by deforming the tubular member 115, and the O-ring seal 118 between the sealing member and the tubular element. However, an extra difference not mentioned by the claimant is the recess 4 in the EP, and I consider that there may be force in the defendant's submissions that the Figure 3 construction is advantageous by allowing a smaller diameter and therefore a more compact construction, and by providing a greater length over which the tubular member 115 is supported by the sealing member 114. **I do not therefore think that the claimant has made out a case against claims 14 and 15.**

Insufficiency

- 54 The claimant alleges that the specification of the patent is insufficient by virtue of internal inconsistency and lack of clarity as to what the alleged inventions is. They note that these inconsistencies were not present in the application as filed and assert that they came about by virtue of the addition of matter in contravention of section 76(2). As a result the claimant says that the extent of protection cannot be properly discerned, and the patent is therefore invalid having regard to *Milliken Denmark v Walk Off Mats* [1996] FSR 292 and *Scanvaegt International v Pelcombe* [1998] FSR 786.
- 55 The specific allegations of the claimant are that the description teaches that of the three exemplified constructions only that of Figure 1 is within the invention, but Figure 1 does not fall within the scope of claim 1, there being no second sealing means between the annular sealing member (20) and the tubular means (15); that claim 4 is invalid because it specifies a different manner of fitting from that in claim 3 on which it depends; that claim 12 is insufficient because it does not disclose how to deform the inner end of a thick-walled tube to form a flange; and that claims 14 and 15 are invalid insofar as they cover the joint of Figures 1 and 2, which are inconsistent with the requirements of claim 1 (the axial movement between the tubular member and the sealing member which is required by the claim being specifically prevented in Figure 2; and the second sealing means 124 in Figure 2 being provided on the tubular member 115 rather than the annular sealing member 114).
- 56 I accept that the specification of the patent is indeed ambiguous for the reasons stated by the claimant. This would seem to have arisen from an attempt to stretch the claims of the patent to embrace the embodiment of Figure 3, which I have found above to add matter in contravention of section 76(2). However I do not think this ambiguity is itself a ground for finding the specification insufficient and therefore invalid, and I am unable to discern in either *Milliken Denmark* or *Scanvaegt International* the principle which the claimant states. Indeed in the latter Aldous LJ, approving *Milliken*, was quite clear (see page 797) that lack of clarity was not a matter which resulted in invalidity, although it could result in the proprietor being unable to establish infringement.

57 On claim 12, I do not accept without further argument that this claim is insufficient, Indeed this allegation does not sit easily with the claimant's allegation of what is common general knowledge. **The attack on sufficiency therefore fails.**

Findings and order

58 In summary, I have found that the application for revocation succeeds on the grounds of section 72(1)(a) in that claim 1 lacks inventive step, and of section 72(1)(d) in that the amendments made to the specification result in the patent disclosing matter extending beyond that in the application as filed.

59 As explained above I have proceeded on the basis that the defendant no longer wishes to amend the specification to overcome any finding of invalidity, and I do not in any case consider the amendments already offered under section 75 to be allowable. I therefore refuse to allow these amendments, and I do not think it appropriate in view of the defendant's unwillingness to take the proceedings any further to afford a further opportunity to amend to overcome my findings.

60 I therefore order patent GB 2314392 to be revoked.

61 Although Oystertec plc is still the registered proprietor, in view of the apparently still unresolved dispute on the entitlement to the patent, a copy of this decision will be sent to Easyrad Limited for information.

Costs

62 This claimant has won and is entitled to an award of costs as a contribution to its expenses in prosecuting the application up to the point where the substantive hearing was due to be arranged, even to the preparation of a skeleton argument. I note that costs have already been awarded for the preliminary hearing in respect of the entitlement of the claimant to bring the action for revocation, and make no further award for this. However, I believe that I should reflect the delay and inconvenience caused after March 2004 by the failure of Oystertec to pursue the proceedings whilst remaining the registered proprietor.

63 I therefore award the claimant Marks & Clerk plc the sum of £1800 to be paid by the defendant Oystertec plc within 7 days after the expiry of the appeal period below. Payment will be suspended in the event of an appeal.

Appeal

64 Under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal must be lodged within 28 days.

R C KENNELL

Deputy Director acting for the Comptroller