

PATENTS ACT 1977

IN THE MATTER OF an application
under section 72 by McAlpine &
Company Ltd for revocation of UK
patent no. 2329332 in the name of
Eskander Corporation NV

DECISION

Introduction

- 1 The patent in suit was granted to Eskander Corporation NV (the defendant) on 15 May 2001, having been filed on 28 July 1998. It claims priority from application GB 9716498.2 which in turn has a filing date of 4 August 1997.
- 2 On 30 October 2001 McAlpine & Company Ltd (the claimant) applied for revocation of the patent under Section 72(1)(a) of the Patents Act 1977 on the grounds that the invention claimed was not patentable in that it was not novel or did not involve an inventive step. The claimant is seeking unconditional revocation of the patent (or, if found to be partially valid, 'partial revocation') and costs. A counter statement was filed on 3 January 2002 by the defendant, refuting the application and seeking its dismissal, an order maintaining the patent in the form granted or on the basis of claims found to be valid, a certificate of contested validity if successful and costs. The usual evidence rounds followed. Whilst they generally proceeded smoothly, certain issues were raised regarding the completeness and admissibility of some of the claimant's evidence. These issues were to be resolved at the substantive hearing.
- 3 The case came before me on 4 December 2002 where the parties were represented by their patent agents: Mr G Williams of Marks & Clerk for the claimant and Mr R Jehan of Williams Powell & Associates for the defendant. At the hearing Mr Williams withdrew the argument that the invention was not novel, so in this decision I only need to consider the claimant's assertion that it does not involve an inventive step.

The patent

- 4 The patent relates to a waste outlet valve for so-called waterless urinals, ie urinals that are not flushed either intermittently or continuously. In the embodiments described, there is an elastomeric, tubular one-way valve element. The lower portion of the valve element is flattened so that its walls abut to form a seal. The element is retained within a sheath or pipe connected immediately below the waste outlet of a urinal bowl by a removable retainer member which also serves to support a perfumed element and a domed anti-spatter member. The valve permits fluid to pass into the waste system by temporary deformation of the flattened portion, but prevents reverse flow of malodorous gas from the waste system.
- 5 There are 13 claims, and claim 1 reads:-

1. A waste outlet device when used in conjunction with a urinal operated substantially without a continuous or intermittent supply of flushing water and comprising one-way valve means mountable so as to be removable from within the urinal bowl, wherein said one-way valve means does not trap fluid within the device.

6 Claims 2 - 12 are all appendant to claim 1. For the purposes of this decision I do not need to consider the contents of claims 3, 4, 6 - 9, 11 and 12 because at the hearing Mr Jehan conceded that they would all stand or fall with claim 1. The other appendant claims, claims 2, 5 and 10, relate to the relationship between the waste outlet device, adjacent members and a general waste system.

7 Finally, claim 13 is an omnibus claim referring to Figures 2 to 6 of the drawings. It was agreed at the hearing that consideration of Claim 13 would be deferred until the fate of the remaining claims was known and, if I were to find any of those other claims invalid, the defendant had been given a chance to submit amendments.

The law

8 I need say little about the law because the relevant provisions are all well known. Section 1 of the Act says, *inter alia*, that a patent may only be granted for an invention that involves an inventive step. Section 3 expands on this:

“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 . . .”

the “state of the art” referring to everything made available to the public before the priority date. Finally section 72(1)(a) gives me the power to revoke a patent on the grounds that the invention is not a patentable invention within the meaning of section 1, whilst section 65 gives me the power to issue a certificate of contested validity if I find the patent to be wholly or partially valid.

9 The principles on which inventive step should be assessed have been well established and neither party referred me to any specific case law in this respect. In respect of the duties and responsibilities of expert witnesses I was referred to two cases - *Ikranian Reefer [1993] FSR 563* and *Anglo Group plc v Winther Brown & Co Ltd (2000) 72 Con. L.R. 118* - but as there was no real dispute about those duties and responsibilities, I do not need to go into these cases in detail.

The state of the art

10 In its statement of case the claimant based its inventive step argument on two patent documents, patent applications GB2296309 (‘the Hepworth patent’) and WO97/11234 (Now 2000), and two other documents, an advertising brochure and Technical Design Guide both published by Hepworth Building Products and relating to their ‘HepvO[®]’ self sealing waste trap product. The defendant challenged the publication dates of the advertising brochure and Technical Design Guide, arguing that the claimant had not

established they were published before the priority date of the patent in suit. Whilst not conceding this point, at the hearing Mr Williams said he was no longer relying on these two documents, so I do not need to consider them further.

- 11 In the evidence rounds the claimant introduced as exhibits to witness statements further documents that were said to be pertinent to the patentability of the claims. These documents were not so much evidence to support the case the claimant had put forward as additions to that case, and on that basis the claimant should probably have sought leave to amend its statement. However because there was no real uncertainty about the case the defendant was being called upon to answer, I am pleased to say it did not make an issue of this and simply treated the case that had been made in connection with these documents as though they had been included in the statement. I shall do the same.
- 12 The most important of these further documents was a set of papers derived from a seminar at Hepworth Building Products in December 1996 promoting their HepvO^{RTM} waste trap to ‘an audience from the plumbing engineering fraternity’ (‘the Hepworth seminar papers’). The set of papers comprises four papers presented by speakers at the seminar, plus a report of all the questions that were asked by the audience and the answers given. At the hearing the defendant argued that the claimant had failed to establish that these papers were in the public domain prior to the priority date, but on the basis of the supporting witness statement, internal evidence within the papers themselves and the absence of any contrary evidence I ruled against the defendant on this point at the hearing.
- 13 Other documents included a further patent specification relating to a waterless urinal, GB 2137247 A (NRDC), a brochure for a urinal waste outlet called ‘Whiffaway’, a brochure for another waterless urinal outlet fitting based on the Now 2000 patent (‘the Washroom International brochure’), a Hepworth Plumbing price list dated 30 June 1997 and a print of web-pages relating to the history of waterless urinals. A paper from the Building Research Establishment relating to the development of waterless urinals was also exhibited, but I ruled at the hearing that the claimant had not discharged the onus on it of establishing that this paper was in the public domain. Accordingly, as it cannot be treated as part of the state of the art for the purposes of section 3, I do not need to consider it further.
- 14 Of all these documents, the Hepworth patent, which was published on 26 June 1996, is particularly important. It describes a non-return device for ‘waste and/or odour traps for domestic and other plumbing’ which can replace the conventional water trap. The core of the device is a rubber valve element which is essentially the same as the valve element described in the patent in suit, but the way it is mounted is not the same. Three different mounting arrangements are shown in the Hepworth patent. In figures 1 and 2 the valve element is held inside a flanged outlet pipe which is inserted into the waste outlet of a sink from above. The outlet pipe has an internal thread to support the valve element, and this positions the element directly below the sink outlet. In figure 3 the inlet end of the valve element is trapped between the lower end of a conventional basin outlet pipe and further section of waste pipe. This positions the valve element inside the further section, spaced from the sink outlet. Finally, figures 4 and 5 relate to a yet further embodiment in which the tube is retained within a section of waste pipe by a collar and the section of waste pipe is attachable to a basin outlet pipe. This creates a

self contained unit which can be inserted into a waste pipe system, again spacing the valve element from the sink outlet.

- 15 The HepvO^{RTM} product which formed the subject of the Hepworth seminar papers appears derived from the second of the embodiments described in the Hepworth patent (or possibly the third - for present purposes, the difference is immaterial). The Hepworth price list was only cited to show it was on the market before the priority date of the present patent, a point that the defendant does not dispute.
- 16 All the other documents relate to waterless, i.e. non-flushed, urinals. The Now 2000 patent, upon which the 'Whiffaway' product is based, was published on 27 March 1997 and shows a urinal outlet having a domed shield above a malodour counteracting disc and an outlet pipe for mounting in a urinal bowl. GB 2137247 (National Research) was published on 3 October 1984 and provides a funnel device mounted in a urinal outlet pipe to reduce the surface area below the device exposed to the air. Both of these arrangements rely on a fluid filled U-bend trap to seal against odours from the drains. A further waterless arrangement is shown in the web-page print which involved floating a barrier liquid on the contents of a trap.

The evidence

- 17 So much for the cited documents, including those that were first cited as exhibits to a witness statement. I must now say a word about the witness statements themselves. The claimant provided evidence from two witnesses. In correspondence preceding the hearing the defendant complained that these witness statements were not restricted to facts but also included opinions. To that extent, the defendant argued, the witnesses were being put forward as experts and accordingly their evidence needed to comply with all the requirements for expert evidence. At the hearing Mr Williams did not deny that some of the evidence was opinion, but nor did he attempt to rely on that opinion. Rather, he submitted that it was not uncommon for a bit of opinion to get intermingled with evidence of facts, particularly if the encouragement in the Civil Procedure Rules for witness statements to be in the witness's own words had been followed, and the correct approach was not to throw out the whole of the evidence but for me to ignore the bits that were opinion. Mr Jehan did not disagree with this submission, and I too am sure it is the right approach in the present case. I have therefore paid no attention to the opinions expressed by the claimant's witnesses. Indeed, the main contribution of the claimant's witness statements has been to introduce the documents I have mentioned above.
- 18 The defendant's evidence consisted of very short statements from three witnesses. At the hearing I allowed the withdrawal of one of those witness statements because it had become apparent it was based on a misunderstanding. The other two witness statements did little more than introduce as exhibits two letters. The first was from the Design Council, confirming the award of Millennium Product status to a product made under licence under the present patent. The second was from Hepworth Plumbing, referring favourably to the developments that form the subject of the patent, calling those developments "exciting" and saying "it is clear that the Waterless Urinal is completely unique".

19 Neither party requested cross-examination of any of the witnesses.

The arguments in respect of claim 1

- 20 Having set the scene, I will now look at the arguments from both sides in relation to claim 1, starting with the claimant's arguments. Dealing first with the interpretation of claim 1, Mr Williams submitted that 'operated substantially without a . . . supply of flushing water' at line 2 and 3 did allow for the presence of some water, and that the use of the term 'flushing water' did permit a certain amount of water to be present in the trap for other purposes. He distinguished between water passing through the valve as the intended fluid to be received by the valve and flushing water. Water passes through a sink outlet without the sink being flushed and urine passing through a urinal outlet was, he said, equivalent to this. Mr Williams also submitted that the expression "does not trap fluid within the device" at the end of claim 1 did not debar the retention of sodden objects in a strainer, as the defendants had apparently been arguing.. In the event Mr Jehan put a slightly different angle on this point at the hearing, which I will come to when I consider the subordinate claims.
- 21 Mr Williams based his assertion that claim 1 is obvious primarily on the basis of the Hepworth patent when read in the light of the Hepworth seminar papers, but considering both against the background of the other documents which showed that the concept of a waterless urinal was known. Both the patent and the seminar papers, it will be remembered, are concerned with non-return devices for waste outlets which allow one to dispense with the conventional water trap. The Hepworth patent says the devices are for use in domestic and other plumbing, but it does not expressly mention urinals. The four papers presented at the Hepworth seminar likewise make no express reference to urinals. However, Mr Williams drew my attention to three of the questions asked by the audience. Question 2.4 asked whether the device had been tried on urinal wastes and its effect on limescale build-up. The answer given by a delegate specialising in the servicing of high-throughput washrooms such as exhibition halls and motorway services was to the effect that limescale precipitated out of trapped water and urine, and as the device did not retain these, it was something they had been awaiting a long time. Question 2.25 asked whether the device was effective when dry and not subject to the flow of water. The answer explained that initial tests had been carried out using new, dry units, but Mr Williams submitted this showed that use of the device without flushing water had been contemplated and that this was suggestive of waterless operation. Finally, question 2.28 asked whether there were plans to test the device in urinal bowls, the answer being that such testing was ongoing.
- 22 Claim 1, of course, also requires the valve element to be removable from within the urinal bowl, and in this connection Mr Williams pointed out that in its first embodiment, described in connection with a sink bowl, the Hepworth patent discloses removal of the valve element through the waste outlet - ie from within the sink bowl - for maintenance or replacement.
- 23 I now turn to Mr Jehan's arguments. There were, he suggested, two key features in claim 1, the application to a waterless urinal and the particular structure of the device specified in the claim. As regards the first of these, he emphasised that the Hepworth patent lacks any reference to application to urinals of any sort. Rather, it only mentions

sinks, baths and showers which all require the input of water in order to provide their function. In no circumstances, he asserted, does this document suggest the waterless environment required in claim 1 of the present patent. Similarly, he argued that the Hepworth seminar papers contain no suggestion that anything other than an arrangement using flushing water was intended. In particular, question 2.4 refers to both water and urine which taught away from the use of the valve in a waterless environment, question 2.25 relates only to a new installation or a valve that has been idle for some time, and question 2.28 contains no suggestion that the urinal should be used a waterless environment.

- 24 Mr Jehan also emphasised that all the prior art waterless urinals described in the claimant's evidence relied on the use of fluid filled traps. This was true of both the Now 2000 and NRDC patents, and also of the arrangement referred to in the internet print in which a barrier liquid is used. Indeed, the Now 2000 patent is specifically concerned with a chemically based malodour counteracting device for use with such a trap, as confirmed by the Washroom International brochure. Even the McAlpine WhiffAway product, which was launched in August 1998, retained its trap, and all this indicated that at that stage manufacturers considered a trap essential in a waterless urinal. Thus all of the available prior art depended on fluid filled traps to provide sealing.
- 25 With reference to the particular structure required by claim 1, Mr Jehan asserted, citing Figures 8 and 9 of the seminar papers and noting the right hand column of the following page which show HepvO^{RTM} units and a plumbing arrangement for the units, that the seminar was concerned with a structure similar to the second embodiment of the Hepworth patent. In this structure, the valve element is not removable through the bowl. Indeed, he argued, the seminar papers teach away from having an easily-removable valve element because they show the HepvO^{RTM} units in positions in the pipework that would require a plumber to replace the valve and instead place emphasis on the longevity of the valve.
- 26 Finally, Mr Jehan turned to the Hepworth Plumbing letter in the defendant's own evidence. This, he said, illustrated the magnitude of the departure of the arrangement of the patent in suit from the state of the art, because Hepworth say in that letter that 'it is clear that the Waterless urinal is completely unique...'. It also shows that Hepworth themselves had not contemplated using their new valve element in a waterless urinal.

Does claim 1 involve an inventive step?

- 27 I must now weigh up these arguments. In doing so, I agree with Mr Jehan's identification of the key features in claim 1. It is not sufficient to show that it is obvious to use the sort of valve element shown in the Hepworth patent and used in the HepvO^{RTM} unit in a urinal. For claim 1 to be obvious it must be shown that it is obvious to use this valve element in waterless urinal, and moreover in such a way that it is removable from within the urinal bowl.
- 28 It is clear from the Hepworth seminar papers that their valve was intended to completely replace a conventional fluid filled trap in a range of plumbing situations. Not only that, it is clear from the very fact that questions 2.4 and 2.28 were asked that a

skilled practitioner would have left the seminar fully appreciating the fact that this type of valve was potentially usable in urinals, and this of course is before the priority date of the present patent. However, as Mr Jehan rightly submitted, use of the HepvO^{RTM} structure which formed the subject of the seminar would not have led to an arrangement in which the valve element was removable through the urinal bowl. Was it nevertheless obvious to use an arrangement in which this would be possible?

- 29 If this had to be considered solely on the basis of what was disclosed at the seminar, I am quite sure the answer would have to be no. However, in accordance with the well-established principles for assessing obviousness, I have to work on the presumption that the skilled practitioner was also aware of the Hepworth patent. The HepvO^{RTM} unit was of the type represented in the second or third embodiments of the Hepworth patent, but there is also a first embodiment. Were the first embodiment used in a urinal, the valve would indeed be removable from within the urinal bowl. Hepworth chose, for whatever reason, to develop a different embodiment into a marketable product, but the fact that Hepworth apparently chose not to develop the first embodiment of their own patent does not remove that embodiment from the state of the art. The skilled person was aware from the seminar that a one-way valve element could be considered for urinals and was also aware from the patent that such a valve element could be used in an arrangement which permitted the element to be removed through the waste outlet of the relevant sanitary appliance. There can have been no inventive step in using the latter arrangement in a urinal. To put that another way, there could be no inventive step in considering use of an option that a patentee has described but chosen not to pursue. Thus I am satisfied that at the priority date of the patent in suit a urinal outlet having the structural requirements of claim 1 would have been obvious to the skilled person.
- 30 Was it, though, obvious for the urinal to be a waterless one? The evidence clearly establishes that waterless urinals were known, but it also establishes that all the known ones required some form of fluid trap to seal against odours from the waste system. Forming this seal so one can dispense with the fluid trap is precisely the function of the Hepworth valve element. Whilst I do not agree with Mr Williams that question 2.25 of the seminar and its answer directly indicates that Hepworth foresaw use of their valve in a non-flushed environment, it does clearly indicate that a flow of water is not essential to the functioning of the valve. With this information, it is difficult to see how it could be obvious to the skilled practitioner to use the Hepworth valve element in a flushed urinal and yet not be obvious to use it in an unflushed one.
- 31 Before reaching a conclusion, though, I must consider the Hepworth letter which enthuses about the 'unique' nature of the waterless urinal concept of the present invention. At first glance this enthusiasm does not sit well with a finding of obviousness, but that first impression does not stand up to closer scrutiny, for three reasons. First, the second paragraph of the letter acknowledges that '...the valve we supply for inclusion in your product is derived from our HepvO Self-Sealing Waste Valve.' In other words, Hepworth are writing to one of their customers. As everyone knows, it is good business practice to be nice to your customers, so Hepworth's compliments do not carry quite the weight they might have done in other circumstances. Second, that customer is effectively exploiting a Hepworth product in an area that Hepworth themselves had not exploited directly. In effect this is expanding the market coverage for Hepworth's device, so no wonder they are enthusiastic about it. Third, we

do not know exactly what Hepworth were praising. Mr Jehan wanted me to assume it was the basic concept, ie the features of claim 1, but it could equally well have been the specific design, which incorporates many features not in claim 1. (The same also applies to the award of Millennium product status, although in the event Mr Jehan did not attempt to rely on this evidence at the hearing.)

32 In connection with the second point above, Mr Jehan suggested that Hepworth's failure to consider this market suggested the invention could not have been obvious. I am not sure that necessarily follows. We have no evidence as to why they did not enter this market, and there could have been business reasons. For example, Hepworth may have been too busy concentrating on the mass markets for their new valve rather than smaller, specialised niches. However, even if I give the benefit of doubt to the defendant and assume Hepworth had not exploited this market because it had not been obvious to them that their embodiment 1 valve element could be useful in this market, the fact that one can find someone in the business to whom the invention was not obvious does not mean it cannot have been obvious to other skilled practitioners.

33 Taking all these considerations into account, I do not feel the Hepworth letter displaces my *prima facie* finding. I therefore consider claim 1 to be obvious.

The appendant claims

34 I now turn to the appendant claims. Mr Jehan conceded that claims 3, 4, 6 - 9, 11 and 12 would all stand or fall with claim 1, so it follows from my finding against claim 1 that these claims are obvious too. That leaves claims 2, 5 and 10.

35 Claim 2 requires the 'valve means' to be connected to the bowl of the urinal upstream of the waste pipe system. Mr Williams argued that this arrangement was entirely conventional in that it was usual to site a trap at the head of a general waste system and that the Hepworth patent arrangement did just that. Mr Jehan submitted that in the wording 'upstream of the waste pipe system' should be interpreted as meaning that it is upstream of every single bit of the waste pipe system. I feel Mr Jehan's interpretation of the wording is stretching the natural sense of the claim too far, but even if it were not, the step that I have found to be obvious - using the first embodiment of the Hepworth patent in a waterless urinal - would result in an arrangement that met the requirements of claim 2. Accordingly I find this claim to be obvious.

36 Claim 5 also has the 'upstream requirement, albeit expressed in different words, plus a requirement that the 'valve means' be housed in a sheath member connectable to the waste pipe system. Mr Williams argued that the first embodiment of the Hepworth patent met the latter requirement because it shows a tube attached to a waste system and surrounding the valve. Mr Jehan did not really dispute this - his only argument on claim 5 was the same as his argument on claim 2, which I have already dismissed. It follows that I find claim 5 obvious too.

37 Claim 10 has the same requirements as claim 5, but in addition it requires a releasable retaining member which retains both the 'valve means' inside the sheath member and an anti-spatter member. Mr Williams argued that the first embodiment of the Hepworth patent has a releasable retaining member for the valve and that the Now 2000 patent

disclosed an anti-spatter member in association with a urinal outlet and thus since the two documents are in the same field it does not require an inventive leap to arrive at a combination of the two. Mr Jehan argued that the releasable retention had to be such as to permit easy removal of the anti-spatter member for maintenance purposes, and this was not possible with the type of retaining member shown in the first embodiment of the Hepworth patent. He also argued that it was not obvious to combine the teachings of the Hepworth and Now 2000 patents, in part because there was no need to have a malodour counteracting device with the Hepworth valve element and in part because the latter was unhygienic in that it traps sodden debris in its strainer.

- 38 With his first argument I feel Mr Jehan is putting words into claim 10 that are not there, whilst on his second argument I felt he got carried away with his alleged concerns about hygiene. Nevertheless, I do not consider that combining the Hepworth and Now 2000 patents is as simple as Mr Williams suggests. The first problem is that the Now 2000 arrangement is concerned with dealing with malodours that emanate from a fluid filled trap whereas the Hepworth arrangement avoids the need for a trap at all. The two arrangements are therefore alternatives, and as Mr Jehan rightly argued, there is nothing in the evidence to provide any grounds for supposing the skilled person would have wanted to combine them. However, even if we ignore this point, the design of the retaining member shown in the first embodiment of the Hepworth patent is not such as to permit the simultaneous retention of an anti spatter member, whilst the way the anti spatter member is mounted in the Now 2000 patent would be no use at all in simultaneously retaining a valve member. Thus even if the skilled person did combine the teachings of these documents, they would not arrive at the arrangement of claim 10. Accordingly I do not consider that the claimant has established claim 10 is obvious.

Conclusion

- 39 I have found that claims 1 - 9, 11 and 12 are invalid in that they lack an inventive step in the light of the prior art. However I have dismissed the attack on the patentability of claim 10.
- 40 Mr Jehan did not specifically request the opportunity to amend the claims should they be found invalid although I did indicate at the hearing that I would give this opportunity. Accordingly, and in accordance with section 72(4) of the Act, I order that patent GB2329332 be revoked unless it is amended under section 75 to the satisfaction of the comptroller. I allow the defendant six weeks to submit proposals for amendments, though this period should be treated as stayed should an appeal against the present decision be lodged. The defendant should send a copy of any amendments to the claimant who will then have one month to submit comments thereon to the comptroller, sending a copy of any comments to the defendant. I will then decide how the case is to proceed, and will also consider the defendant's request for a certificate of contested validity. If no amendments are filed, I will revoke the patent.
- 41 I have made no finding so far on the patentability of claim 13. As claim 10 has survived, there must be a presumption that claim 13 is also patentable, but I will consider the matter further if amendments are submitted.

Costs

- 42 Mr Williams and Mr Jehan agreed at the hearing that costs should go with the cause and be based on the comptroller's normal scale. Accordingly, and bearing in mind that the defendant filed very little evidence and that the hearing was fairly short, I order Eskander Corporation NV to pay £1,500 as a contribution to McAlpine & Company Ltd's costs. This sum should be paid within seven weeks of the date of this decision, though that deadline should be treated as suspended if an appeal is lodged.

Appeal

- 43 As this decision does not relate to a matter of procedure, the period in which an appeal may be lodged is six weeks.

Dated this 27th day of January 2003

P HAYWARD

Divisional Director acting for the Comptroller

THE PATENT OFFICE