

9 August 2010

**PATENTS ACT 1977**

BETWEEN

Mr Richard Wragg

Claimant

and

Mr Mike Donnelly

Defendant

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PROCEEDINGS

Reference under section 71 of the Patents Act 1977 in  
respect of patent application number EP 1408284

HEARING OFFICER

J Elbro

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**DECISION**

**Introduction**

1 Patent number EP 1408284 (“the patent”) was granted to Mr Mike Donnelly (“the defendant”) on 29 November 2006. It relates to a device for allowing fluid to be released from a boiler to the outside of a building while reducing the temperature/pressure of the fluid by changing its direction.

2 An application under section 71(1) of the Patents Act 1977 (“the Act”) was filed by Mr Richard Wragg (“the claimant”) requesting a declaration by the comptroller of non-infringement in respect of its Flowflex Pipe Cowl (“the cowl”, of which a sample has been provided). The application followed an exchange of correspondence between the parties in which the defendant alleged infringement of the patent. The claimant further alleged several of the claims to be invalid.

3 This dispute has previously been the subject of two Opinions issued by the IPO.

4 An Opinion under Section 74A of the Act was requested by the defendant as to whether several of the claims of the patent were infringed by the actions of the claimant with respect to the pipe cowl. An Opinion, numbered 18/08<sup>1</sup>, was issued on 9 September 2008, which found that claims 1-3, 8 (18 and 19 subject to caveats) and 21 were indirectly infringed by the claimants actions under Section 60(2) of the Act.

5 A further Opinion under Section 74A of the Act was requested, by the claimant's representative, as to whether the claims of the patent were valid. An Opinion, numbered 27/08<sup>2</sup>, was issued on 10 February 2009 which found the claims to be inventive over the prior art.

6 I note, as both parties acknowledge, that these Opinions are not binding for any purpose.

7 The case proceeded in the usual way, including the issuing of a preliminary evaluation before the evidence rounds. The matter came before me at a hearing, at which Mr Alistair Wilson, Q.C. (instructed by patent agents Barker Brettell) appeared on behalf of the claimant and Ms Jane Lambert (instructed by patent agents Murgitroyd & Co) appeared on behalf of the defendant.

### **The patent**

8 The patented invention provides an apparatus for safely expelling fluid i.e. water or water vapour from the pressure relief valve of a household boiler. Page 1 of the specification acknowledges prior art apparatus and their disadvantages in terms of safety, inaccessibility and unsightliness. In particular, the prior art, as both parties agreed, primarily consisted of simply bending the pipe round to point back towards the wall (either as a single pipe, or a Y-junction where the pipe split in two, each piece then pointing back towards the wall – a “Yorkshire bend”). A particular issue raised was that the bent pipe had to be fitted from the outside, rather than it being possible to push the construction through the wall from the inside.

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<sup>1</sup> <http://www.ipo.gov.uk/op1808.pdf>

<sup>2</sup> <http://www.ipo.gov.uk/ep1408284.pdf>

9 A preferred embodiment of the invention is shown in figure 3 of the description.

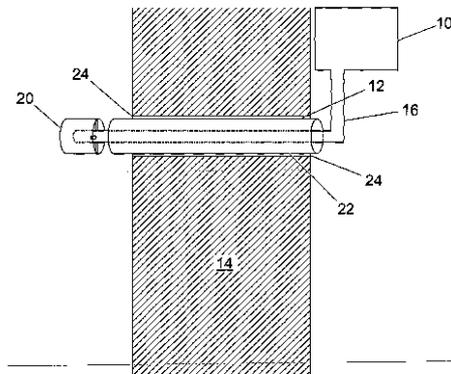


Fig. 3

10 The figure shows the apparatus comprising a conduit 16 connected at a first end to a pressure relief valve of a boiler 10 and extending through an aperture 12 in an external wall. An end portion 20, which is generally cup-shaped, is connected, via spokes which extend radially from a second end of the conduit which is open to the atmosphere. The internal concave portion of the end portion faces the second open end of the conduit and the internal surface is adapted to deflect water expelled from the conduit in a desired direction.

11 The patent contains one independent claim, claim 1 to:

*an apparatus for expelling fluid to the external environment from a boiler situated internally of a building, the apparatus comprising a conduit connectable at its first end to a pressure relief valve on said boiler and having its second end open, in use, to the external environment, the conduit having an end portion connected to its second open end, said end portion being adapted to intercept fluid expelled from the second open end of the conduit, characterised in that the end portion is substantially cup-shaped and has its concave inner surface facing the open end of the conduit.*

12 Claim 21 is also of particular interest as it defines a method of installing the apparatus of and of claims 1-20.

## **The cowl**

13 The cowl for which the claimant seeks a declaration of non-infringement (“the cowl”) comprises a short tube with a first end portion having a means to connect the cowl to a conduit, a second end portion which is connected to the inner surface of a concave dish, apertures located radially on the short tube at the second end and a flange located near to the concave dish between apertures and the first end portion.



## **The witnesses**

14 Mr Richard Wragg and Mr Mike Donnelly both gave evidence in the form of witness statements and were each cross-examined. The evidence was given in an honest and straightforward manner and both are clearly skilled in the relevant field.

## **Validity**

15 The claimant alleges invalidity of claims 1-3, 8, 12-14 and 21-24. The defendant’s counterstatement contests these allegations on the basis that claim 1 is novel and inventive. Thus the only issue of contention regarding validity is that of claim 1.

16 The relevant sections of the Act are Sections 2 and 3:

*2.-(1) An invention shall be taken to be new if it does not form part of the state of the art.*

*(2) The state of the art in the case of an invention shall be taken to comprise all matter (whether a product, a process, information about either, or anything else) which has at any time before the priority date of that invention been made available to the public (whether in the United Kingdom or elsewhere) by written or oral description, by use or in any other way.*

*(3) The state of the art in the case of an invention to which an application for a patent or a patent relates shall be taken also to comprise matter contained in an application for another patent which was published on or after the priority date of that invention, if the following conditions are satisfied, that is to say –*

*(a) that matter was contained in the application for that other patent both as filed and as published; and*

*(b) the priority date of that matter is earlier than that of the invention.*

*3. 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).*

### State of the art

17 The following prior art documents were submitted by the claimant as evidence to support his assertion that the independent claim of the patent is invalid.

GB 1075334 the invention is intended to allow damp air to escape from a roof space to the outside of a building. The tube (or conduit) part of this ventilator is intended to be varied in height according to weather/airflow conditions and not to be connectable to a pressure relief valve or even, in a more general way, to a boiler.

GB 1238564 relates to a ventilation cap for a gas vent or chimney flue. Such a device does not reverse the flow of the emissions (see page 1 lines 22-23) and is intended to prevent items from entering the vent or flue.

GB 2332504 discloses a device to cap a disused chimney primarily to prevent the ingress of debris, the elements or animals

GB 2378750 relates to a ventilation cap intended to allow air to escape from a building, while offering protection from the elements and is intended to prevent items from entering the flue and facilitates lateral airflow from the vent. The cap of this invention is not intended to be connected to a boiler in any way.

DE 3439729 also relates to a roof ventilator system including a cap. The ventilator includes a non-return valve which opens when pressure in a roof space is exceeded.

US 5762091 discloses a fitting for a pressure vessel which allows fluid to be expelled via apertures located radially around the side walls of a cup shaped end portion. The fitting also contains a frangible plate, which is damaged by the fluid exiting under pressure.

US 6318403 discloses a combination manifold and check valve for a boiler, in which a pipe leads from the boiler to the external environment.

18 In the event, Mr Wilson did not place any great reliance on these documents, beyond using them to support his assertion that ventilation caps for chimneys and the like are known in the art and redirect fluid flow in a similar manner to the present invention, as I explain in more detail below.

### Novelty

19 In his statement of claim, the claimant submitted that '334, '564, '750 and '729 showed the patent to be invalid through lack of novelty. Mr Wilson did not pursue this argument at the hearing. I think this was a sensible concession as none of these four documents is intended for use in the manner of the patented invention nor is connectable, in use, to a pressure relief valve of a boiler without very significant adaptation. A novelty argument based on these documents would seem hopeless.

### Inventive step

20 Both parties agreed that the appropriate test for assessing inventive step is that set out in *Pozzoli*<sup>3</sup> which encompasses the well established four step test set out in *Windsurfing*<sup>4</sup>. This test involves the following steps:

- 1a *Identify the notional person skilled in the art;*
- 1b *Identify the common general knowledge of that person;*
- 2 *Identify the inventive concept of the claim in question, or if that cannot be 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;*

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<sup>3</sup> *Pozzoli SPA v BDMO SA* [2007] EWCA Civ 588

<sup>4</sup> *Windsurfing International v Tabur Marine (Great Britain) Ltd* [1985] RPC 59

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.*

### Steps 1a and b

21 The claimant summarised the skilled person to have knowledge including “that the exterior outflow from a domestic boilers pressure relief valve should be directed back against a wall and knowledge of prior art methods of doing so. He would also know that prior art method could not be attached to the end of the pipe before passing it through the wall unless a much larger hole was drilled and that this created difficulties when placing boilers in a location where access to the other side of the wall was difficult.” I see this as being consistent with the defendant’s more concise assessment which is “a manufacturer and/or installer of household combination boilers. And their common general knowledge is summarised in paragraphs 0003-0004 of the patent”.

22 I am in general agreement with these assessments. In summary, I consider that the person skilled in the art would be a manufacturer and/or installer of household boilers. Their knowledge would extend to plumbing and plumbing products and, as both parties acknowledge, the use of a number of yorkshire bends to be a common prior art solution to the problem addressed by the patent. The skilled person would also, by virtue of his experience, be aware of the issues of having to situate a fluid pressure relief device external to a building, including at high levels and the associated safety requirements.

23 Mr Wilson asserted, and I did not understand Ms Lambert to demur, that the person skilled in the art would be aware of the following common general knowledge:

- The prior art approach of using curved joints, such as Yorkshire bends, to redirect fluid emerging from boilers back against the wall
- The use of cup-type endings to reverse the direction of water flow in various plumbing applications (I expand on this in step 3 below)
- The use of ventilation caps, as illustrated by much of the cited prior art.

### Step 2

24 I did not understand the parties to seriously differ on the inventive concept in general terms, which from claim 1 appears to be the use of a cup-shaped end portion to surround a conduit through which fluid is able to escape to an external environment. The fluid meets the base of the cup shaped portion once it exits the conduit and is redirected by the side walls. There was some dispute between the parties in particular on the precise meaning of “cup-shaped” as I outline below when considering infringement, but that does not appear to matter here.

### Step 3

25 The parties did not appear to differ on the difference from the prior art – the use of the device of the patent instead of using Yorkshire bends and the like.

### Step 4

26 Mr Wilson's argument was based on the existence of a number of examples in plumbing and elsewhere where some sort of cup-shape is used to reverse the direction of flow of a fluid.

27 His primary example related to U-bends in plumbing below e.g sinks, which he said were in modern systems replaced by concentric pipes, with an end cap. Water flows in through the inner pipe, hits the end cap, and is diverted back along the outside pipe in a similar manner to the way fluid is diverted in the patented invention. He gave other examples relating to plumbing in urinals and siphons in water tanks. He argued a similar effect was seen in ventilation caps for chimneys – while he accepted that these caps were primarily to stop things falling down the chimneys, he argued that they still caused rising smoke to flow in the appropriate manner.

28 Each of the plumbing examples was put to Mr Donnelly in cross-examination. In each case, while accepting the alleged use, he was able to show a distinction from the application in the invention (water not under pressure, a siphon pulling not pushing).

29 Regarding the chimney covers, Ms Lambert made the point during cross-examination of Mr Wragg (by rather colourful reference to a giant version of the cowl Mr Wragg had made for the purposes of an entry in the Guinness Book of Records) that the size of the chimney covers was significantly larger than the size of anything which would be used on a pressure relief pipe.

30 To answer the obvious question about why, if it were obvious to use this known technique in this way, none had ever done it, Mr Wilson also sought to cast doubt on the actual benefits obtained from the invention in comparison to the prior art Yorkshire bends. As I understood his argument, it was essentially that none had ever used something in the form of the embodiments disclosed in the patent because they offered no benefit compared to Yorkshire bends, and would cost more. (The Yorkshire bends, both witnesses agreed, were essentially free, being made from odd bits of pipe left over from other jobs).

31 This led to much debate, questioning of the witnesses and forensic examination of diagrams in the specification as to the size of the hole one needed to drill in the wall to use the disclosed embodiments of the invention – a key advantage of the invention being that it was allegedly installable from inside because the whole thing could be pushed through the wall. While the evidence was divided on just how big a hole was needed, it appeared clear to me overall that the disclosed embodiments were capable of fitting through a smaller hole to some degree than the prior art bends would be.

32 Overall, considering the totality of the evidence, I consider that the examples the claimant was able to come up with of use of similar mechanisms for reversing flow direction (or at least having that effect) were unconvincing to show that this technique would obviously apply to the relevant application on a pressure relief pipe – Mr Donnelley’s distinctions appeared convincing. The applications appeared to be simply too distant from the present one. This was particularly so in the case of the chimney flues which made up the bulk of the written evidence.

33 I therefore find the attack on the validity of the claims fails.

### **Infringement**

34 Section 60 of the Act is relevant to infringement and reads:

*60.-(1) Subject to the provisions of this section, a person infringes a patent for an invention if, but only if, while the patent is in force, he does any of the following things in the United Kingdom in relation to the invention without the consent of the proprietor of the patent, that is to say -*

*(a) where the invention is a product, he makes, disposes of, offers to dispose of, uses or imports the product or keeps it whether for disposal or otherwise;*

*(2) Subject to the following provisions of this section, a person (other than the proprietor of the patent) also infringes a patent for an invention if, while the patent is in force and without the consent of the proprietor, he supplies or offers to supply in the United Kingdom a person other than a licensee or other person entitled to work the invention with any of the means, relating to an essential element of the invention, for putting the invention into effect when he knows, or it is obvious to a reasonable person in the circumstances, that those means are suitable for putting, and are intended to put, the invention into effect in the United Kingdom.*

35 The conditions of section 71(1)(a) and (b) of the Act must be met for the comptroller to issue a declaration of non-infringement. As the claimant asserts that these conditions have been met, and this has not been contested by the defendant, I do not need to consider this in these proceedings.

36 As I mentioned in my preliminary evaluation, although neither party addressed me directly on this, the question before me appears to be one of contributory infringement (section 60(2)) rather than of primary infringement (section 60(1)). This is because the cowl in question lacks a “conduit” suitable for attachment to a pressure release valve of a boiler as required by claim 1 (the stub pipe on the cowl itself being too short to pass through a wall). I understand

the issue before me to be whether the cowl would constitute means relating to an essential element of the invention for putting the invention into effect.

37 The claimant alleges no claims are infringed and uses similar arguments in his grounds for request as those that were put forward in support of his position in opinion 18/08. The defendant does not specifically address the individual claims, but refers to Opinion 18/08, which found no infringement of claims 4-7, 9-14, 16, 17, 20 and 22-25.

38 Therefore it is common ground that there is no infringement of the claims listed above. Equally it is common ground that if I find claim 1 infringed then so to are the remaining dependent claims. This means that the only issue of infringement for me to decide is the infringement, or otherwise, of independent claim 1.

39 Putting the points in paragraph 36 and 38 together, as it would clearly be standard usage to use the cowl on the end of a piece of pipe, the question for me is to determine if there cowl falls outside the scope of claim 1 in any manner apart from the lack of a suitably long conduit. If not, then it would seem apparent that provided there was sufficient actual or constructive knowledge than there would be contributory infringement under Section 60(2).

40 At the hearing, Mr Wilson raised two points of alleged distinction between the cowl and the invention claimed in claim 1.

41 Firstly, Mr Wilson argued that the cowl does not have a “second end open, in use, to the environment” as required by the claim. Instead, the end of the conduit is closed off by the saucer piece, and there are holes in the side (albeit holes that border on the saucer, and thus run to the end of the pipe) which allow the fluid to escape. Further, there was no “concave inner surface” facing the end of the conduit as the part of the end piece sealing the conduit is flat. Secondly, he argued that the end portion was saucer-shaped rather than cup-shaped, as claim 1 requires.

42 He further argued that the cowl worked in a fundamentally different way to the embodiments of the invention. In the embodiments, fluid shot out the open end of a pipe to be caught and reflected 180 degrees by a cup. In the cowl, fluid shot out the side of the pipe through the holes (thus at 90 degrees to the direction of travel through the pipe), to be deflected by the edge of the saucer through a second right angle

43 Ms Lambert disagreed that the cowl and the invention worked in a different way – she argued that both involved catching and reversing the direction of fluid flow. She further contended that the saucer-shape of the cowl’s end portion fell within the meaning of “substantially cup-shaped”.

44 In construing the claim, both parties submit that the correct approach is the one set out in *Kirin-Amgen*<sup>5</sup>. I agree that it is correct to follow these principles. In doing so I must put a purposive construction on the claims; in essence, I must decide what would a person skilled in the art have understood the patentee to have used the language of the claim to mean.

45 It seems to me that the words “having a second end open, in use, to the external environment” in claim 1 when read in conjunction with the description and drawings are capable of encompassing the situation, as in the cowl, where the opening of the end to the external environment is via holes in the side wall which extend to that end. Mr Wilson stated that the holes could equally well have been some distance from the end, but the fact remains that in the cowl under consideration, they are not, and it is where they are in that cowl that matters.

46 I also have no difficulty with finding that in the cowl there is a concave inner surface facing the end of the conduit. The saucer as a whole faces this end, even if the bent portion is outside the radius of the conduit. Indeed, this is true of the embodiment in figure 3 of the patent – the part facing the actual end of the pipe is flat.

47 Considering the differences between the canonically cup-shaped embodiments of the invention, and the cowl, the claimant submitted that a purposive interpretation of “cup-shaped” leads to “a narrow interpretation” and that it would be understood by a skilled person to have “its ordinary everyday meaning of shaped like a cup”. The defendant disagrees with his assessment and asserts that a “more accurate” (and broader) construction maybe found in the aforementioned Opinions, emphasising in particular the use of the word “substantially” in the claim.

48 On this last point, the defendant made reference to how slight variations in shape were considered by the Court of Appeal in *Dyson Appliances Ltd v Hoover Ltd*<sup>6</sup>. In that case, the court found that the term “frusto-conical” was not to be interpreted precisely as required by mathematical definition but rather be constructed purposively so as to encompass a shape, generally frusto-conical, which achieves the desired result.

49 It seems to me that applying the same principle as in *Dyson Appliances*, shapes which are generally concave and have a base and side walls would achieve the desired result in that they would cause fluid to be diverted from its original direction when it impinged on the inner surface. I find that “cup-shaped” is intended to encompass such shapes which perform the same function as a cup in this context, but may otherwise be described by a skilled person as a dish, saucer or bowl.

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<sup>5</sup> *Kirin-Amgen and others v Hoechst Marion Roussel Limited and others* [2005] RPC 9

<sup>6</sup> *Dyson Appliances Limited v Hoover Ltd* [2002] RPC 22

50 As to whether the “saucer-shaped” end portion of the cowl performs the same function as a cup in this context, it seems to me that Ms Lambert’s argument is more convincing than Mr Wilson’s in this regard: the variant does not have a material effect upon the way the invention works. Fluid escaping from the conduit is deflected back against the wall, in a similar pattern by the end portion in each case. There may be some differences in the precise path of the fluid, but these are not material in terms of the function of the invention.

51 Hence I find that the concave end section of the cowl is within the scope of the “substantially cup-shaped end portion” of claim 1.

52 I therefore find that the cowl would constitute means relating to an essential element of the invention for putting the invention into effect.

### **Conclusion**

53 I find the attacks on the validity of the claims of the patent fail and that the arguments in relation to non-infringement also fail. I therefore decline to make a declaration of non-infringement.

### **Costs**

54 The defendant has succeeded in this action and is therefore in principle entitled to a contribution towards his costs. The standard practice before the Comptroller is for costs to be awarded on a published scale, rather than for full compensatory costs to be awarded, but it is possible for a greater award to be made if such is justified.

55 Ms Lambert argued that in this case, I should make an award greater than that provided for by the scale. She pointed to the general principle that parties should attempt to resolve matters by alternative dispute resolution, and characterised the opinions service as this. She argues that as there have already been two opinions in this case, both of which gave unfavourable answers to the claimant, that the defendant should not have to bear the brunt of costs (a figure of about £10000 was mentioned) for this action.

56 Mr Wilson resisted this on the grounds that it would act as a serious deterrent to parties from using the opinions service to expose a party who used it to a risk of greater costs.

57 I agree with Mr Wilson. The purpose of the opinions service is to provide a way, short of full litigation, for parties to get an impartial view of the dispute between them. In many cases, this will be sufficient for the parties to be able to come to a resolution. But in those cases where it is not possible, a party should not be punished for wishing to have the matter fully explored in a way which is simply not possible under the opinions service, with its procedural restrictions such as lack of cross-examination.

58 I shall therefore award costs according to the standard IPO scale. As this action was started after 3 December 2007, it is the scale published in TPN 4/2007 which applies. This was a relatively straightforward case, with a short hearing and relatively little evidence, although Mr Donnelly needed to travel to the hearing to give evidence. An award towards the lower end of the scale therefore seems appropriate. I order Mr Richard Wragg to pay Mr Mike Donnelly £2,300 towards his costs within 7 days of the expiry of the period for appeal from this decision. Payment may be suspended in the event of an appeal.

### **Costs**

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

**J ELBRO**

Divisional Director acting for the Comptroller