



BL O/077/06

22 March 2006

## PATENTS ACT 1977

BETWEEN

Lee Moore

Claimant

and

Nicholas Jackson

Defendant

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PROCEEDINGS

Reference under section 72 of the Patents Act 1977 in  
respect of patent number GB 2371245

HEARING OFFICER      P Hayward

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## DECISION

### Background

1      The patent in suit, GB 2371245, stands in the name of the defendant, Nicholas Jackson, and claims a priority date of 18 January 2001. In May 2005 the claimant filed the present application for revocation under section 72 of the Patents Act 1977. The grounds given were that claims 1, 2, 5, 6, 23, 29 and 30 were not novel and the remaining claims lacked an inventive step, in the light of the following six documents:

- D1**      WO 00/61258 published on 19 October 2000
- D2**      US 5192429 published on 9 March 1993
- D3**      “Water Treatment for Microirrigation, Filtration and Chemical Treatment”, Ross, David S published September 1989
- D4**      GB 2293333 published on 27 March 1996
- D5**      “Rotorflush Filter Pump” web page by Rotorflush Filters Ltd with no publication date ascertained
- D6**      DE 19916545 *esp@cenet* abstract, original publication date 14 October 1999.

- 2 This application is opposed by the defendant. Neither side has filed any evidence beyond these six documents, and the case came before me at a hearing on 26 January 2006. Mr Keith Loven of patent attorneys Loven & Co appeared for the claimant and Mr Trevor Thompson of patent attorneys Intellectual Property Group appeared for the defendant.
- 3 As is not uncommon, there had been some refinement and adjustment of the issues by the time of the hearing. First, the claimant confirmed he was dropping arguments based on document D5 because he had been unable to establish its date of publication. Second, both sides confirmed that they wanted me to consider not only whether claim 1 was novel but also whether it involved an inventive step. Whilst this had not been pleaded in the claimant's original statement, the defendant had addressed the issue in their counter statement and the claimant had subsequently taken it up. Third, whilst in their pleadings both sides had addressed the validity of every single subordinate claim, Mr Thompson said at the hearing that if the defendant had to limit the independent claims, he would come down to either claim 15 or claim 18 and accordingly it was not necessary for me to address the independent validity of all the other subordinate claims. I am grateful to him for this sensible concession, because it saved a lot of time at the hearing. Finally, in response to this Mr Loven then said he would not be disputing the validity of claim 18.
- 4 Because the issues were narrowed in this way, Mr Loven did not need to rely on documents D2, D3 and D6 at the hearing because they had only been cited in respect of subordinate claims that I was no longer being required to consider. I therefore only need to address the novelty and inventive step of independent claims 1 and 29 in the light of document D1, and the inventive step of dependent claim 15 in the light of documents D1 and D4.
- 5 Following the hearing, I became aware that neither side had addressed me on two passages in document D1 that seemed to me to be fairly significant. Accordingly I gave them each the opportunity to make written submissions on those passages. I have taken those submissions into account in this decision.
- 6 Neither side referred me to any case law. However, I think that merely reflected the fact that the case law is well established. There seemed to be no disagreement between them as to the principles I should apply.

### **The patent**

- 7 The patent relates to filter units for water and addresses the problem of the filtering mesh becoming clogged with particulate matter that had been suspended in the water. A backwashing assembly diverts jets of filtered

water back to the interior surface of the filtration mesh in order to dislodge the particulate matter. This much was known at the priority date of the patent - there is no dispute between the parties about that. The alleged invention resides in the operation of the backwash pump.

8 The patent includes two independent claims 1 and 29:

Claim 1 reads:

*'A filter unit for filtering particulates and other foreign matter from a water supply, comprising a filtering chamber, at least a portion of the exterior of the filtering chamber being provided with a mesh through which water may enter the filtering chamber in use, the mesh being sized to filter particulates and other foreign matter from the water, the filter unit further comprising an outlet through which filtered water exits the filter unit, and a rotatable member located within the filtering chamber, the rotatable member having at least one outlet spaced from an internal face of the mesh, the at least one outlet being angled at an angle  $\alpha$  to a radial direction passing through the axis of rotation of the rotatable member and the axis of rotation of the rotatable member being such that the at least one outlet traverses at least a substantial portion of the internal face of a mesh, the filter unit further comprising a dedicated pump having an inlet communicating with the filtering chamber and an outlet communicating solely with the rotatable member such that operation of the pump causes filtered water from within the filtering chamber to be pumped through the rotatable member to exit the at least one outlet and impinge on the internal face of the mesh so as to cause particulates and other foreign matter located on an external face of the mesh to be dislodged,*

*wherein the pump is operable independently of the water flow rate through the filter unit.*

Claim 29 reads:

*A method of filtering water to remove particulates and other foreign matter comprising the steps of passing the water through a filtering chamber having a mesh sized to filter the particulates and other foreign matter from the water, outputting the water from the filtering chamber through an outlet of the filtering chamber, wherein a dedicated pump is used to pump water from the filtering chamber exclusively through a rotatable member located within the filtering chamber to exit through at least one outlet of the rotatable member to impinge on an interior face of the mesh so as to dislodge particulates and other foreign matter located on an exterior face of the mesh, the at least one outlet being angled at an angle  $\alpha$  to a radial direction passing through the axis of rotation of the*

*rotatable member and*

*the pump being operable independently of the water flow rate through the filter unit.*

- 9 It is common ground that the invention - if there is one - resides in the final clauses of these claims, ie that the backwashing pump is operable independently of the water flow rate through the filter unit. Neither side felt it necessary to address me on the construction of these clauses, even though I invited them to do so. They seemed content to try and take the clauses at face value. However, I don't feel that is good enough, because the clauses strike me as inherently ambiguous. Do they mean that the control or power input to the pump motor is not varied in dependence on the water flow rate, or do they mean that the flow of water through the backwashing rotor isn't varied in dependence on the main flow? The ambiguity was underlined by the parties' own arguments, because whilst Mr Thompson's submissions tended to assume that the first interpretation was correct, Mr Loven's leaned more towards the second (although not consistently so).
- 10 To resolve this ambiguity, I must turn to the description and apply the principles of purposive construction. That is not easy because this feature is not mentioned in the description at all, save in the consistory clauses. However, there are two factors that point away from the first interpretation. One is that the description and subordinate claims use the expression "pump" to refer to the complete unit - the motor, impeller, inlet and outlet - and not just the motor. Thus the clauses in question cannot be talking about the operation of the pump motor; they must be talking about the operation of the pump as a whole. The other is that the description is totally silent on the control and power inputs to the pump motor, so if the first interpretation is correct, the claim would have no support in the description.
- 11 There is no express passage in the description to support the second interpretation either, but it does fit in with the whole context in which the invention is presented. The invention is said to be overcoming the problems of prior art document D4 in which the flow of backwashing fluid is taken from the main output water flow of the filter unit. In the arrangements described in the present specification, the flow is instead taken from the filtering chamber itself, and is thus not dependent on how much water, if any, is flowing through the main outlet.
- 12 Accordingly I am satisfied that the only tenable interpretation of the clauses at the ends of claims 1 and 29 is that the flow of water through the backwashing rotor isn't varied in dependence on the main flow. I shall therefore proceed on that basis.
- 13 I should add that Mr Thompson said I was not entitled to make a ruling on

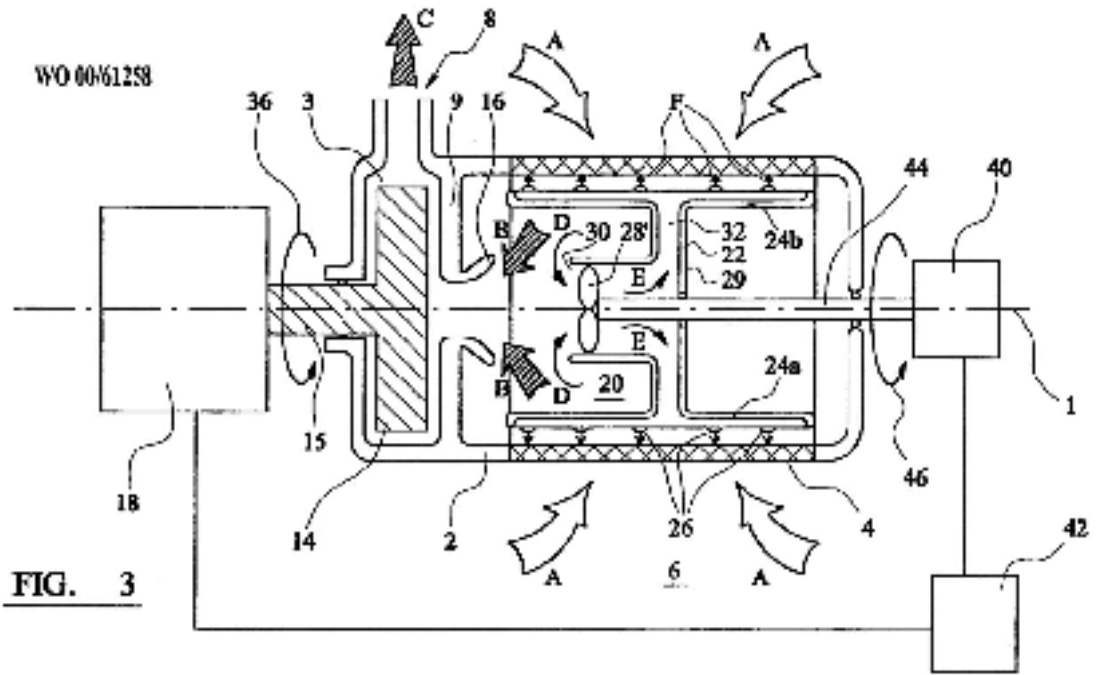


FIG. 3

whether the claims had sufficient support as this had not been pleaded (and, I might add, it is not a ground of objection under section 72). I agree, but that does not mean it is improper to take support into account when construing the claims in the light of the description.

**Prior art document D1**

14 So far as the main claims are concerned, there is only one prior art document that I need to consider, and that is document D1. D1 was published before the priority date of the patent. It discloses a pump and filter assembly and is directed towards the same general problem as the present patent, ie removing foreign matter from the outer face of a mesh forming the walls of a filtering chamber. There is no dispute that its second embodiment, illustrated in figure 3, shows everything up to the final clause of claims 1 and 29.

15 In figure 3, water enters the filtering chamber through the cylindrical mesh 4. A main pump impeller 14 draws water through the mesh and then out of the filtering chamber via a passageway 16, along the paths indicated by arrows A,

B and C. A separate backwash impeller 28' withdraws filtered water along paths D from the filtering chamber into a rotatable backwash assembly 29 to exit the rotatable assembly via angled nozzles 26. The nozzles 26 are directed radially outwards towards the inner surface of the mesh 4 so that the backwashing flow will clear debris from the outer surface of the mesh.

- 16 The particular problem that D1 seeks to address is that in prior systems, a decrease in water flow through the filter unit tends to cause an increase in backwashing water supply and vice versa. This, the specification argues, is the exact opposite of what is required. In fig.3 of D1 the backwash impeller 28' is driven by a motor 40, and these two together perform the function of the dedicated pump in present claims 1 and 29. Motor 40 is completely separate from the motor 18 driving the main impeller 14. However, a controller 42 is provided to maintain a relationship between the operation of the two pumps. In particular, the controller can ensure that as the main pump impellor speed (and therefore main output flow) increases, the flow of backwashing fluid, and thus backwashing of the filter screen assembly, is at least maintained and is preferably increased.

**Novelty: claims 1 and 29**

- 17 I must now consider whether claims 1 and 29 are anticipated by D1. For the purposes of assessing validity, neither side drew any distinction between claims 1 and 29, and indeed, both concentrated solely on claim 1 in their arguments. I shall do the same.
- 18 Both sides accepted that in D1, the water flow rate through the filter unit is implicitly dependent on the operation of the main pump. Accordingly, in the context of D1 the last clause of the present claim 1 amounts to "wherein operation of the backwash pump is independent of what the main pump is doing". In line with well-established case law on novelty, Mr Loven accordingly acknowledged that for D1 to anticipate claim 1, it must contain clear and unmistakable directions to operate the pumps independently. He argued that it did indeed contain such directions, relying on the passage on page 10 lines 16-21 which states:

*"A controller 42 is connected to the main pump motor 18 and also to backwash motor 40. Preferably, the controller 42 maintains a relationship between the rotational speed of the two motors 18, 40 such that as the main motor 18 increases speed, the backwashing motor 40 speed is also increased."*

His argument was that if the inventor of D1 had intended that it was essential to the invention that a controller was provided to control the relationship between the two pumps he would not have used the word "preferably". This was reinforced, he said, by the statement in the preceding paragraph that the pumps "are not drivingly connected and are entirely separate", by the further statement at page 11 lines 23-30 that "both the pumping section 12 and the backwashing will have no effect on each other" and by claim 14 which refers to "at least a degree of independence of operation". All this, he argued, amounted to an implicit disclosure of the

backwashing pump being operated independently of the main pump.

- 19 Mr Thompson disagreed with Mr Loven's interpretation of the passages he had quoted from pages 10 and 11 and claim 14 of D1. It is, he said, important to look at them in the context of D1 as a whole, not in isolation. I agree. The whole thrust of D1 is to overcome the problem it had identified with the prior art, namely, that an increase in resistance in the output line leads to a decrease in the main output flow but an increase in the backwashing flow. Thus the characterising portion of claim 1 of D1 (in lines 23-30) reads:

*“ . . . the pump and filter assemblies are combined into a single unit, and that there is a backwashing pump which is arranged, in use, to supply backwashing fluid to the backwashing means, the backwashing pump and the main pump are functionally connected so that in use the tendency for an increase in pump output flow resistance to cause an increase in fluid flow to the backwashing assembly is offset.”*

The key teaching in D1, Mr Thompson submitted, was the provision of a functional connection between the main pump and the backwashing pump. This is reflected in the embodiments described. In the first, for example, the main and backwashing impellers share a common drive shaft so that as one slows, the other also slows. The second embodiment is the one of fig.3, in which the two impellers have separate motors but they are linked by controller 42.

- 20 Given this context, Mr Thompson contended that the word 'preferably' on page 10 cannot mean that the provision of any relationship between the speed of the two motors is optional because that would be contrary to the whole teaching of D1. The "preferably" must therefore refer to the particular relationship specified here, namely, that as the main motor speed increases, the backwashing motor speed also increases.

- 21 Mr Loven argued this interpretation was not tenable, because if the word "preferably" applies to the nature of the relationship, the only alternatives were that:

- (i) as the main pump flow increases the backwash pump flow decreases, or
- (ii) the main and backwash pump flows do not affect one another.

Option (i) could not be intended, he said, because that was the very situation D1 was trying to overcome, so it didn't make any sense to apply the "preferably" to the particular relationship - it could only refer to the provision of any relationship.

22 Had I been in Mr Loven's shoes, I think I would have put this last point a different way - if "preferably" does refer to the specific relationship, the only possible alternative is (ii), and that is the very relationship Mr Loven is alleging to be implicitly disclosed. However, it makes no difference because Mr Loven is not, in my view, attaching proper weight to a statement on page 2 of D1 that:

*"... we have invented a solution to the problem whereby the tendency for the backflushing supply to increase when the main pump output increases and the main output flow decreases, is at least partially offset" (my emphasis).*

Thus a partial offset is clearly contemplated. In other words, the backflushing supply could still increase when the main flow decreases so long as it doesn't increase by as much as it would have done without the invention. This is reinforced by a number of other passages in the specification. For example, page 3 lines 12-15 read:

*"... the increased flow resistance in the output from one of the pumping means (the main pumping means) reduces its output flow, but does not reduce to the same extent the output flow in the other pumping means."*

whilst claims 13 and 14 talk about an increase in flow resistance (or reduction in flow output) being accompanied by a "less than proportionate" increase in the output of the other pump.

23 Against this background, I am quite satisfied that "preferably" on page 10 can only be construed as referring to the particular relationship, because if the author was trying to say the provision of any relationship was optional, they would not have expressed it this way. Instead, in the preceding sentence they would have said that the controller was "preferably" connected to the main pump motor. Further, as Mr Loven's option (i) is clearly within the ambit of the invention of D1 so long as there is "partial" offsetting, the "preferably" clause cannot be construed as an implicit disclosure of the two pumps being operated independently. As for the passages earlier on page 10 and on page 11 that Mr Loven asserted were supporting his interpretation, they are both purporting to describe what is shown in figure 3, not some alternative embodiment, and figure 3 includes the functional connection between the two motors. What these passages are clearly doing is contrasting figure 3 with figure 1, where the two impellers are on the same drive shaft. When read in context, they make perfect sense and do not imply that the functional connection is optional. Accordingly I reject Mr Loven's submissions.

24 However, Mr Loven had an alternative argument. He submitted that the requirement for the backwashing pump to be operable independently of the



water flow rate simply meant that it must be capable of being so operated (and Mr Thompson rightly accepted this). With this in mind, Mr Loven sought to apply the infringement test (which, although not referred to directly at the hearing, is set out in *General Tire and Rubber Company Limited v Firestone Tyre & Rubber company Limited* [1972] RPC 457) of looking at the earlier disclosure of D1 and considering whether it would infringe the claims. He argued that the pumps in D1 were capable of independent operation because the controller 42 could be removed or disconnected, and D1 would then infringe the present claims.

- 25 This is a hopeless point. What Mr Loven is saying is not that figure 3 anticipates claim 1 but that if you modified figure 3 (by disconnecting the controller) you would have something that anticipated claim 1. As Mr Loven conceded, there is no indication in D1 that one could disconnect the controller. It follows that there are no “clear and unmistakable directions” to operate the pumps independently.
- 26 For completeness, I should mention that Mr Thompson argued you would not arrive at the invention of the present patent if you disconnected the controller, because in figure 3 of D1 both impellers face each other. They are therefore in competition with one another because they draw fluid from the same chamber, so if there is increased resistance in the main pump outlet the backwash pump will take more water and vice versa. In short, there would still be a link between operation of the backwash pump and water flow through the unit. When I asked why this did not apply to the arrangement of the present patent, Mr Thompson stated that as the outlet to the backwash pump in the patent was located at the bottom of the filter chamber and there were no opposing pumps there would be no competition between the pumps and therefore no link between their operation. Mr Loven disagreed, pointing out that in the present patent the water for the backwash pump was drawn from the filter chamber - i.e. from the same source as the main pump - and that the pumps were therefore just as much in competition with one another as those in figure 3 of D1.
- 27 I don't find Mr Thompson's arguments very convincing, but I wouldn't want to decide the point without expert evidence. However, because I have found Mr Loven's underlying proposition to be ill-founded, I do not need to consider the matter further.
- 28 In conclusion, notwithstanding Mr Loven's arguments I find that document D1 does not anticipate claims 1 and 29.

#### **Inventive step: claims 1 and 29**

- 29 I now turn to the question of whether claims 1 and 29 lack an inventive step

in the light of D1. Mr Loven said that there are references throughout D1 to the main and backwash pumps being separate. Moreover, the figure 3 embodiment showed a filter unit where the link is purely by electronic control and he submitted that it would be obvious to operate the unit without this electronic link. He also relied on the disclosure in respect of figure 3 of the possibility of fine tuning the relationship between the two pumps which, he said, implied the relationship is changeable and consequently that the pumps were capable of independent operation. If an operator wished to perform backwash cleaning while there was no water flow through the filter unit, for example, it would be obvious to him to switch the main pump off while operating the backwash pump, i.e. independent operation of the pumps.

30 Mr Thompson argued that it was not enough to assert that the skilled worker might have carried out these changes. There had to be some motivation for making the described changes and there is nothing in D1 to teach or suggest them. The assertion that it was obvious to perform backwash cleaning of the filter with the main pump switched off, for example, was using *ex post facto* analysis of the disclosure of D1.

31 Obviousness is normally addressed using the four-step approach set out in *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd*, [1985] RPC 59. This was not specifically referred to at the hearing, but I think both sides were implicitly (and not unreasonably) taking the first three steps for granted and addressing the fourth. In the present context, the fourth step amounts to asking whether, viewed without any knowledge of the alleged invention (namely, the backwashing pump being operable independently of the water flow rate through the filter unit), the differences between the alleged invention and figure 3 of D1 constitute steps which would have been obvious to the skilled man or whether they require any degree of invention.

32 I agree with Mr Thompson that, at least in the present context, it is not enough to assert that a skilled person might have made the necessary changes unless that is backed up by evidence of a motive for making the changes. Thus Mr Loven's argument that it would be obvious to disconnect control from the main pump so as to perform backwash cleaning with no water flow through the filter fails because he has provided no evidence that, at the priority date, this is something the skilled person would have wanted to do. Likewise, the mere fact that the relationship in figure 3 can be fine tuned isn't enough to establish that the skilled person would have realised that operating with no relationship at all was an option worth considering.

33 As I have already discussed in connection with novelty, I also consider that the references on pages 10 and 11 of D1 on which Mr Loven relied do not suggest that the flow of water through the backwashing rotor isn't varied in dependence on the main water flow. Nevertheless, there are two passages

in D1 which, in my view, do suggest this. These are the passages on which I asked for written submissions after the hearing. The first is on page 9 where, having described the first embodiment with the two impellers on the same shaft, there is a summary of the invention that concludes in lines 10-14:

*“ . . . the functional connection according to the invention ensures that when an increase in main output flow C occurs the backwashing flow F is at least maintained and preferably is increased.”*

The expression “at least maintained” here can only be construed as saying that the backwash flow is not varied in dependence on the main flow. Of course it is difficult to see how that can be done in figure 1, but that simply means that the skilled reader would read this passage as a general commentary on the invention rather than a specific description of figure 1.

- 34 This passage on page 9, though, does not stand on its own because it is firmly reinforced by the language of claim 15 of D1. This reads:

*“ . . . the method including the step of arranging and operating the combined pump and filter assembly so that in response to an increase in output flow from the combined assembly a flow of fluid to the backwashing means is maintained at at least substantially the same level.”*

- 35 Thus the reader of D1 is clearly invited, on page 9 and in claim 15, to consider operating the backwashing pump such that the backwash flow isn't varied in dependence on the main flow. That, I have already ruled, is what the last clauses of claims 1 and 29 are calling for. It is true that this invitation is not made in the specific context of the figure 3 embodiment. However, of the two main embodiments described, figure 3 is the only one that is amenable to modification in this way. Accordingly, given this clear invitation, I am satisfied that it would have been obvious to the skilled reader of D1 to modify the figure 3 embodiment so that the backwashing pump worked independently within the meaning of claims 1 and 29. On this basis, claims 1 and 29 lack an inventive step.

#### **Inventive step: claim 15**

- 36 I will now turn to the question of whether claim 15 is obvious. This claim reads:

*A filter unit assembly comprising a filter unit as claimed in any preceding claim and a tank housing in which the filter unit is located, the tank housing being provided with an inlet for entry of water into the tank unit*

*and the outlet of the filter unit forming the outlet of the tank housing.*

37 Mr Loven relied on figure 1 of GB 2293333 (document D4) to show that it was known to put filters into a tank (i.e. a housing), arguing that there could be no invention in applying this arrangement to the filter of claim 1. D4 is acknowledged as prior art in D1, and its figure 1 does indeed show a filter in an open container. However, it describes this container as a pit or lagoon, having earlier said that one application of the invention is for pumping slurry. It shows no inlet, but Mr Loven argued that there must be one as the water must get into the tank somehow.

38 Mr Thomson said that the lagoon of figure 1 in D4 was not a tank housing within the meaning of claim 15 and there was no evidence of any inlet. He argued that the housing of his claim 15 was particularly significant as it provides a means for collecting particulate debris for disposal. In contrast, the filter unit of D1 is described as finding use in a fountain or aquatic environment and was intended to keep the pump operating, and not to collect and remove debris.

39 I do not accept Mr Thompson's arguments about the significance of the housing in claim 15 because he is relying on features that are not in the claim. In particular, there is nothing in the claim about being able to collect the debris. However, I do agree with Mr Thompson that the pit or lagoon in D4 is not a tank or "tank housing" within the normal meaning of those words, nor can we take it for granted that it must have a water inlet. Accordingly the case against claim 15 fails.

## **Conclusion**

40 In conclusion, I find that there is nothing in document D1 to suggest that claims 1 and 29 lack novelty, but they do lack inventive step in the light of this document. The only other claim I have been asked to consider is claim 15, and on the evidence provided I find there is no basis for the allegation that this claim lacks an inventive step.

41 Although the defendant has not explicitly requested an opportunity to amend the patent should my findings go against him, I think Mr Thompson was implicitly requesting this when he said at the outset of the hearing that if the defendant had to limit the claims, he would come down to claim 15 or claim 18. Accordingly, I am going to allow him two months in which to file amendments under section 75 of the Act should he so wish. If amendments are filed, I will require them to be advertised and will then give directions for the subsequent procedure. If no amendments have been filed within two months, I will revoke the patent.

42 Finally, the defendant had requested a certificate of contested validity. Given my findings, I am not prepared to grant this.

## **Costs**

- 43 The parties have accepted that costs should be on the comptroller's normal scale. As the claimant has won, in principle he is entitled to costs. However, the claimant's case was poorly presented, and I am conscious of the fact that he has won on a point that he did not even plead originally (obviousness) and on the basis of passages in document D1 that he did not even mention at the hearing. That suggests to me that the costs award should be towards the lower end of the scale, because had the claimant done a better job, the proceedings could have been more focussed.
- 44 Bearing in mind that there has been no evidence other than the documents attached to the statement, I therefore direct that the defendant pays the claimant £800. This should be paid within five weeks.

## **Appeal**

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

**P Hayward**

Divisional Director acting for the Comptroller