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Case No: IP-2017-000177

IN THE HIGH COURT OF JUSTICE
BUSINESS AND PROPERTY COURTS OF ENGLAND AND WALES
INTELLECTUAL PROPERTY ENTERPRISE COURT

Royal Courts of Justice, Rolls Building
Fetter Lane, London, EC4A 1NL

Date: 26/02/2019

Before :

HIS HONOUR JUDGE HACON

Between :

MARFLOW ENGINEERING LIMITED

Claimant

- and -

CASELLIE LIMITED

Defendant

Douglas Campbell QC (instructed by **Shakespeare Martineau LLP**) for the **Claimant**
Jonathan Hill (instructed by **DAC Beachcroft LLP**) for the **Defendant**

Hearing date: 15 January 2019

Approved Judgment

I direct that pursuant to CPR PD 39A para 6.1 no official shorthand note shall be taken of this Judgment and that copies of this version as handed down may be treated as authentic.

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HIS HONOUR JUDGE HACON

Judge Hacon :

Introduction

1. The Claimant ('Marflow') makes plumbing products and is the owner of UK Patent No. 2 368 888 ('the Patent'). The Patent claims a method of installing a fluid-using appliance such as a shower. The Defendant ('Cassellie') is a competitor supplier of plumbing products.
2. Marflow alleges that Cassellie's marketing of a fixing plate used in the installation of showers and the like infringes the Patent. Cassellie counterclaims for revocation of the Patent.
3. Douglas Campbell QC appeared for Marflow, Jonathan Hill for Cassellie.

The Patent

4. The Patent has a filing date of 9 November 2000 and no priority date.
5. The claimed invention is a method which addresses problems arising when an appliance is connected to pipework extending from the wall against which the appliance is installed. It can be used with any fluid-using appliance and the fluid could be a gas, but it is easier to discuss the invention by reference to a shower.
6. In outline the method employs a plate, commonly a metal plate, with apertures which receive through them one or more water pipes extending out of the wall. The plate is fixed to the wall. Locking members secure the pipes to the plate so that there is no movement of the pipes relative to the plate or, therefore, the wall. The ends of the pipes are then joined to the inlet fittings of the shower.

The witnesses

7. Each side had one expert witness who was cross-examined. There was also a witness statement from Paul Fennell, Chairman of Marflow, who was not cross-examined.
8. Marflow's expert was Eric Mace. Mr Mace became an apprentice plumber in 1956 and has since worked in that trade for several employers. For a while he ran his own plumbing business. In 1996 he became a part-time professional standards inspector for the Institute of Plumbing although he also continued to trade on his own account, latterly as a consultant. Mr Mace is a former President of the Chartered Institute of Plumbing and Heating Engineers. I found Mr Mace to be a careful and it seemed to me reliable witness.
9. Stephen Walsh was the expert for Cassellie. He began as an apprentice plumber in 1964 and became a Chartered Engineer in 1983. He was first instructed as an expert witness in 1984 and his *curriculum vitae* gives the impression that being an expert witness is largely what he has done since. In cross-examination he said that he has been instructed as an expert on more than a thousand occasions. A small number of these were patent cases although none went to trial.

10. Mr Walsh gave evidence on the common general knowledge without having taken on board what that is. It emerged in cross-examination that his idea of the common general knowledge was any information made available by the Patent's filing date. He said that he had carried out weeks of research in his own extensive library and had called colleagues in the industry and manufacturers to find out whether they had anything that could assist him in his search for the common general knowledge relevant to this case.
11. There were two cited items of prior art. Unusually for an alleged infringer's expert, Mr Walsh said in his report that the Patent disclosed an inventive step over both. During an examination-in-chief he obligingly disclaimed a section of his report which included his statement that there was an inventive step over one of the items of prior art. Later, in cross-examination, he went back on that. I sometimes found Mr Walsh to be unclear in what he was saying, and I am not convinced that he was always sure either. Mr Walsh was not a satisfactory witness.

The skilled person

12. Both sides agreed that the skilled person was a plumber with experience in fitting showers and/or other fluid-using appliances.

The common general knowledge

13. Mr Mace explained that at the priority date care was taken by the plumber to ensure that the water pipes emerging from the wall were in the correct position to be joined later to the inlets of the shower. Once the pipes were in place the wall was finished, probably by another tradesperson such as a plasterer or a tiler. It was important that during the plastering and tiling the pipes remained in position. There were alternative means to do this such as using plastic clips around the pipes which were screwed to the wall. When the plasterer or tiler had completed their job the plumber returned to attach the pipes to the shower inlets.
14. Both experts stated that UK plumbers are conservative when it comes to practices in the trade. Though not a major factor, I take this to mean the skilled person would not have had an enthusiasm for abandoning his or her established way of doing things.
15. On page 1 the Patent refers to a mounting plate which, the Patent says, was commonly used in continental Europe. I will call this the 'Continental Plate'. Both counsel submitted that only the common general knowledge in the UK was relevant (I discussed this in *Regen Lab SA v Estar Medical Ltd* [2019] EWHC 63 (Pat) at [44]-[50]) and that the Continental Plate was not common general knowledge in this country. Nonetheless the discussion of the Continental Plate in the Patent would play a significant role in the reader's understanding of the invention claimed.

The Patent

16. After a short introduction to the invention, the specification introduces the Continental Plate on pages 1-2:

“Particularly where the appliance has a pair of inlet fittings, it is known to use a mounting plate which includes integral fittings which are joined to pipe parts which terminate in the fittings. Thus an appliance may be installed later by

joining the pair of inlet fittings of the appliance to the fittings integrally provided by the mounting plate. Such a system is commonly used in continental Europe.”

17. The advantages and disadvantages of the Continental Plate are explained:

“The use of a mounting plate as described is advantageous particularly where the appliance has a pair of inlet fittings as the spacing between the pipe parts can be set by the pipe parts being joined to the integral fittings of the mounting plate, and moreover, by having a mounting plate secured relative to the wall, a rigid mounting is provided for the appliance.

However, the integral fittings of the mounting plate each provide a female connecting part for receiving a pipe part end, and a male or female connecting part for joining with an inlet fitting of the appliance. The female connecting part faces inwardly of the wall on which it is desired to install the appliance, and thus the joints between fittings and pipe parts have to be made prior to securing the mounting plate on the wall. After the pipe parts and integral fittings have been joined, and the mounting plate is secured relative to the wall, the joint is inaccessible.”

18. The specification moves on to describe the usual practice in the UK at the priority date:

“In the UK, the use of such mounting plates is uncommon. This is because the practice in the UK is make joints directly between the outwardly projecting pipe parts and inlet fittings of the appliance.”

19. There follows a description of the invention, the claim 1 method, which is said to combine the advantages of the usual UK practice with the advantages of the Continental Plate:

“Thus the invention enables advantages of the known system to be realised, namely that the mounting member can provide a rigid mounting for the appliance and help set the distance between a pair of pipe parts where the appliance has a pair of inlet fittings, whilst enabling joints to be made directly between the pipe part or parts and the inlet fitting or fittings.”

20. A point to be noted is that the direct joining of pipe and inlet fitting referred to is between the pipe and the inlet fitting of the appliance. It is that joint which advantageously remains accessible using the claim 1 method.

21. The description returns to the advantages of the invention on page 3, one of which, mentioned again, is the accessibility of the joint between the pipe and the inlet fitting of the appliance:

“By virtue of the invention, the pipe part or parts is/are prevented from moving axially and thus the making of joints between the pipe part or parts and the inlet fitting or fittings can be made less difficult. Moreover there is no inaccessible joint with the pipe part.”

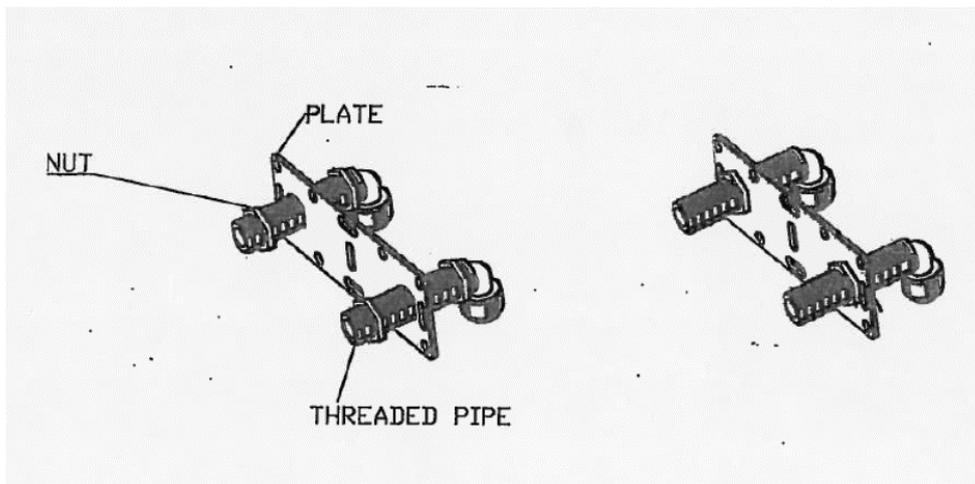
22. At the trial argument was directed just to claim 1 so I need consider only that claim.

Claim 1

23. Claim 1 was divided by the parties into these integers:
- (a) A method of installing a fluid-using appliance on a wall at a mounting position where a part of a fluid pipe extends outwardly of the wall, the method including the steps of
 - (b) securing a mounting member relative to the wall at the mounting position,
 - (c) the mounting member having a generally plate-like configuration body,
 - (d) with an aperture to receive the part of the fluid pipe extending outwardly of the wall,
 - (e) and the body of the mounting member providing in or thereon, a locking member, the method including
 - (f) passing the outwardly extending pipe part through the aperture provided in the mounting member until the pipe part extends outwardly of the mounting member,
 - (g) locking the pipe part relative to the mounting member such as to prevent axial movement of the outwardly extending pipe part relative to the mounting member, by means of tightening a locking element on the locking member,
 - (h) and subsequently joining the outwardly extending pipe part to an inlet fitting of the appliance in fluid tight manner.

The Cassellie Product

24. Although the normal construction of a claim must in principle be done without the alleged infringement in mind, a comparison between the claimed and the accused product or process can direct attention to the parts of the claim that require interpretation.
25. There are two relevant features of Cassellie's product in use. First, the water pipes in the wall are not connected directly to the inlets of the shower or other appliance. They terminate inside the wall and are connected to what I will call an 'intermediary pipe'. The intermediary pipe passes from the pipe in the wall, through the mounting member or plate, to the shower inlet to which it is attached.
26. Secondly, the intermediary pipe has a screw thread on its periphery. It is fixed to the plate using one nut each side of the plate. The nuts are rotated on the screw thread of the intermediary pipe until they abut opposing sides of the plate, locking the intermediary pipe into a fixed position relative to the plate.
27. These are diagrams on the fitting instructions supplied with the Cassellie product. The diagram on the left shows nuts yet to be rotated to fix the intermediary pipes to the plate, the one on the right showing locked intermediary pipes:



Two points of construction

The fluid pipe

28. The fluid pipe is the pipe in and emerging from the wall which provides the water (where the appliance is a shower). The specification says this on page 2:

“According to one aspect of the invention we provide a method of installing a fluid-using appliance on a wall at a mounting position where a part of a fluid pipe extends outwardly of the wall, ... “

29. In my view, when the Cassellie product has been installed, its intermediary pipe becomes a section of the fluid pipe within the meaning of claim 1. The intermediary pipe is connected inside the wall to another section of the fluid pipe, but this seems to me to be neither here nor there. The pipe in the wall might have further upstream connections to other upstream sections in the wall, but that would not prevent all sections, including the intermediary pipe, being part of the claim 1 ‘fluid pipe’.

The position of the locking member

30. The second point of construction relates to the position of the locking member before it is in locking mode. The issue is whether it must be attached to the mounting member or whether it can be attached elsewhere.

31. Integers (e) and (g) of claim 1 in relevant part state:

“(e) ... the body of the mounting member providing in or thereon, a locking member, ...”

(g) locking the pipe part relative to the mounting member such as to prevent axial movement of the outwardly extending pipe part relative to the mounting member, by means of tightening a locking element on the locking member”

32. The locking member is either in or on the mounting member, i.e. in or on the plate. ‘In’ the plate appears to mean within the aperture. ‘On’ suggests that it can be elsewhere but still attached to the plate. At page 3 the specification sets out another pair of

alternatives: the locking member is secured in the aperture or is formed as an integral part of the plate:

“The locking member may be secured in the aperture, although in another example the locking member may be provided integrally with the mounting member. This latter embodiment is most easily provided where the mounting member includes a moulded, e.g. plastic, body, in which case a locking member such as a collet may be formed integrally with the body of the mounting member during moulding.”

33. I think the skilled reader would understand that all combinations of the above are possible: the locking member may be attached within the aperture or attached to the plate elsewhere; in either location the locking member can be structurally distinct from the plate or alternatively it can be an integral part of the plate, typically being created as part of the plate during moulding.

34. It is to be noted that integer (e) and the passage of the description quoted are apparently concerned with the locking member whether it is in locked or unlocked mode. I think that skilled person would take this to mean that it applies to both.

35. Integer (g) requires the locking member to have a locking element. Tightening the locking element causes the locking member to lock the pipe to the plate, preventing axial movement. The locking element (not to be confused with the locking member) may be a simple nut, but this is in a specific context, disclosed on page 3 of the Patent:

“The locking element may in one example be a simple nut which is screw threaded onto the collet or other locking member to lock the pipe part relative to the mounting member. ...”

36. The only example of a locking member expressly identified is a collet, a collar through which the pipe extends. The collet can be secured in the apertures of the plate by various means. It is tightened to fix the pipe using a locking element such as the nut just mentioned. The specification gives more details on pages 6 and 7, explaining that screwing a nut onto the collet urges tongues of the collet inwards, locking the tongues around the pipe and thus fixing it to the plate.

37. The description makes it clear that locking members other than collets can be used. It says this at the bottom of page 7 to the top of page 8 (omitting reference numbers):

“In place of collets to secure the outwardly extending pipe parts, relative to the mounting member, any other suitable locking members may be provided which may lock the pipe parts relative to the mounting member, at least against movement of the pipe parts axially thereof.”

38. Taken in isolation this could suggest that any means of locking the pipe to the plate will do, provided it prevents axial movement of the pipe. But it is consistent with and to my mind does not override the usual meaning of the words of integer (e). I think that this integer and the rest of the specification would lead the skilled person to conclude that both before and after it is in locking mode, the locking member must be attached to the plate or form an integral part of the plate; it may be located within the aperture or elsewhere on the plate.

Validity

39. The Patent was alleged to lack inventive step over two cited disclosures:
- (1) German Patent No. 42 25 263 C1 ('Krone'), and
 - (2) US Patent No. 4,550,451 ('Hubbard').
40. Allegations that the invention of the Patent lacks inventive step over four identified items of common general knowledge were not pursued.

The law

41. The law on inventive step was set out by the Court of Appeal in *MedImmune Ltd v Novartis Pharmaceuticals UK Ltd* [2012] EWCA Civ 1234; [2013] RPC 27, at [87]-[94] and in *Hospira UK Ltd v Genentech Inc* [2016] EWCA Civ 780; [2017] RPC 13, at [9]-[13], in both of which reference was made to *Pozzoli SpA v BDMO SA* [2007] EWHC 1372 (Ch); [2007] FSR 36. No issue of law arose in the present case.

Krone

42. Krone discloses a wall mounting for fastening cables and the like, including hoses. The device is inserted into a hole in the wall. It has spring clamps which are inwardly pressed as the device is passed from the near side of the wall and through the wall. The spring clamps spring out when they pass beyond the opposite side of the wall, forming a collar resting on the opposite side of the wall. The cable or hose is passed through a cap nut, then through the core of the device and thus through the wall. The cap nut is screwed on external threading surrounding the core of the device until it rests against the near side of the wall, fixing the device to the wall. Further tightening of the nut causes segments of a collet in the device to press radially inwardly on the cable or hose, clamping it to the device and thus to the wall.
43. No mounting plate is mentioned in Krone. Mr Walsh said that use of a flat mounting plate was part of the common general knowledge and the skilled person would expect Krone to work with a mounting plate. But he spoke of reasons (plural) why Krone would not be used in that way and identified one of them. He called these reasons 'commercial', but the one identified was plainly technical. It was that the installer would not have access to the rear of the mounting plate, which is necessary to hold the near side of the Krone device when it is fastened. He said that using the Krone device with a plate would be possible, but inconvenient. He concluded that the Patent discloses an inventive step over Krone.
44. Mr Mace thought that Krone offered a complex solution to fixing a pipe to a wall and so would not be of interest to a plumber who would have known of simpler means. There was no teaching of a plate. Krone was concerned with fixing cable and hoses, which are flexible. Fixing these to a plate would not provide a rigid mounting, an advantage of the Patent. He did not believe that using a plate in the manner claimed in the Patent would have been obvious to a skilled person who had read Krone.
45. On that evidence I find that the invention of claim 1 has an inventive step over Krone.

Hubbard

46. Hubbard discloses a device for locating and supporting plumbing pipes. It consists of a strap, typically of metal or plastic, which has holes along its length to receive pipes. The strap is nailed to studs in the wall or is otherwise secured to the wall. The holes receiving the pipes prevent lateral or vertical movement. Axial movement is prevented by welding or soldering the pipes to the strap if both are made of metal, or if one or either is made of plastic using cylindrical plastic inserts in the holes of the strap. The insert is a collet with a tapering diameter such that when a pipe is inserted, the sides of the insert push outwards to secure the insert and pipe to the strap. The pipes are thus wedged in the holes.
47. Mr Mace thought that the welding or soldering option would be of no interest to a plumber because they did not carry welding or soldering tools. It was also not accepted practice to use welding or soldering to fix metal pipes in place because it may weaken or compromise the materials of the pipe. He also thought that the wedging option would be regarded as unattractive to the skilled person because a pipe that can be wedged in can also be disturbed from its position.
48. No locking member or locking element is disclosed in Hubbard. Mr Mace thought that it would not have been obvious to the skilled person to adapt Hubbard in such a way as to introduce the locking member and locking element as claimed in the Patent.
49. Mr Walsh agreed that the welding or soldering option was not part of a plumber's skill set. Like Mr Mace he thought that the skilled person would have recognised that using inserts was not secure because over time vibration of the pipes, or thermal expansion and contraction, would cause them to come loose. In one section of his report Mr Walsh said that the skilled person would have remedied the difficulty by using a product called the 'Conex fitting' and that the skilled person would have regarded the Conex fitting to be a locking member on the mounting plate. Mr Walsh concluded in this part of his report that using the Conex fitting would have been obvious.
50. On the other hand, in section 12 of his report, in which he summarised all his various conclusions, he said that the Patent had made an inventive step over Hubbard. Section 12, the whole of it, was the section disclaimed by Mr Walsh during his examination-in-chief.
51. Mr Campbell explored with Mr Walsh the contradiction between the two sections of his report regarding Hubbard. Mr Walsh's final stated position was that the Patent *had* made an inventive step over Hubbard. By implication his ultimate view was that it would not have been obvious to turn to the Conex fitting and install it into a Hubbard strap.
52. I have to say that I would not have had much faith in Mr Walsh's view on what was or was not obvious whatever his view had finally turned out to be. I can attach no weight to his evidence about the Conex fitting or inventive step generally. I must rely on what Mr Mace said.
53. I conclude that it was not obvious to the skilled person in November 2000 to modify the Hubbard device such that it would be used with a locking member and element according to the method of claim 1.

Conclusion on validity

54. Claim 1 does not lack inventive step over either Krone or Hubbard. The Patent is valid.

Infringement

The law

55. The law on the scope of a patent claim was explained by the Supreme Court in *Actavis UK Ltd v Eli Lilly & Co* [2017] UKSC 48; [2017] RPC 21 and the Court of Appeal in *Icescape Limited v Ice-World International BV* [2018] EWCA Civ 2219; [2019] FSR 5. I discussed those judgments in *Regen Lab SA v Estar Medical Ltd* [2019] EWHC 63 (Pat) at [199]-[224].

Normal construction

56. Using the Cassellie product, the pipe is locked to the plate by tightening the nuts against the plate. Before they are tightened the nuts are neither in nor on the plate. The nuts cannot be the locking member.

57. Mr Campbell argued that alternatively the screw thread on the intermediary pipe of the Cassellie product was the locking member and the nuts were the locking elements. I do not accept this for two reasons. First, claim 1 requires that the locking member is provided in or on the body of the mounting member – the plate. On a straightforward reading of claim 1 the screw thread of the Cassellie product is not provided on the body of the plate; it is provided on the body of the fluid pipe. Secondly, the locking member must be in or on the plate. Part of the screw thread is within the aperture in use but not the operative parts on which the nuts are tightened. These necessarily lie outside the plate.

58. In my view, on a normal construction of claim 1 the use of the Cassellie product involves a method that lacks integer (e) and therefore also (g).

Equivalence and the inventive concept

59. Mr Campbell identified the inventive concept or core this way:

“The generally plate-like mounting member which determines where the pipes are required to be fixed, in combination with the locking members and element which are used to grip and lock the pipe into position in relation to the plate.”

60. Mr Hill submitted his statement of the inventive concept orally (I have changed some of the tenses for consistency):

“Taking a fluid pipe or pipes extending outwardly of a wall and locking it or them into position against axial movement by means of a locking member provided in or on the mounting member and locking the locking member into position by tightening the locking element on the locking member.”

61. It is clear that the inventive concept is a development over both the known UK method of joining the pipe part directly to the inlet fittings of the appliance and the Continental Plate as explained in the specification. I would identify the inventive concept as follows (using the example of two pipes):

The idea of using a plate (mounting member) to install a fluid-using appliance by securing the plate to the wall, receiving the fluid pipes extending out of the wall through apertures in the plate and then using a locking means to lock the pipes to the plate.

62. The inventive concept did not include a specific type of locking means. A collet, the means referred to in the Patent, would not have been new to the skilled person. The specification contemplated the possibility of other locking means. Any suitable locking means known to the skilled person would have been treated as an alternative way of implementing the locking part of the inventive concept, but no particular locking means would have been seen as part of the inventive concept.
63. Three direct results are achieved by the inventive concept. First, the pipes are fixed to the plate in that they cannot be moved axially. Secondly, they are fixed in positions relative to each other. Thirdly, the pipes extend outwardly from the apertures of the plate.
64. The advantages consequent upon these results combine those of the Continental Plate with those of the standard UK practice. They are (i) the plate provides a rigid mounting for the appliance, (ii) the spacing between the pipes is set (if there are more than one), (iii) joining the pipes to the inlet fittings is easier due to no axial movement of the pipes and (iv) the pipes may be joined directly to the inlet fittings of the appliance, so the joint remains accessible.

Whether the Cassellie method is a variant within the scope of claim 1

Improver Question (1)

65. The first question is whether the Cassellie variant in use achieves substantially the same result in substantially the same way as the inventive concept.
66. All three direct results identified above are achieved using the Cassellie product. They are achieved in the same way, namely by securing the plate to the wall, passing the fluid pipes through the apertures of the plate and then using a locking means to lock the pipes to the plate.
67. Mr Hill submitted that Cassellie's system did not provide advantage (iv) because there would be an inaccessible joint (or joints) between the water pipe in the wall and the start of the intermediary pipe. He referred to the top of page 2 of the Patent, quoted in paragraph 17 above. A problem with the Continental Plate was that once installed there was an inaccessible joint between the end of the fluid pipe and the plate. Likewise, Mr Hill argued, using the Cassellie product would result in a similarly inaccessible joint in the wall. Therefore using the Cassellie product did not achieve the same result as the inventive concept.
68. I disagree. Whether using the inventive concept or the Cassellie product, there is no joint between the end of the fluid pipe and the plate. The disadvantage discussed at the top of page 2 of the Patent can apply to neither. The relevant advantage of the inventive concept is that the fluid pipe is joined directly to the appliance and it is this joint which advantageously remains accessible after the shower has been installed. That advantage also obtains using the Cassellie product.

69. Cassellie's argument raises the question whether an advantage consequent upon the use of an inventive concept is invariably a 'result' achieved by the inventive concept as contemplated by Lord Neuberger in *Actavis*, in particular at paragraph 66(i) and (ii), and if so whether the variant must achieve all the advantages of the inventive concept in substantial part. Given my finding that Cassellie has directed its argument to the wrong joint, I need take this no further.
70. The answer to the first *Improver* question is yes.

Improver Questions (2) and (3)

71. Mr Hill's arguments on equivalence were focussed on the first question. He did not submit that either the second or third question assisted his case on the scope of claim 1 if the answer to the first question was yes.

Conclusion on equivalence

72. Use of the Cassellie product to install a shower is a variant method falling within the scope of claim 1.

Conclusion

73. The Patent is valid and infringed.