



PATENTS ACT 1977

BETWEEN

Manitowoc Beverage Systems Limited

Claimant

and

Malachy Scott Sr
Gavin Scott
Malachy Scott Jr
Paul Scott

Defendants

PROCEEDINGS

Application under section 72 for
revocation of UK patent GB2471159

HEARING OFFICER

A C Howard

*Mr Geoffrey Pritchard of Three New Square, instructed by Bawden & Associates,
represented the Claimant*

*Ms Ashton Chantrielle of 8 New Square, instructed by F. R. Kelly represented the
Defendants*

Hearing date: 13 November 2013

DECISION

Introduction

- 1 This decision relates to an application under section 72(1) of the Patent Act 1977 by Manitowoc Beverage Systems Ltd (“the claimant”) for revocation of UK patent GB2471159B (“the patent”) in the names of Malachy Scott Sr, Gavin Scott, Malachy Scott Jr and Paul Scott (“the defendants”). The patent relates to a system for cooling and dispensing beverages in which the beverage is cooled en route to a dispensing font and the font is cooled to create a decorative iced effect. The patent was granted with effect from 7 March 2012 and has a claim to priority from European patent application EP09174723 filed on 30 October 2009.
- 2 In their statement of case filed on 5 November 2012, the claimant sets out four main grounds for revocation of the patent, namely that the patent lacks novelty with respect to the disclosure in various technical brochures and patent specifications, that the claims lack novelty in view of prior use, that the claims are obvious in view of the common general knowledge and/or the disclosure in various patent specifications, and, finally, that the invention is not disclosed clearly and completely

enough for it to be performed by a person skilled in the art. The application for revocation and the statement of grounds were accompanied by copies of the cited documents and a video recording of alleged prior use.

- 3 The defendants filed a counterstatement on 18 January 2013 denying all of the grounds. In the subsequent rounds of evidence, witness statements were received from Mr John Payne, a Technical Support Manager employed by the claimant, and from Mr Malachy Scott Jr for the defendants, together with the various supporting documents referred to therein.
- 4 The matter came before me to decide at a hearing held on 13 November 2013, at which Mr Payne and Mr Scott Jr were called for cross-examination. At the beginning of the hearing, Mr Pritchard explained that he wished to limit the number of prior art documents relied upon for the sake of brevity and asked for permission to amend the pleaded case such that one of the prior art documents, GB2443899 (“’899”), which had been pleaded as an obviousness reference, could also be pleaded as an anticipatory reference, i.e. for novelty. Ms Chantrielle objected to this on the basis of the late notification and the consequent lack of time to prepare the defendants’ arguments. At the hearing I said that I would allow both sides to address me on the basis that the amendment sought by Mr Pritchard was admitted and that I would deal with the question of admission in my written decision.

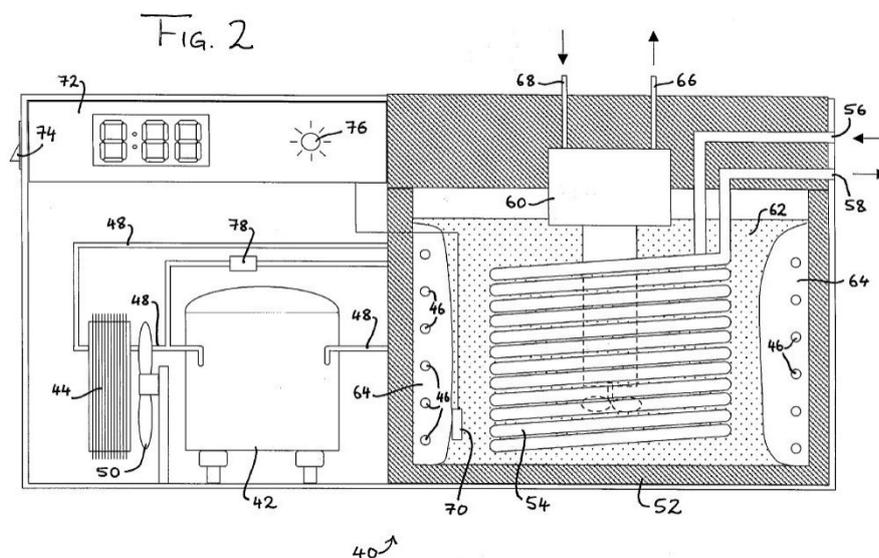
Amended pleadings

- 5 Mr Pritchard’s submission is that although ‘899 has been relied upon as an obviousness reference in the pleaded case, it is clear from the witness statements of Mr Payne and Mr Scott that the parties have approached it in a very general sense. For example, Mr Payne refers to ‘899 in his witness statement by saying that figure 8 and the associated text “clearly describe each and every feature” of the patent. He submits that both sides have approached the relevance of ‘899 by considering whether various integers of the patent are present in it or not, which in effect is what is required in the assessment of novelty, and so the defendants would not be prejudiced by the late amendment. Had it been the other way around, that is if ‘899 was being relied upon as an obviousness reference instead of novelty, then that could potentially have required the introduction and analysis of new evidence at a very late stage in proceedings, for example with regard to the common general knowledge, which would clearly prejudice the defendants’ case. In Mr Pritchard’s submission, the amendment is a matter of housekeeping or formality.
- 6 Ms Chantrielle’s submission is that the claimant had plenty of opportunity to amend the pleaded case before the days leading up to the hearing and that therefore I should not allow it. I have some sympathy with the defendants’ position on this, but I recognise too that it is only in the days leading up to a hearing that minds are focussed on the key lines of attack and defence in a case. As Mr Pritchard pointed out in his arguments, the comptroller does have discretion to allow such amendments provided that he takes into account the prejudice to the other party, that the other side has had a proper chance to deal with every issue and to adduce any evidence they so wish, and that the party seeking amendment has sought the amendment in good faith and with due diligence. Ms Chantrielle accepts that the evidence submitted is a little messy on both sides, and I believe this reflects to some extent on the lack of focus in the pleadings. However, on balance, I do not consider that the defendants can be said to be disadvantaged by this late amendment since

they have been fully aware of the content of the '899 specification from the outset of these proceedings and do not need to adduce any new evidence in their case against it. In assessing whether an invention involves an inventive step or not, it is a necessary requirement to consider what, if any, differences exist between any earlier disclosure and the invention; if there are none then the invention lacks novelty. So, as Mr Pritchard quite rightly submits, an assessment of inventive step must always involve what amounts to an assessment of novelty before one can consider the degree of invention involved in the differences. Insofar as good faith and due diligence in seeking the late amendment is concerned, I have already said that it is not unusual for the merits of a case to become clearer in the days leading up to a hearing and I am satisfied that both the amendment in respect of '899 and the further limit in the number of prior art documents relied upon are made in an attempt to have the case dealt with expeditiously and fairly. I will allow the amendment to the pleaded case in respect of '899.

The patent

- 7 The patent relates to a system for cooling and dispensing beverages in which the beverage is cooled en route to a dispensing font and the font is cooled to create a decorative iced effect. The specification describes how in recent years it has become popular to chill the font on which a dispensing tap is mounted and through which the beverage flows. By chilling the exterior of this font to sub-zero temperatures, a layer of ice can be formed from atmospheric humidity on the outside of the font. This is said to have two main effects - it provides a certain refrigerating effect to the beverage just before it is dispensed (although not enough to replace a dedicated cold room or shelf cooler during periods of high throughput) and also has a cosmetic/marketing effect. The invention is concerned with providing a single cooling system for cooling both the beverage and the font. It consists of a single tank system containing a sub-zero coolant to cool the beverage and the same sub-zero coolant to frost the font. The cooling system allows an ice bank to grow within the tank to act as a low temperature thermal mass for cooling beverage flowing in a length of coiled pipe, or python, immersed in the coolant. The invention is best illustrated by reference to figure 2 of the specification as reproduced below:



- 8 Figure 2 shows a cooling system comprising a compressor 42, a condenser 44 and an evaporator 46 all interconnected by fluid delivery conduits 48 for delivering refrigerant through the system. The evaporator is positioned at the side of the walls of insulated bath 52, the bath also containing the beverage python 54 with an inlet 58 and an outlet 56 for the beverage to pass through. An agitator pump 60 is provided to agitate the liquid sub-zero coolant 62 within the bath and to pump coolant from the bath to the dispensing font through outlet 66 and back through inlet 68. A temperature probe 70 is positioned within the bath to control the temperature of the sub-zero coolant 62 and the thickness of the ice bank 64. The sub-zero coolant used is said to be a freezing point depressant (commonly known as anti-freeze) sold under the trade name InnCool™, but mixed to provide a glycol concentration of 10% rather than the 7-8% as recommended by the manufacturer.
- 9 The patent has a single independent claim, claim 1, which reads as follows:
1. A cooler comprising a tank for containing a sub-zero coolant, a heat exchanger inside the tank which in use forms a bank of frozen, sub-zero coolant on the heat exchanger, the tank also containing coolant in liquid form in use, a beverage coil immersed in the liquid coolant for routing and chilling a beverage, wherein the liquid coolant provides a reservoir for a coolant circuit to a font to provide an ice tower, and further comprising pumping means to pump the sub-zero fluid through said coolant to a font.

Grounds for revocation

- 10 Revocation of the patent is sought on the grounds that the invention lacks novelty and/or inventive step with regard to:
- a) the Ecco Blizzard 3 glycol cooler described in the Celli S.p.A. webpage dated 9 January 2009 (“Ecco”);
 - b) UK patent GB2443899 (“899”), published 21 May 2008;
 - c) prior use by the defendants of the TS11 Inncool™ cooler in October or November 2009 (“Inncool”), as described in the News section of the defendants’ website;
- 11 Revocation on the grounds of prior use of Inncool in November 2009 relies in part on the claimant being able to show that the patent is not entitled to claim priority from EP09174723. Although the claimant initially sought revocation of the patent on the ground that the invention of claim 7 of the patent was not disclosed clearly and completely enough for it to be performed by a person skilled in the art, this ground was not addressed by Mr Pritchard at the hearing or in his skeleton arguments.

The law

- 12 Section 72(1)(a) of the Act gives the comptroller power to revoke a patent on application by another person if the invention is not a patentable invention. Section 72(1)(c) provides a similar power where the specification of the patent does not disclose an invention clearly enough and completely enough for it to be performed by a person skilled in the art. An invention is patentable if it meets the conditions set out in section 1(1), namely that the invention is new, it involves an inventive step, it is capable of industrial application and is not excluded.

- 13 Sections 2 and 3 of the Act define what is meant by “new” and “inventive step” respectively. Section 2 states that an invention shall be taken to be new if it does not form part of the state of the art; it goes on to define the state of the art as comprising anything made available to the public before the priority date of the invention. Section 3 states that an invention shall be taken to involve an inventive step if it is not obvious to a person skilled in the art. Finally, section 125 of the Act specifies that an invention shall be taken to be defined by the claims as interpreted by the description and any drawings in the patent specification.
- 14 There is no issue between the parties as to the applicable law.

Argument and analysis

- 15 I shall first deal with the grounds for revocation based on the Ecco and ‘899 documents.

a) Novelty

- 16 As was explained by the House of Lords in *Synthon BV v SmithKline Beecham*¹, in order for an item of prior art to deprive a patent claim of novelty, two requirements must be met. First, the prior art must disclose subject-matter which, when performed, must necessarily infringe that claim. Second, the prior art must disclose that subject-matter sufficiently to enable a skilled addressee to perform it.
- 17 The first step in assessing whether an invention lacks novelty is to construe the meaning of the claims. The correct principles I must apply are set out in *Kirin Amgen*² and again in *Virgin v Premium*³, namely that the task is to determine what a person skilled in the art would have understood the patentee to have been using the language of the claim to mean. The wording of the claims should be construed purposively and interpreted in the light of the description and the drawings. In the present case, both sides accept that the claims of the patent are self-explanatory and require little effort to construe.
- 18 The ‘899 document was published before the priority date of the patent. It describes various improvements in dispensing and cooling beverages which employ two or more coolers and complex systems of plate heat exchangers and bypass valves to control the temperature of the beer. A further embodiment of the invention, shown in figure 8 of the drawings, has a single cooler and a coolant re-circulation loop which acts to cool the beverage supply line leading to a font and causes condensation or ice to form on the outside of the font. The embodiment in figure 8 is the one primarily relied upon by the claimant to attack the novelty of the patent, and the drawing is reproduced below:

¹ *Synthon BV v SmithKline Beecham plc* [2005] UKHL 59

² *Kirin Amgen Inc v Hoechst Marion Roussel* [2004] UKHL 46

³ *Virgin Aircraft Airways Ltd v Premium Aircraft Interiors UK Ltd* [2010] RPC 8

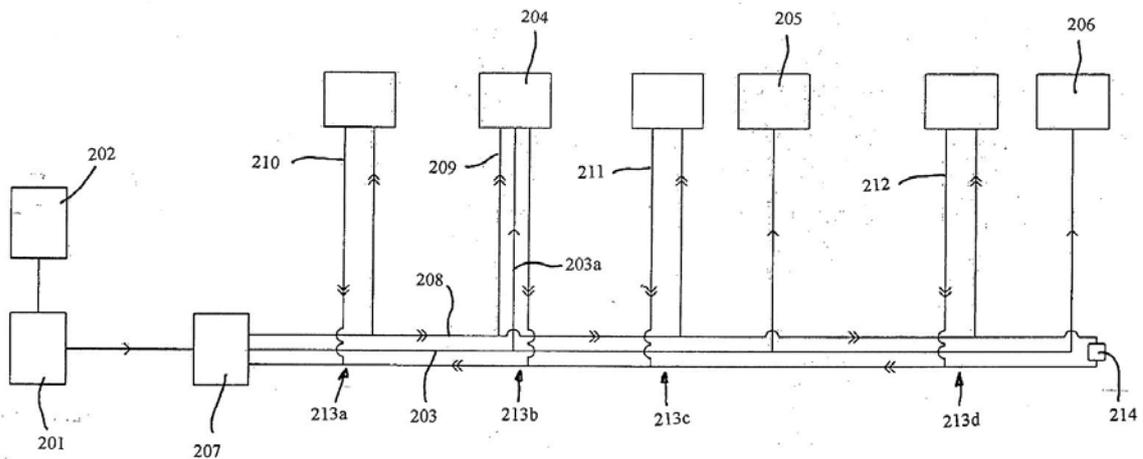


FIGURE 8

- 19 The beverage dispensing system has a beverage source 201 (e.g. a beer keg) connected to a source of pressurised gas 202 to drive beer through a supply line 203 to a plurality of beer outlets 204, 205 and 206. The supply line 203 passes through a cooler 207 containing water, a glycol/water mixture or a binary ice for cooling the beverage to a desired temperature. The description suggests that keg 201 and cooler 207 are normally located in a cellar or other temperature controlled environment remote from the outlets. The cooler 207 supplies a coolant re-circulation loop 208 that runs alongside the beverage supply line 203 and within an insulated python running from the cellar to the bar area where the outlets 204, 205, 206 are located. The coolant re-circulation loop acts to prevent the beer from warming up between the cellar area and the bar area. The re-circulation loop is connected to a number of branch loops leading to the beer outlets which act to prevent beer warming up in the portion of the supply line between the python and the outlet, and can also cause condensation and/or ice to form on the outside of the outlet. The condensation and/or ice is said to cause an interesting visual effect and to provide additional cooling of the beverage.
- 20 Claim 1 of the patent requires the cooler to have the following components:
- a tank containing sub-zero coolant,
 - a heat exchanger inside the tank to cool the sub-zero fluid such that an ice bank is formed on and around the heat exchanger,
 - a beverage coil immersed in the sub-zero coolant,
 - a pump for pumping sub-zero coolant from the tank to a font in order to provide an ice tower.
- 21 Cooler 207 of '899 is said to contain a sub-zero fluid (i.e. a glycol/water mixture) for cooling beer within a beer supply line to the desired temperature and to provide a source of coolant for creating condensation and/or ice on a font. '899 does not say whether the cooler 207 creates an ice bank around a heat exchanger nor does it say whether the cooler contains a pump for pumping the sub-zero fluid to the font. Although '899 does say that a beverage supply line passes through cooler 207, it does not specifically disclose a beverage coil immersed in the sub-zero coolant. Mr Pritchard submits that these differences between the claimed invention and the cooler in figure 8 of '899 are either implicitly present or are inherently disclosed with reference to the coolers described earlier in the document. Ms Chantrielle argues that the cooler shown in figure 8 of '899 is completely different to the coolers

described earlier in the document and that it is not possible to infer or imply anything from the earlier teaching. I note that the description of '899 says that figure 8 "is a schematic view of another dispense system not (my emphasis) according to the invention", which tends to support Ms Chantrielle's argument. She also argues that while figure 8 of '899 teaches a system in which a single cooler is located in the cellar and from which coolant can be circulated to other points throughout the system (including an ice font), the document does not teach the skilled reader how to create a single tank cooling system having a single coolant for cooling both beer and ice font. I shall deal with each one of these points next.

- 22 Mr Pritchard submits that since '899 makes clear that the beer outlets are higher than the cooling tank and that the coolant has to be raised from the cellar to the bar area, this implicitly requires the use of a pump for pumping sub-zero coolant as specified by claim 1 of the patent. I agree with him that a circulation pump would be needed to raise the coolant from the cellar to the bar area, but this pump could be provided anywhere in the coolant circulation line and not necessarily within the cooler itself as required by claim 1. In figure 1, the sub-zero coolant is said to flow between the plate heat exchanger and the glycol cooler in a re-circulation loop, but it does not show where the pump is located. Again, there is no pump shown in the sub-zero coolant recirculation loop of figure 2. In figure 3-7, which show various features of the beverage dispense system located near the dispense point, the glycol cooler does have an integral pump: it has a tank containing a mixture of glycol/water coolant, an impeller driven by a motor for circulating the coolant within the tank, an evaporator coil of a refrigeration unit for controlling the temperature of the coolant and a pump, driven by the motor, that passes coolant from the cooler into the coolant supply line leading to the plate heat exchangers. The question I have to answer is whether the teaching of '899 would lead the skilled person to use or substitute the glycol cooler of figure 3, which has an integral pump in the way required by claim 1, for the cooler in figure 8.
- 23 All of the glycol coolers shown in figures 1-7 are intended to be located in the bar area and provide a source of sub-zero coolant both to cool the beer before it is dispensed and to create a frost effect on the font. The cooler 207 in figure 8 is different in that it is located in a cellar area or other temperature controlled environment remote from the outlet, which, as Mr Pritchard quite rightly submits, makes the need for a circulation pump even more of a requirement. Cooler 207 is also different from the other glycol coolers in '899 in that it directly cools the beer flowing in a beer supply line as it passes through it, which none of the earlier glycol coolers suggest. The nearest one gets to this is in glycol cooler 8 shown in figure 2, in which the glycol cooler and plate heat exchanger plate are combined in a single unit. Here the plate heat exchanger comprises a chamber 22 positioned on top of the tank through which the beer supply line passes. Cooling of the beer is achieved by pumping coolant from the tank into the chamber and around the beer supply line as required, e.g. when beer is dispensed or in response to the temperature of the beer. Glycol cooler 8 does not have a beer supply line running through it, and so is quite different to the one proposed in figure 8.
- 24 Taking all of this into account, I disagree with Mr Pritchard's submission that '899 discloses a number of different specific embodiments that each build on the disclosure described previously. This may well be true for the embodiments shown in figures 1-7, but the cooler shown in figure 8 is intended to serve a very different purpose to the glycol coolers described beforehand and there is nothing to suggest

that the coolers are in any way interchangeable. The description also states quite clearly that figure 8 is not according to the invention. The conclusion I draw from this is that there is no implicit or inherent disclosure of cooler 207 having an integral pump to pump sub-zero coolant to the font as required by claim 1.

- 25 The second difference between the claimed invention and cooler 207 is that '899 does not say whether the cooler has a beverage coil immersed in the sub-zero coolant: as I have already noted above, '899 merely says that beer is cooled as it flows through a beer supply line passing through cooler 207. This difference is a semantic one: the function of the two beer routing and cooling mechanisms is exactly the same, and the word "coil" merely suggests an arbitrary length of beer supply line.
- 26 The third difference between the claimed invention and cooler 207 is the specific requirement for the cooler to have a heat exchanger which in use forms a bank of frozen, sub-zero coolant on the heat exchanger. Mr Pritchard addressed the point about ice bank formation within the cooler by reference to the other coolers described in the document, some of which explicitly disclose the creation of a sub-zero ice bank within a glycol/water coolant. I have already concluded that it is not necessarily possible to take elements of the glycol coolers disclosed in figures 1-7 and import them into the cooler of figure 8. However, I find that there is sufficient teaching in '899 with regard to the formation of ice banks in glycol coolers and the consequent benefit of running glycol coolers with an ice bank, e.g. to provide a reserve cooling capacity that can be used to maintain the temperature of the coolant during periods of high demand, for it to be implicit that cooler 207 could and would be operated in this way.
- 27 The final point to consider on '899 is that made by Ms Chantrielle regarding whether figure 8 teaches the skilled reader how to create a single tank cooling system having a single coolant for cooling beer and for icing a font. This, it seems, is the key feature of the present invention, allowing the previous two tank solution to be replaced by a single tank requiring less physical space, fewer parts and lower cost. The defendants accept that figure 8 discloses a single cooler solution for cooling beer and icing a font, but they argue that the associated description could, and in fact does, teach a two tank solution. The relevant passages from '899 are at lines 21 of page 25 to line 28 of the following page, which say that "a beer supply line 203 passes through a cooler 207 which may contain water, glycol/water mixture or a binary ice.... for cooling the beer to the desired temperature" and "the cooler 207 supplies a coolant re-circulation loop 208 contained within the beverage supply line 203 in an insulated python that extends from the cellar to the bar area" which "prevents the beverage warming up between the cellar and the bar area" and which may also be used "to cause condensation and/or ice to form on the outside of the outlet".
- 28 I find Ms Chantrielle's argument very compelling. The description does not say or even suggest that the same coolant is being used for cooling the beer and for icing the font. More importantly, it would seem that the beer can be cooled by a number of different coolants, i.e. water, a glycol/water mixture or a binary ice, where only one of which (the glycol/water mixture) would be suitable to provide a sufficiently cooled sub-zero fluid to form an ice tower. I agree with the defendants that '899 does not clearly teach the skilled person a single tank, single coolant cooler for cooling beer and icing a font.

29 Taking all of these differences between '899 and claim 1 of the invention into account, I find that there is no teaching in '899 of a single tank glycol cooler which uses the same sub-zero coolant to cool beer and to ice a font, nor does it clearly teach a cooler having an integral pump for pumping sub-zero coolant to the font. Contrary to Mr Pritchard's submission, '899 does not, on its own, challenge the validity the claimed invention. I shall address the relevance of '899 to inventive step later in my decision.

30 Turning next to the Ecco disclosure. This is a news article published on the Celli S.p.A. website before the priority date of the patent relating to a new series of glycol coolers. The disclosure is very brief, so rather than paraphrasing what it says, it is as easy to copy the text of it below:

*"1) - Ice effect on towers
2) - Extra cold beer
3) - Ice bank (cooling reserve).
The available configurations will be;*

*3 upright undercounter units with 30/50/75 l tank.
2 carts, 50/75 l.*

Numerous advantages are to be gained with this series, since a single cooler can perform three functions and there is no longer a need to have several units arranged in cascade:

- Greater available space*
- Lower purchase costs*
- Lower energy consumption*
- Shorter installation and maintenance times and thus reduced operating costs.*

BLIZZARD/3 is equipped with a single evaporator, a single tank and agitator with pump. It is therefore simple to use and can be fitted with the same coils as used in the GEO 30/50/75 models for beer at standard serving temperature and a longer coil for extra cold beer.

The 300 l/h glycol recirculation pump, made of brass, is situated under the tank and can deliver glycol and enable the ice effect to be obtained even at considerable distances. The glycol passes through the python, which must be adequately insulated (recommended minimum insulation 19 mm.), eventually arriving at the tower so as to generate the ice effect and keep the beer EXTRA COLD along the way. The presence of an agitator and pump allows two pythons to be used to prevent the beer from freezing when the towers are a considerable distance away and the glycol for frosting them is at temperatures below -5°C.

The thermostat is digital, with dual control and display for viewing the temperatures in the tank and of the recirculating glycol.

A special container assures a reserve supply of glycol and includes a level sensor that will automatically cause the pump to stop in the event that the fluid runs out, thus preventing damage to the pump itself."

31 Mr Pritchard submits that Ecco has all the features of the claimed invention: it has a single tank of sub-zero glycol coolant cooled to a temperature of -5°C by a single evaporator; the cooler can create an ice bank to provide a cooling reserve, it cools beer and it provides a source of coolant for frosting a tower; it has a recirculation pump located under the tank and it has an agitator.

- 32 The defendants' position is that the phrase "single tank" is misleading if taken to imply that there is only a single supply of sub-zero coolant which forms an ice bank within a tank and, in its liquid form, is pumped from the tank to ice a font. They point to the description of the digital thermostat being used to measure the temperatures in the tank and the recirculating glycol, and argue that the different temperatures being measured are not the temperature of the same liquid at two different points in a circuit but rather the temperatures within two separate and isolated liquid circuits. Their contention is that while Ecco talks of a "single tank" cooler, the beer is actually cooled by a conventional water-based ice bank cooler, and the glycol cooling system, which circulates glycol to the font in a separate line alongside the python, is completely separate. In their counterstatement, the defendants referred to the full product specification sheet for the Ecco Blizzard 3 cooler (exhibit 1 of the counterstatement) dated February 2008, which refers to water tank capacity, a glycol ice tank, an ice bank and two temperature probes (tower recirculation and ice bank tank). At the hearing, Mr Pritchard argued that even if the disclosure in the full product specification relates to the same product as in Ecco, which the claimant disputes, it cannot be permissible to mosaic documents in a way which imports the teaching of one document into another unless there is very clear direction to do so. I agree with this argument up to a point: if the teaching of Ecco is open to interpretation and it is possible to envisage an alternative configuration of cooler from its own words, then if this alternative configuration happens to be the one disclosed in the full product specification then this does not make it any less relevant. What I will do is to consider what Ecco teaches as a standalone document.
- 33 I can find nothing in Ecco to suggest either that an ice bank is formed within the glycol coolant or that a beer supply line is immersed in the glycol coolant for cooling beer. The only disclosure of beer being cooled by the glycol coolant is the cooling that occurs "when the glycol passes through the python.....and keep the beer EXTRA COLD along the way". The alternative interpretation of the Ecco disclosure proposed by the defendant may well be correct, but one cannot read this directly from Ecco without reference to the full product specification. While Ecco may well have scattered within it most, if not all, of the keywords and features of the claimed invention, I find that this falls short of providing a clear disclosure of the cooler set out in claim 1 of the patent.

b) Inventive step

- 34 Both sides agree that it is convenient in this case to address the question of inventive step by using the structured approach explained by the Court of Appeal in *Pozzoli*⁴. This involves the following steps:
- 1a *Identify the notional "person skilled in the art"*
 - 1b *Identify the relevant common general knowledge of that person;*
 - 2 *Identify the inventive concept of the claim in question or if that cannot 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;*
 - 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?*

⁴ *Pozzoli S.p.A. v BDMO SA* [2007] FSR 37

- 35 Both sides agree that the notional person skilled in the art would be someone with similar skills and experience to the two witnesses in this case, Mr Payne and Mr Scott Jr, namely someone with extensive involvement in research, development and deployment of beer dispensing and cooling systems. I shall say more about the evidence of the two witnesses and their cross-examination at the hearing a little later in my decision.
- 36 As far as the common general knowledge of the skilled person is concerned, the two sides agree that the following features were known at the priority date of the patent:
- a) ice fonts for decorative effect, and the use of a glycol/water mixture to provide sufficiently cooled fluid to form the iced effect.
 - b) ice bank coolers, in which a bank of ice is allowed to grow around and out of a refrigeration plate in a tank of glycol/water. The thickness of the ice bank could be controlled by measuring the temperature of the glycol/water.
- 37 In her skeleton argument, Ms Chantrielle suggests that it was also part of the common general knowledge to use a 7% propylene glycol concentration for ice bank coolers where the temperature of the liquid coolant is at -2°C , to use a 30-50% concentration where the temperature of the liquid coolant had to achieve -5°C or lower, that it was necessary to use pumps to circulate the coolant to wherever it may be required and that in order to achieve both the cooling of the beverage and the frosting of the font, a two tank system or two separate coolers was required. Some of this, she says, is supported by the witness testimony of Mr Scott Jr and the remainder is set out in the explanation of the background art given in the patent itself.
- 38 It is convenient at this point to discuss the role of Mr Payne and Mr Scott Jr as witnesses of fact and of their cross-examination at the hearing. As Mr Pritchard reminded me, neither of the witnesses are formally called as expert witnesses in these proceedings (in the sense that they are independent of the parties or the underlying events), but the two can most certainly be regarded as experts in the field in a more general sense and to be persons skilled in the relevant art of the present invention. As such, I must approach their testimony with a degree of caution, and not be drawn into accepting one witness opinion over another without corroboration from elsewhere. Although the two witnesses were cross-examined at length, on reflection I feel that their testimony provides very little assistance in this case. This is in no way a reflection of the expertise of the individuals, who are rightly acknowledged as leading innovators in this field of technology, nor too of the answers that they provided. Both individuals responded well to the pressure of cross-examination and appeared to provide honest answers to the questions posed. However, a lot of the questioning involved the witnesses explaining what they understood a particular word or phrase in a document to mean, which was inviting them to offer an opinion on a matter in which they could not be genuinely objective. Where I did find their testimony helpful was with regard to their explanation of the common general knowledge at the priority date of the patent. As might be expected, there was some disagreement between them even on this, so I shall only accept as fact what can be corroborated elsewhere.
- 39 Returning to the question of the common general knowledge of the person skilled in the art, I cannot find support for Mr Scott's assertion that it was known to use particular concentrations of propylene glycol to reach particular temperatures, but there is certainly evidence to corroborate his view that pumps could be used to

circulate a glycol coolant in a beverage system. The assertion that the frosting of a font required a two bank system is, in my view, quite simply a statement of the prior art and not an indication of the common general knowledge.

- 40 The next two steps in the consideration of inventive step is to identify the inventive concept of the claim in question and to 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. As I have noted above, these steps are also necessary to some extent in considering the question of novelty, and so this should be a straightforward exercise insofar as the ‘899 and Ecco documents are concerned. I shall deal with each separately.
- 41 The inventive concept of claim 1 is a cooler having a single source of sub-zero coolant for cooling beer and to ice a font. The cooler achieves this by allowing an ice bank to form in the sub-zero coolant to provide the necessary reserve cooling capacity needed for cooling beer, while maintaining some of the coolant in a liquid state for pumping around a recirculation loop linked to a dispense font so as to create an ice effect.
- 42 The differences between the inventive concept of claim 1 and ‘899 are the single source of coolant for cooling beer and icing a font and the integral pump for pumping coolant to the font. Mr Pritchard’s argument was that the skilled reader would find the pump to be inherently disclosed in ‘899, but I have already found that not to be the case. The evidence before me shows that it was part of the common general knowledge of the skilled person that pumps could be used to circulate glycol coolant in a beverage system. On this basis, I consider that a skilled person would regard the positioning of the pump within the cooler to be an obvious, if not the only, location.
- 43 As for the single source of coolant for cooling beer and icing a font, I find that there is nothing in the common general knowledge of the skilled person to point the way towards how this might be achieved or why it might be desirable to do so. In hindsight it is of course obvious to say that one would wish to rationalise the two cooling systems for reasons of cost and efficiency, but there is nothing in the common general knowledge of the skilled person at the priority date of the patent that would lead to such a modification of the beverage dispense systems in ‘899. As a consequence, I find that claim 1 of the patent is not rendered obvious by the disclosure in ‘899.
- 44 Turning now to the Ecco disclosure, this does not disclose the cooling of a beer coil within the same tank of sub-zero coolant as is used to ice a font. There is a suggestion that an ice bank cooler is employed, which the skilled person would know from common general knowledge could be used in cooling beer, and the skilled person would know, again from the common general knowledge, that ice banks can be formed in glycol coolers. So, at best, the skilled person would know from Ecco that there is a glycol ice bank cooler for cooling beer and a separate source of cooled glycol for icing the font. However, I can find nothing that would lead the skilled person to consider combining the two coolers disclosed in Ecco. As a consequence, I find that claim 1 of the patent is not rendered obvious by the disclosure in Ecco.

c) Prior use of Inncool™

- 45 The claimant alleges that the patent lacks novelty over the commercial supply of the defendants' TS11 Inncool cooler to Diageo Irl in October and November 2009. The Inncool cooler is the subject of the present patent, and it is described in the News section of the defendants' own website as follows:

*“After 6 months of designing, testing and perfecting the MLH TS11 InnCool Ice Cooler, MLH supplied the first batch to Diageo Irl in October 2009. MLH have applied for a patent on this single bath dual functionality cooler. **The first of its kind**, it has a single ice bank and subzero fluid bath cooler system, and a defrost heat exchange system. The single bath cooler can ice the tower and and chill the product from the single bath system. **Saving energy** as normally two coolers and compressors would be required or a two bath system to perform the same function. The MLH TS11 InnCool Ice Cooler also has a defrost mechanism to avoid the freezing of liquids such as water and detergents that are used to clean the product coils.”*

- 46 The claimant's argument is that Inncool was made publicly available before 30 October 2009, i.e. the earliest possible priority date of the patent. They also claim that if the patent is not entitled to its October priority date then the further commercial supply of the Inncool cooler before the filing date of the patent would invalidate it on the grounds of prior use. I shall address the question of the priority date of the patent before considering the evidence of prior use.
- 47 The patent claims a priority date of 30 October 2009 from European Patent application EP09174723 (“the priority document”). There are two attacks on priority. The first attack is that claim 1 loses priority because the priority document fails to disclose a pumping means to pump the sub-zero fluid through the coolant circuit. This is clearly shown in figure 2 of the patent with reference to inlet 68 and outlet 66 of the agitator pump 60, but the claimant says that there is no such disclosure or even a suggestion of a pump for pumping a sub-zero fluid through a cooling circuit to a font in the priority document. The claimant's second attack on priority is that the scope of claim 1 is broader than the disclosure in the priority document in a number of areas, for example by not specifying the presence of a liquid temperature probe in claim 1, by not saying that that the liquid coolant is used as a reservoir for a coolant circuit to a font in claim 1, and by not saying that the agitator pump has the effect of agitating the fluid coolant against the coolant bank in claim 1.
- 48 The priority document has a single figure and three pages of description. The figure is essentially a hand-drawn version of figure 2 of the patent but omits the inlet 68 and outlet 66. In the accompanying description, the agitator pump 7 is said to agitate the sub-zero fluid against the frozen coolant bank, and also pump the sub-zero fluid to the dispense font in order to create an ice tower effect. On the basis of this passage of the description, I am satisfied that there is explicit disclosure in the priority document for an inlet and outlet of sub-zero coolant from the pump to the dispense font for the purpose of creating an ice effect.
- 49 With regard to the claimant's second attack on priority and the alleged omission from claim 1 (and others) of certain features of the invention described in the priority document, I do not consider claim 1 as granted to be unreasonably broadly cast (at least relative to the disclosure of the priority document), and it appears to me that all the features of the invention as set out in that claim are fully supported and sufficiently described by the hand-drawn figure and the accompanying detailed

description. The inconsistency between the freezing point of the coolant in claim 3 and that in the priority document is clearly the result of a typographical error (“above the freezing point” in claim 3 as granted should read “below the freezing point”). The preferred features in claims 4-9 are also all supported by the priority document, although the particular operating parameters of the cooler set out in claims 10 and 11 are not. Taking all of this into account, in my view there is no question that the invention set out in claims 1-9 of the patent are entitled to a priority date of 30 October 2009. That being the case, the allegation of prior use in respect of the commercial supply of Inncool before the filing date of the patent falls away.

- 50 Returning to the question of the prior use of the Inncool cooler, the evidence presented by both sides can be summarised as follows:
- i) the defendants’ own website which states that Inncool was provided to Diageo Irl in October 2009;
 - ii) witness statements from Mr Scott Jr and Mr Payne which say that Diageo had asked all of its suppliers to provide a single tank beer cooler that could also perform the ice tower feature before the priority date of the patent;
 - iii) witness statement from Mr Scott Jr saying that a prototype of Inncool was prepared on its own premises and a number of these were supplied to Diageo as beta test units. The units were riveted closed and security sealed.
- 51 The claimant requested specific disclosure of various documents in the defendants’ possession to support its case. A number of delivery notes and a license agreement concerning the manufacture and supply of Inncool after the priority date were provided, together with an email from the defendant’s patent attorney confirming the lack of documentation concerning the development and testing of the prototype unit. The email does say that beta test units were installed in two pubs before the priority date of the patent, that these units were checked at the end of the test period and it was confirmed that the seals and rivets remained intact.
- 52 The claimant argues that there appears to be no evidence of any confidentiality undertaking on the part of Diageo during the beta testing of Inncool and therefore nothing to suggest that Diageo were prevented from examining machines in detail, which they say is the invariable practice of Diageo. They say that the defendants could have provided the evidence if they so wished, for example by way of witness statements from those involved in the testing or further explanation of how the units were riveted shut, but chose not to do so. They argue that while they accept the defendants’ argument that the burden of proof is clearly on them to prove by evidence that the invention was in the public domain before the patent, the fact that the defendants had an opportunity to prove its case and chose not to do so then the burden shifts to the defendants. They argue that I must assume that the test units were delivered to Diageo without any obligation of confidence and were fully accessible, i.e. there should be a presumption that supply of the beta test units to Diageo would have allowed a skilled person to ascertain the features of the claimed invention.
- 53 The defendants explain that the beta testing arrangement involved Mr Scott installing the prototype cooler in the two pubs. The prototype cooler was in the form of a small box, it was not to be touched during the testing and at all times was riveted closed and security sealed. During the test the coolers were inspected every week. At the end of the test, the security seals and rivets had remained intact and therefore the

prototype had not been touched or tampered with. Ms Chantrielle referred me to the case law in *Merrell Dow*⁵ and *Lux Traffic Controls*⁶ and argued that the testing of the prototype prior to the priority date did not constitute an enabling disclosure of the claimed invention.

- 54 The defendants admit that the prototype was used in public before the priority date of the patent and that it was not in their control at all material times. I have no doubt that the nature of the invention defined by claim 1 is such that a skilled person could quite easily establish its features by simply inspecting the workings of the apparatus.
- 55 In these circumstances, evidence that the invention appeared not to have been observed by anyone is irrelevant - the law is quite clear that the mere making available of information about an invention to even one person without any obligation of confidentiality is sufficient for it to invalidate a later application regardless of whether anyone actually accessed that information. The key question is therefore, notwithstanding that they had not in fact done so, was Diageo free in equity and law to access and use the information?
- 56 The claimant says, and I agree, that the defendant has to prove that the prototype was supplied under an obligation of confidentiality in order to succeed with their argument. I also agree that there is no evidence to support the conclusion that there was a written confidentiality agreement. However that is not the end of the story. The coolers were in the custody of Diageo only for the purpose of the trial and were returned at the end. It is reasonable to assume that they remained the defendants' property at all times. They were riveted closed and security sealed. For Diageo to have accessed information about the invention they would have had to remove the rivets, which would presumably have involved at least some measure of destructive force, and break the seal. I believe that any reasonable person presented with this situation would understand that they were not at liberty to open up the apparatus to enable inspection of the inner workings. There was accordingly in my view a clear implicit obligation of confidentiality. The supply of the prototype to Diageo for beta-testing before the priority date was therefore not novelty-destroying.

Conclusion and Decision

- 57 I have found that the invention set out in claim 1 of the patent is novel and comprises an inventive step over the cited prior art. I have also found that the invention was not made available to the public before the priority date of the patent. The claimant's case for revocation of the patent has therefore failed.

Costs

- 58 The defendant has asked for an award of costs in their favour and ask that I should make an award above the comptroller's standard scale on the basis of the prior art initially cited by the claimant but not ultimately relied upon.
- 59 I am at liberty to depart from the scale if I see fit to do so. However the existence of the comptroller's scale and the certainty this gives to litigants in terms of controlling their exposure to costs is an important factor in providing access to justice before this tribunal. In order to avoid undermining this objective, departure from the comptroller's

⁵ *Merrell Dow v Norton* [1996] RPC 76 HL

⁶ *Lux Traffic Controls Ltd v Pike Signals* [1993] RPC 107

scale should therefore only be contemplated where there has been a serious case of abuse or other undesirable behaviour. I do not consider that such circumstances exist here and it follows that a scale award is appropriate. I accordingly order that the claimant pays the defendants a sum of £3000, the deadline for payment being seven days after the expiry of the period for appeal.

Appeal

60 Any appeal must be lodged within 28 days.

A C Howard

Divisional Director, acting for the Comptroller