



BL O/206/05

21st July 2005

PATENTS ACT 1977

BETWEEN

Dr. Alan James Clegg

Claimant

and

Amcor Flexibles UK Limited

Defendant

PROCEEDINGS

Application under Sections 13 (1) and 13 (3) to be mentioned
as either sole or joint inventor in UK patent GB2221691

HEARING OFFICER

Peter Back

DECISION

Introduction

- 1 UK patent GB2221691 was filed on 15th July 1988 and granted on 15th April 1992 to Courtaulds Films & Packaging Holdings Limited (“Courtaulds”). The patent, which has since been assigned to Amcor Flexibles UK Limited (“Amcor”), names Michael George Reinhardt Zobel (“Dr. Zobel”) as the sole inventor.
- 2 An application under sections 13(1) and 13(3) of the Patents Act 1977 (“the Act”) was filed by Dr. Alan James Clegg (“Dr. Clegg”) on 18th August 2003. The application seeks a declaration by the comptroller that the claimant, Dr. Clegg, is entitled to be mentioned as either sole or joint inventor in the patent. Amcor filed their counterstatement on 30th October 2003. Evidence for the claimant was filed on 23rd December 2003 in the form of a witness statement by Dr. Clegg together with supporting exhibits. Evidence for the defendant was filed on 11th March 2004 in the form of witness statements by Dr. Zobel, Dr. John Claisse, the agent responsible for prosecuting the patent through to grant, and John Fairweather, a research manager at

Courtaulds at the time of the invention. These statements were accompanied by supporting exhibits.

3 For his evidence in reply, the claimant requested disclosure of certain documents from the defendant before eventually submitting a second witness statement, supporting exhibits and a witness statement by Colin Smith on 30th November 2004. Colin Smith worked with Dr. Clegg at Courtaulds at the time of the invention.

4 The matter came before me at a hearing on 20th April 2005. Mr. James Abrahams, instructed by patent agents Lawrence Shaw & Associates, appeared as counsel on behalf of the claimant, and Mr. Andrew Norris, instructed by patent agents Withers and Rogers, appeared as counsel on behalf of the defendant.

The Witnesses

5 As I have said, evidence for the claimant was filed in the form of a witness statements by Dr. Clegg and Colin Smith, and evidence for the defendant was filed in the form of witness statements by Dr. Zobel, Dr. John Claisse and John Fairweather. At the hearing, Dr Clegg, Dr Claisse, Dr Zobel and Mr Fairweather were cross examined, Colin Smith was not called. I found Dr. Clegg, Dr. Zobel and Mr Fairweather to be entirely credible witnesses.

6 Under cross examination, Dr Claisse was asked by Mr Abrahams whether he thought he should have mentioned in his evidence that Amcor were still his clients and whether as a patent attorney he should declare any interest he had in the proceedings. At first, Dr Claisse denied that he had any interest at all in these proceedings but subsequently conceded that he continued to act for Amcor. I assume that Mr Abrahams was seeking to demonstrate that because Dr Claisse still acts for Amcor, I should attach less weight to his evidence. However, since it is clear that Dr Claisse was involved in the preparation and filing of the application for the patent, I do not think that his current status with Amcor makes much difference. I found Dr Claisse to be a rather defensive witness and it emerged that a significant amount of his evidence was based on what he had been told rather than his personal experience. It is for that reason that I do not think his evidence adds much to the Defendant's case. Mr Fairweather's evidence focussed primarily on the line management and reporting arrangements at the time and relates to matters which by and large are not in dispute.

The patent

7 The invention relates to perforated polymeric films for the storage or packaging of plant material. The perforated films provide the desired degree of oxygen permeability to ensure prolonged shelf-life of plant materials stored in them, while at the same time enabling water permeability of packages to be controlled to a desired level. In order to

prolong the shelf-life of packaged plant materials, the water vapour and oxygen permeability of the films are designed to suit the respiration requirements of the plant material to be packaged. For water vapour permeability, this is achieved by selecting the type of polymer used and the thickness of the film, while oxygen permeability is determined by the size and number of perforations in the film. The patent's main claim, claim 1, reads as follows:

“A polymeric film for the storage or packaging of plant material, the film being perforated and having a water vapour permeability of not more than $800\text{g m}^{-2}\text{ day}^{-1}$ and an oxygen permeability of not more than $200000\text{cm}^3\text{ m}^{-2}\text{ day}^{-1}\text{ atmosphere}^{-1}$, both permeabilities being measured at 25°C with a relative humidity of 75 percent.”

- 8 Examples of polymers which can be used for the film include regenerated cellulose, homo and copolymers of polyefins, polyesters and polyamides. The size of the perforations are preferably between 20 and 100 microns in diameter: if the perforations are too large, control of oxygen permeability is not possible, and if the holes are too small then a larger number of holes are required which adds to the cost of the film. The patent acknowledges that perforations in the film can be produced by known methods such as electrical discharge or by optical means, e.g. using a laser.

The law

- 9 Section 13 of the Act deals with the right of an inventor to be mentioned in an application or a patent, the obligation on the applicant to identify the inventor(s) and the right of any person to object to a mentioned inventor. Sections 13(1) and 13(3) of the Act read as follows:

13 (1): The inventor or joint inventors of an invention shall have a right to be mentioned as such in any patent granted for the invention and shall also have a right to be so mentioned if possible in any published application for a patent for the invention and, if not so mentioned, a right to be so mentioned in accordance with rules in a prescribed document.

13(3): Where a person has been mentioned as sole or joint inventor in pursuance of this section, any other person who alleges that the former ought not to have been so mentioned may at any time apply to the comptroller for a certificate to that effect, and the comptroller may issue such a certificate; and if he does so, he shall accordingly rectify any undistributed copies of the patent and of any documents prescribed for the purposes of subsection (1) above.

- 10 An inventor is defined in section 7(3) of the Act as:

7(3): *In this Act, "inventor" in relation to an invention means the actual deviser of the invention and "joint inventor" shall be construed accordingly.*

- 11 In deciding who is the actual deviser of the invention, it is first necessary to determine what is the invention. Section 125(1) of the Act states that:

125(1): *For the purposes of this Act an invention for a patent for which an application has been made or for which a patent has been granted shall, unless the context otherwise requires, be taken to be that specified in a claim of the specification of the application or patent, as the case may be, as interpreted by the description and any drawings contained in that specification, and the extent of the protection conferred by a patent or application for a patent shall be determined accordingly.*

What is the invention?

- 12 Section 125(1) points to the invention being defined by the claims as interpreted by the description and any drawings contained in the specification. Section 125(1) also says that this is the case “*unless the context otherwise requires*”.
- 13 At the hearing, both parties referred to case law that deals with the question of what is the invention in the context of inventorship. In *Coflexip SA v Stolt Comex Seaway MS Ltd* (unreported Court of Appeal judgment dated 31st July 2000), which was referred to by the claimant and which considered the issue of whether a patent is obvious, Aldous LJ said at paragraph 33:

“As Laddie J pointed out in *Brugger v Medic-Aid Ltd* [1996] RPC 635 the inventive concept must apply to all embodiments falling within the claims. It is therefore not legitimate to define the relevant concept as something narrower than the claims. It follows that it must be taken from the claims, in this case claim 1.”

- 14 In referring to *Coflexip*, the claimant submitted that the term “invention” used in section 7(3) means precisely what is set out in the claims. The defendant, on the other hand, submitted that section 7(3) would be a context that requires the invention to have a different meaning. The defendant referred to the Court of Appeal’s decision in *Markem Corporation v Zipher Ltd* [2005] EWCA (Civ) 267, which considered the relevance of the claims in entitlement proceedings. At paragraph 92 of the judgment, Jacob LJ stated:

“So if one goes on a claim-by-claim approach, one can assert of a particular claim that “that claim is Markem’s because it was first proposed at Markem”. We have already identified why that approach is not good enough. On top of that,

however, we think the claim-by-claim approach is itself fallacious and not what is called for by the Act.”

15 At paragraphs 101 and 102, Jacob LJ went on to say:

“Accordingly we think one is driven to the conclusion that [section] 8 is referring essentially to information in the specification rather than the form of the claims. It would be handy if one could go by the claims, but one cannot. [Section] 8 calls for identification of information and the rights in it. Who contributed what and what rights if any they had in it lies at the heart of the inquiry, not what monopolies were actually claimed.

It is not possible to be very specific about how this is to be done. But as a general rule one will start with the specific disclosure of the patent and ask whether that involves the use of information which is really that of the applicant, wholly or in part or as joint owner. Here the specific disclosure of the Zipher patents is clearly Mr. McNestry’s basic idea, his particular "clever way." Without that the disclosure would be near valueless. True the patent would have claims covering bi-directional or dual purpose printers, but without any practical way of achieving them. What one is normally looking for is "the heart" of the invention.”

16 Mr. Norris argued that the provisions of sections 7 and 13 on inventorship and section 8 on entitlement are very similar and require an equally similar approach to the question of what is the invention. He submitted that since the claims of an application can and often do vary significantly between application and grant, it would be dangerous to look to the claims alone when considering inventorship: whilst the claims of an application can change in light of prior art, the inventor does not. Mr. Norris submitted that both sections 7 and 13 fit into the exception of section 125(1) where the context requires a different approach in deciding what is the invention. The correct approach, he submits, is that set out in *Markem*, which looks at the heart of the invention as set out in the patent specification as a whole.

17 I agree with Mr. Norris that the approach set out in *Markem* is equally relevant when considering inventorship. This is clear from section 7(2) of the Act, which states that it is the inventor that is primarily entitled to the patent unless this is overridden by any rule of law or any legally enforceable agreement existing at the time the invention is made. It would make no sense at all to adopt one approach to entitlement and a different one to inventorship. In fact, the question of who devised the invention was specifically addressed by the Court of Appeal in *Markem*, and it was because the claims were unduly broad that it was necessary to look beyond them to find the basic concept (the heart of the invention) that led to the patent. Identifying the invention by looking to the claims alone is entirely appropriate if the claims help identify the heart of the invention. If not, as was the case in *Markem*, it is necessary to look beyond the

claims and to the specification as a whole in order to identify what is the invention. I do not think there is any great inconsistency between the two approaches set out by the parties, and as Mr. Norris accepted, there will be instances where the two approaches will lead to the same answer, i.e. when the claims clearly define the heart of the invention. However, where they do not, then *Markem* says that it is entirely appropriate to look beyond the claims in deciding who devised of the invention.

- 18 Looking at the claims in their broadest sense, the claimant submits that the invention is a new film having certain physical characteristics that makes it suitable for the storage or packaging of plant material. The usefulness of the film lies in its use to keep fruit and vegetables fresher for longer on a supermarket shelf. This is achieved by the formation of a controlled atmosphere within the packaging, this controlled atmosphere being the result of respiration by the plant material together with a degree of permeability of the packaging which allows a certain amount of permeation of organic volatiles. This technique of providing a controlled atmosphere within the package is known as modified atmosphere packaging (MAP), and it is common ground that this was well known before the priority date of the patent. The claimant submits that the invention is not the idea of using perforated film in MAP since this would be claimed quite differently.
- 19 The defendant contends that the invention is not just a film, but is a film suitable for packaging plants and for extending the shelf-life of packaged material. In addition, Mr. Norris pointed to a number of features that he argued were at the heart of the invention, namely the specific permeability requirements for modified atmosphere packaging of plant material and the ability to control oxygen permeability by one way and the ability to control water permeability by another.
- 20 The patent specification outlines in general terms the experimental work carried out in order to identify the optimum film characteristics required for packing a variety of fruit and vegetables. In each of the experiments, the shelf-life of plant material is determined for a variety of film materials and perforation densities, the thickness of each of the films being kept constant in each case at 25µm. The specification acknowledges that it was known to vary the water vapour permeability of a film by changing its material and thickness. It also states that packaging films for controlling the levels of oxygen and carbon dioxide were also known, and that the lack of control over water content provided by these films could lead to an increase in the deterioration of packaged materials.
- 21 If I now approach the question of what is the invention as *Markem* says I must, i.e. by looking for the heart of the invention, I would have to conclude from reading the specification as a whole that the invention is not just a film with a few holes in but is a film having specific physical characteristics that allows a modified atmosphere to be produced around the plant material to be packaged. It is this modified atmosphere that

allows the shelf-life of the packaged product to be extended, and it is the matching of the modified atmosphere to the respiration rate of the packaged plant material by trial and error that the patent is concerned with. I therefore disagree with the claimant that MAP is not at the heart of the invention. The whole thrust of the research work set out in the patent is aimed at identifying the optimum permeabilities for extending the shelf-life of various vegetables. The patent does not concern itself with identifying methods for producing perforated film, simply because various methods for doing so already existed. However, the invention does rely on such methods to improve upon the shelf-life performance of modified atmosphere packaging films previously available.

- 22 As the defendant rightly argues, claim 1 makes no mention whatsoever of a perforated film suitable for MAP nor of a film for extending the shelf-life of packaged plant material. However, I am bound by *Markem* to look beyond the claims for the heart of the invention, and, in doing so, I find that MAP is at the heart of this particular invention. I do not accept Mr. Norris' argument that the ability to control water permeability by one way and the oxygen permeability by another is an implicit feature of the invention, nor can I find any specific reference to this in the patent.

Who devised the invention?

- 23 It is common ground that at the time of the priority date of the patent Dr. Zobel was conducting research into MAP and in particular what the best materials for MAP were. At the time, Dr. Zobel was employed as deputy group leader of the development and technical centre at Courtaulds. Dr. Clegg was employed as a research manager for Shorko Films, a division of Courtaulds, but also worked at the development and technical centre under a different line of reporting to Dr. Zobel. Dr. Clegg was responsible for carrying out in-line film coating processes for heat sealing, gas barrier and release properties as a commercial alternative to solvent based processes.
- 24 Dr. Clegg says that Dr. Zobel had mentioned to him the problem of making transparent plastic film breathable enough to allow useful extension to the packaging life of vegetables, although Dr. Zobel has no recollection of this conversation. Dr. Clegg says that this inspired him to develop a micro-perforation machine that used electrical sparks to create perforations of less than 100µm in plastic film, which led to Courtaulds filing UK and European patent applications for the ultra micro-perforation machine. Dr. Clegg is named as inventor in these applications.
- 25 It is common ground that Dr. Clegg's group supplied Dr. Zobel with film produced by the micro-perforation machine. What is in dispute is Dr. Clegg's contribution in determining the film properties suitable for packaging plant material.

The evidence

- 26 Dr. Clegg's witness statement refers to a conversation he had with Dr. Zobel in the early part of 1986 in which Dr. Zobel said the main difficulty he had was that transparent plastic films were not breathable enough to allow the useful extension of the packaging life of vegetables. In his own witness statement, Dr. Zobel says that he does not recollect any particular conversation on the subject, and certainly did not request any assistance from Dr. Clegg in manufacturing more permeable films. As I have said, under cross-examination I found both Dr. Clegg and Dr. Zobel to be entirely credible witnesses, and the fact that Dr. Zobel was unable to recall the conversation with Dr. Clegg is of no surprise given the casual nature of the discussion and the passage of time.
- 27 On the basis of the evidence, it seems entirely plausible to me that such a conversation did take place, and that this provided the stimulus for Dr. Clegg to make his micro-perforation machine for producing permeable transparent film. There is no evidence to suggest that the stimulus for Dr. Clegg's machine came from elsewhere, although Dr. Claisse, the patent agent responsible for prosecuting the patent through to grant, did say in his witness statement that he believed the micro-perforator was solely invented to overcome a specific technical problem with other known perforators. In saying this however, it appeared from cross-examination that Dr. Claisse was not speaking from a position of first hand knowledge. In particular, when asked "*Dr. Clegg and his team developed the film that was used by Michael Zobel. That is right, is it not?*" He replied, "*It was not known to me at the time when I was in the company.*" That being the time when the application for the patent was filed. Colin Smith on the other hand, who worked to Dr. Clegg at Courtaulds and was named as joint inventor in the ultra micro-perforation machine patent applications, testifies that the machine was developed to produce controlled permeability film for use in packing fresh produce. Furthermore, the micro-perforation machine patent applications refer to the use of perforated film for packaging purposes to allow the controlled passage of vapours and/or gases.
- 28 By Dr. Clegg's own testimony, Dr. Zobel was already conducting research into making transparent films more breathable for the purpose of extending shelf-life. Dr. Zobel admits that he relied on Dr. Clegg's micro-perforation machine to advance his research into film which increased the shelf-life of packaged plant material. This research involved carrying out shelf-life trials on a variety of fruit and vegetables using films made from a variety of materials and with varying perforation densities. This work, which was reported in a file note dated 21st March 1988 and submitted as exhibit MZ4, formed the basis of the patent. Dr. Clegg admits that he merely produced samples from his machine for Dr. Zobel and his team to evaluate. On the basis of this evidence alone, it is clear that Dr. Clegg had no involvement in testing the shelf-life of

plant material for the films he produced, nor made any contribution in determining the optimum film properties for packaging various fruit and vegetables.

- 29 Under cross examination, Dr. Clegg admitted that he had not conducted any research into modified atmosphere packaging. He said that in response to the conversation with Dr. Zobel, he went away and devised a machine that produced perforated films with modified atmosphere packaging in mind. This is consistent with his first witness statement, where he says that his machine was developed in order to vary the density of micro-perforations to permit the controlled passage of vapours or gases. He admits that he was not directly involved in the tedious experimentation set out in exhibit MZ4 and contributed nothing to the process of optimising film performance.
- 30 I have already found that the invention is not just a film with a few holes in but is a film having specific physical characteristics that allows a modified atmosphere to be produced around the plant material to be packaged. I consider that the experimental work set out in exhibit MZ4 lies at the heart of the invention, and that the evidence points to Dr. Clegg having no direct involvement in this work. In view of this, I find that Dr. Clegg did not devise the invention.

Conclusion

- 31 I have found that the invention relates to a perforated film suitable for packaging plant material, the film having specific water vapour and oxygen permeabilities determined by the plant material to be packaged. I have found that Dr. Clegg played no part in determining the specific water vapour and oxygen permeabilities for the plant material to be packaged and should not therefore be mentioned as inventor in the patent. There is no question that Dr. Clegg invented a process for producing micro-perforated packaging film and, in that respect, assisted Dr. Zobel in devising the invention. However, by Dr. Clegg's own admission, his assistance did not extend to evaluating the effects of the films or to optimising the water vapour and oxygen permeabilities to suit the plant material.

Costs

- 32 Both parties have asked for an award of costs in their statements but counsel made no submissions regarding costs at the hearing. The claimant has failed in his application to be named as either sole or joint inventor and I therefore award costs to the defendant. On the basis of the published Patent Office scale of costs, I award the defendant the sum of £2,000 as a contribution to its costs.

Appeal

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

Peter Back
Divisional Director acting for the Comptroller