

PATENTS ACT 1977

IN THE MATTER OF an application under
Section 72 by STEAG MicroTech GmbH
for the revocation of Patent No.
EP(UK)0428784B in the name of CFM
Technologies Inc.

and IN THE MATTER OF an offer under
Section 29 to surrender the Patent

DECISION

Background

1. The patent in suit (hereafter “the patent”) was filed on 23 November 1989 as application number EP89121671.5 and was granted on 15 March 1995, in the name of CFM Technologies Inc.(the patentees), designating *inter alia* the UK as one of the countries in which it was to have effect.
2. On 15 May 1998, STEAG MicroTech GmbH (the applicants) filed an application for revocation of the patent on the grounds that the invention was lacking in novelty and inventive step. The patentees filed their counterstatement on 25 September 1998. Following a request by the applicants for discovery (disclosure) of documents by the patentees and then a delay whilst the parties unsuccessfully attempted to negotiate a settlement, the patentees filed an offer to surrender the patent on 19 July 1999.
3. The patent relates to a method for drying surfaces, in particular the surfaces of semiconductor wafers. Claim 1 reads as follows:

“A method for drying surfaces of objects which are fully immersed in a rinsing fluid

comprising providing a drying vapour, replacing said rinsing fluid with said drying vapour by directly displacing said rinsing fluid from said surfaces with said vapour, characterised in that the rate at which said rinsing fluid is displaced by said vapour is chosen to be sufficiently slow so that substantially no liquid droplets are left on the surfaces after replacement of the rinsing fluid with drying vapour and substantially no rinsing fluid or drying vapour is removed by evaporation of liquid droplets.”

4. The applicants allege in their statement that the invention is not new having regard to matter which was made available to the public prior to the filing date of the patent, namely 23 November 1989. In support of their allegation they cite the supply by the patentees to Texas Instruments, some time in 1988, of an apparatus for drying semiconductor wafers which, in operation, carried out the method of the invention. They also cite prior disclosure in oral presentations to the 19th annual meeting of the Fine Particle Society in Santa Clara by Joan Koppenbrink and the two named inventors of the patent in July 1988 and to a conference entitled “Microcontamination” which also took place in 1988.

5. The applicants also allege, further or alternatively, that the claims of the patent are obvious and lack an inventive step having regard to the disclosures referred to above in relation to lack of novelty, and also to common general knowledge and the disclosures in US Patent 4,778,532 published 18 October 1988, German Patent DE-C-37 33 670 published 15 December 1988 and US Patent 4,795,497 published 3 January 1989.

The law

6. Section 29(1) allows a patent proprietor to offer to surrender his patent. However, it is clear from section 29(3) that the Comptroller is not necessarily obliged to accept the offer, because this says:

“If the comptroller is satisfied that the patent may properly be surrendered, he may accept the offer . . .”

Indeed, it is also clear from section 29(2) that an offer to surrender does not necessarily have to be accepted because this section allows a third party to oppose the surrender, although in the present case no such opposition has been lodged.

7. In the present case, of course, we have an application for revocation as well as an offer to surrender. Revocation of a patent takes effect retrospectively from the date of grant. In contrast, an offer to surrender takes full effect only from the date on which it is formally accepted by the Comptroller. Accordingly, when an offer to surrender is received following the launch of revocation proceedings, it has long been the Comptroller's policy to consider whether to revoke the patent first, and only accept the offer to surrender if she decides not to revoke the patent. Further, in considering whether to revoke the patent it has been the Comptroller's practice to treat the revocation action as uncontested, ie to consider the matter as if no counterstatement had been filed. Thus the Comptroller will normally assume each specific fact set out in the statement had been conceded, unless there are obvious inconsistencies in the documents filed. I observe in passing that in the present action, whilst the patentees have actually filed a counterstatement in the revocation action, it contains no argument and does little more than list those allegations in the applicants' statement which are not admitted.

8. The Comptroller's practice in this respect was recently implicitly approved by Laddie J in his unreported decision of 7 May 1998 in *Smithkline Beecham Biologicals SA v Connaught Laboratories Inc (SRIS C/40/98)*. Here the circumstances were perhaps a little different in that the judge had a revocation action before him, and an offer to surrender the patent came in immediately before the 8 day trial of the revocation action was due to commence. Laddie J described the Comptroller's practice as set out in the preceding paragraph, observed that the revocation action had not been withdrawn and that the offer to surrender was not yet effective, and concluded:

“It is open to me, therefore, to order revocation of the patent if, having regard to what is pleaded and the material which I have seen, that is the appropriate course.”

He went on to decide that, in the absence of any resistance from the patentees, the petition for revocation was well founded, and accordingly he revoked the patent.

9. Reinforced by this implicit judicial approval, I will follow the Comptroller's normal practice in these cases and decide whether the patent should be revoked. Both parties have already been informed that this was the course of action that would be followed. They have also been warned that the Comptroller was minded to revoke the patent and refuse the offer to surrender unless either side wished to object to this course of action. Neither side has objected.

Lack of Novelty

10. Considering firstly the allegation of lack of novelty, the applicants have cited the supply of an apparatus to Texas Instruments in 1988, which apparatus, when operated, carried out the method of the invention. In support of this allegation the applicants have filed transcripts of evidence given by Mr McConnell, one of the inventors, under cross-examination in an action in the United States of America between the parties to the present proceedings (or at any rate, companies associated with them). In his evidence, on page 195 of the transcript, Mr McConnell confirmed the sale by the patentees of an apparatus that used the drying method of US Patent No 4,911,761 (hereafter '761) to Texas Instruments in 1988. '761, which is in the name of the present patentees has, in all essentials, the same disclosure as the case in suit. Claim 1 of '761 differs from claim 1 of the patent in that it omits the final feature, namely that "substantially no rinsing fluid or drying vapour is removed by evaporation of liquid droplets". However, that feature is disclosed in '761, being the subject of claim 17, and since, in his testimony, Mr McConnell said of the apparatus sold to Texas Instruments "it incorporated all of the changes in the '761 patent", I take this to be effectively saying that it did include this feature. Indeed, since the claim 1 of '761 does specify that the rate at which the rinsing fluid is displaced by the drying vapour is chosen so that substantially no liquid droplets are left on the surfaces after replacement, I believe it must necessarily follow that substantially no rinsing fluid or drying vapour is removed by evaporation of liquid droplets, even though this point is relegated to a subordinate claim in '761.

11. Thus when Mr McConnell says that an apparatus that used the drying method of '761 was sold to Texas Instruments, I interpret this as an apparatus that used the method of the present claim 1. Accordingly, since I am working on the basis that each specific fact set out in the statement is to be regarded as conceded by the patentees, I find the pleading that claim 1 of the patent is invalid because of this prior use to be well founded. Indeed, since the appendant claims all relate to features disclosed in '761, and since the apparatus sold to Texas Instruments is alleged to have incorporated "all of the changes in the '761 patent", I find that the pleaded lack of novelty in the light of this sale is well founded against all the present claims, not just claim 1.

12. This conclusion is sufficient for me to decide that I should order revocation of the patent and decline the offer to surrender. However, I will consider briefly the other matters raised by the applicants' statement in support of their case.

13. The applicants also allege lack of novelty in the light of oral presentations made to the Fine Particle Society in Santa Clara, California between 19 and 22 July 1988. In support of this allegation they have filed a copy of part of the proceedings of the event, including a paper by Joan Koppenbrink and the inventors, entitled "Particle Reduction on Silicon Wafers as a result of Isopropyl Alcohol Vapor Displacement Drying after Wet Processing". That paper discloses experiments carried out on silicon wafers in which they are dried by displacing hot rinsing water by isopropyl alcohol vapour at a rate which minimises droplet formation. All the essential features of the invention of the patent are disclosed. So again, on the basis of this disclosure, and the absence of any other document to contradict it, I find that the invention of claim 1 is not novel because of the prior disclosure at the meeting of the Fine Particle Society in July 1988.

14. The applicants also cite an oral presentation at a conference entitled "Microcontamination" which is said to have taken place in 1988. Whilst I am treating each specific fact set out in the statement as if it had been conceded, I do not consider that this particular fact has been established with sufficient specificity for me to be able to make a

finding of lack of novelty or, for that matter, lack of inventive step in relation to this alleged disclosure.

15. The applicants also allege that claim 1 of the patent lacks novelty with regard to US Patent No 4,722,752 ('752). That patent discloses apparatus and method for rinsing and drying silicon wafers. It discloses a method in which the wafers are slowly lifted out of a bath of water. As the applicants acknowledge, there is no mention of a drying vapour as specified in claim 1 of the patent, but argue that the latter does not actually define the term. '752 does mention at column 2, lines 32-36 a filtered laminar flow of clean dry air maintained above the water bath to remove any residual moisture on the emerging surfaces of the wafers. This contrasts with claim 1 of the patent which refers to substantially no droplets and no evaporation. Thus I am not satisfied, from the material before me, that the disclosure in '732 anticipates the present claim 1.

Lack of Inventive Step

16. The applicants allege lack of inventive step on the grounds of the aforementioned sale of apparatus to Texas Instruments. Having found that this event demonstrates lack of novelty of the patent, I do not need to consider the inventive step argument. The same applies to the oral disclosure at the Fine Particle Society in July 1988.

17. The applicants also suggest that the invention is obvious having regard to the disclosure in US Patent No 4,778,532 ('532). This document discloses apparatus for treating silicon wafers, in which the wafers are held in an enclosed vessel and the various processing fluids are sequentially introduced into the vessel. It describes a rinsing stage in which high purity water is used, then a drying stage in which the preferred drying agent is superheated steam, but other agents, including isopropyl alcohol may be used. However, there is no significance attached to the rate at which the rinsing water is displaced from the enclosed vessel, nor any mention of the avoidance of droplet formation and subsequent evaporation of the drying fluid. On the contrary, as described at column 8, lines 36-53, the drying fluid condenses on the wafers and is evaporated using a heated purging gas such as dry nitrogen.

This specification does not therefore appear to point one in the direction of the solution proposed in the present patent, and so I am not satisfied, from the material before me, that it renders the present patent obvious.

Conclusion

18. I conclude that the claims of the patent are invalid for lack of novelty, and order that the patent be revoked. I decline the offer made by the patentees to surrender the patent.

Costs

19. When they launched the revocation action, the applicants for revocation sought costs. They have been successful, and so in principle they are entitled to costs. Having said that, normally the Comptroller only awards a contribution to costs, based on a published scale. Since the revocation action has been concluded without any evidence actually being filed and without a hearing, on the basis of the scale I would award £150.

20. There is, though, another factor I must first consider. Rule 76 of the Patents Rules 1995 says:

“If, in proceedings before the comptroller under section 72, the proprietor of a patent offers to surrender it under section 29, the comptroller shall, in deciding whether costs should be awarded to the applicant for revocation, consider whether proceedings might have been avoided if the applicant had given reasonable notice to the proprietor before the application was filed.”

The parties were certainly in contact before the present proceedings were launched because of the litigation in the US in connection with ‘761, although I do not know for certain whether the applicants gave reasonable notice of their intention to initiate the present proceedings. However, even if they did not do so, I do not think the proceedings would have been avoided. The applicants laid their cards on the table pretty fully in their statement of case, which is

detailed and specific. Nevertheless the patentees decided to fight the case by filing a counterstatement, and did not offer to surrender the patent until 10 months later. This does not suggest the proceedings could have been avoided by giving reasonable notice.

21. Accordingly I order the patentees to pay the applicants £150 as a contribution towards their costs.

Appeal

22. As this is not on a matter of procedure, any appeal should be lodged within six weeks.

Dated this 8th day of December 1999

P HAYWARD

Divisional Director, acting for the Comptroller

THE PATENT OFFICE