

PATENTS ACT 1977

BLO/017/95

IN THE MATTER OF an application under
Section 13(3) by Thomas Michael Benyon Wright
in respect of Patent No 2261555
in the name of Mawzones Developments Limited

DECISION

Thomas Michael Benyon Wright applied to the Comptroller for a certificate under section 13(3) to the effect that Gary Collinge ought not to have been mentioned as an inventor in respect of Patent No 2261555 in the name of Mawzones Developments Limited ("Mawzones"), and Mawzones have opposed the application. Evidence submitted in the proceedings comprises two affidavits by Mr Wright and, on behalf of the patentees, affidavits by Mr Collinge, named as joint inventor in the patent with Mr Wright, Dr John David Collins of Boulton Wade Tennant ("BWT"), who acted as patent agent in the proceedings which resulted in the grant of the patent in suit, and Alan Charles Deville, a Director of Mawzones. The matter came before me at a hearing on 22 November 1994 at which Mr Wright represented himself and the patentees were represented by Dr Collins.

Patent No 2261555 is derived from Application No PCT/GB91/01136 made under the Patent Cooperation Treaty, filed by Mawzones on 10 July 1991 and naming Mr Wright and Mr Collinge as joint inventors. It entered the national phase as GB Patent Application No 9300253, and was granted on 24 November 1993. It relates to a phase correcting reflection zone plate for focusing microwaves, formed of layers of low dielectric loss material onto which reflective portions are applied, and to apparatus and methods for manufacturing such a zone plate.

Application No PCT/GB91/01136 sought priority on the basis of GB Application No 9015159, filed on 10 July 1990. This earlier application, which was terminated before publication, mentioned Mr Wright alone as inventor, and described embodiments of a zone

plate for focusing microwaves identical in all respects to those forming the subject of the subsequent PCT application. However, in the later application there was described in addition apparatus and methods for the manufacture of the zone plate. Claims 1 to 9 of both the PCT application and the granted patent relate to a zone plate *per se*. Claims 10 to 18 relate to apparatus and methods for manufacture of such zone plates, based on the additional material introduced into the later application.

The main claims of the granted patent are as follows:

"1. A reflection zone plate for focusing microwave energy comprises a plurality of reflective portions corresponding to zones of said zone plate; said reflective portions being positioned in P parallel planes, so that each said reflective portion reflects energy λ/P out of phase with respect to adjacent reflective portions, where λ is the wavelength of the energy and P is an integer of four or more, such that energy reflected from said reflective portions constructively interferes at a focus of said zone plate; wherein the reflective portions in each said plane are formed on a respective low dielectric loss planar substrate.

10. Apparatus for the manufacture of a reflective zone plate as claimed in any one of claims 1 to 9 comprising means to apply said reflective portions corresponding to zones of said zone plate to the surface of a plurality P of planar substrates formed of low dielectric loss material; and means to stack said planar substrates to form said reflection zone plate.

14. A method of manufacture of a reflection zone plate as claimed in any one of claims 1 to 9, comprising the steps of applying said reflective portions corresponding to zones of said zone plate to the surface of said plurality P of planar substrates formed of low dielectric loss material; and stacking said plurality of planar substrates to form said reflection zone plate."

The common inventive concept of these claims includes the provision of reflective portions positioned in four or more parallel planes by forming them on a plurality of planar

substrates. Although the fundamental nature of the invention was not discussed in any detail at the hearing and does not emerge clearly from the evidence, I have understood it to entail the provision of quarter-wave (or higher order) microwave zone plates.

The provisions of section 13(3) under which the present application is made are as follows:

"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."

This section has to be interpreted in the light of section 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."

It emerged at the hearing that Mr Wright largely based his case upon his understanding that the onus resides on the patentees to establish that Mr Collinge made a unique contribution to the inventive content. Dr Collins, on the other hand, argued that the burden of proof lies with Mr Wright to show that Mr Collinge should not have been named as an inventor. At my invitation to both sides to refer me to any authorities touching on the question of onus, Dr Collins referred to *Dunlop Holdings Limited's Application* [1979] RPC 523. Since there had been no opportunity to consider this case prior to the hearing, I invited Dr Collins to submit written comments on it within one week of the hearing, and Mr Wright to submit his comments within two weeks of receiving the comments from the other side. In doing so I stressed that I was not thereby providing an opportunity for either party to reopen any other issues, including those which had already been addressed at the hearing, and in reading their respective written comments I have taken no account of any passages which in my view seek to address anything other than the issue of onus as discussed in the authorities.

In the event, the comments from BWT on behalf of the patentees, as well as discussing *Dunlop*, referred to an unreported decision of 5 August 1987 in the Patent Office in *Bond Knitting Systems Limited's Patent* and to the Patents Court's judgement of 1 March 1988 on appeal. Since I accept BWT's view that this authority, which only came to their attention after the hearing, was more relevant to the case in suit than *Dunlop*, I agreed to take note of it and allowed Mr Wright additional time in which to submit his comments.

In *Dunlop* the question of burden of proof was at issue in the context of an opposition to grant of a patent under section 14 of the Patents Act 1949 on the grounds of prior use, and the allegation that the prior use was in secret. Complex issues of onus arose, but BWT's comments focussed on the principle expressed by Bridge LJ, namely:

"As a matter of principle it seems right to me that in opposition proceedings under section 14 of the Patents Act 1949, the legal burden of proving every element necessary to make good his ground of opposition must rest upon the opponent."

BWT argued that the same legal principle applied in relation to an application under section 13(3), and to underline this point they referred me to *Bond Knitting*, in which *B* was alleging under section 13(1) that he was the inventor of the invention which was the subject of the patent in issue, and under section 13(3) that *C* ought not to have been mentioned as the sole inventor. They quoted the Hearing Officer's words, in support of his conclusion that it was for *B* to establish his allegations, to the effect that:

"That the onus is upon [*B*] to show that he was the inventor and not upon the patentees to show otherwise follows the normal rule that he who asserts must prove and not he who denies."

Elsewhere the Hearing Officer said:

"to my mind the onus was not on [*C*] in this case to establish his inventorship . . ."

I note two things from the judgement on appeal in *Bond Knitting*. First, the case has in common with the action before me the fact that *B* was not represented by a legal expert, and was therefore not professionally advised on such matters as onus. Second, although admittedly the question of onus does not appear to have been raised in the appeal, the learned judge said nothing to imply that he disapproved of the Hearing Officer's conclusions on onus.

In the present case Mr Wright is not, as was *B*, seeking to add his name to the inventors mentioned, but otherwise the circumstances of the case are in broad terms similar to those in *Bond Knitting*. Nevertheless, Mr Wright maintained his view in his comments on the authorities. He argued that, in both of the cases cited, the applicant maintained that the respondent had performed an action which was denied by the respondent, and he reasoned that therefore the burden of proof lay with the applicant to produce evidence that the respondent had indeed acted as alleged. He sought to draw a distinction with the present case, in which, as he argued, the respondent (*viz* the patentees) had not produced evidence to justify the inclusion of an additional name as co-inventor. He added that since it was, in his view, clearly in logic impossible for the applicant to produce positive evidence of a negative assertion, the burden of proof must lie with the respondent.

It is true that in *Bond Knitting* there is the additional feature that *B* sought to have his name added as inventor, and Mr Wright correctly recognised that in these circumstances the burden of proof rests with *B*. However, it appears that he may not have appreciated the other aspect of *Bond Knitting*, which is that the burden also rested on *B* to establish that *C* should not have been so mentioned. Thus, for example, the Hearing Officer concluded that:

"[*B*] has also failed to substantiate a suggestion that of the two he was the only one technically competent enough to have originated the above proposals",

and that:

"in accordance with the above findings, I am unable to conclude that [*B*] has established an entitlement to be named as inventor, or that [*C*] ought not to have been mentioned as sole inventor, and I must therefore refuse his application."

The principle that has been applied in both of the cited authorities is that the burden of proof rests on the side making the allegation. As I have understood his argument, Mr Wright seeks to imply that, by their having added Mr Collinge's name to those mentioned as inventor in the patent in suit, it is in this case the patentees who have made the allegation. I cannot accept this. Mr Collinge has been mentioned as inventor; that is a matter of fact. The point at issue is whether he should not have been so mentioned. It is Mr Wright who alleges that Mr Collinge should not have been mentioned, and I am satisfied, both on my general understanding of the principles of law and on the basis of the two cited authorities, that it is therefore Mr Wright who must prove his case that Mr Collinge should not have been mentioned as inventor. It may in some circumstances be difficult to produce positive evidence of a negative assertion, but I do not accept Mr Wright's contention that it is impossible, and indeed I find that in the present circumstances, if he is to establish his case, it is necessary for him so to do.

Turning to the facts of the case, Mr Wright was at one time employed by Mawzones in the capacity of Managing Director. There appears to be some dispute as to when he was first so employed. He claims in his first affidavit to have been Managing Director of both Mawzones and its sister company Mawzones Limited by early 1988, but Mr Deville states that Mr Wright was a consultant for the two companies between 1987 and June 1989, when he was taken on as a full time employee. In his second affidavit Mr Wright asserts that it had been established at an Industrial Tribunal hearing that he became an employee of the Mawzones companies before June 1989, but he does not seek to re-affirm his claim to have been Managing Director as early as 1988. Despite the disagreement, it is sufficient for me to note that Mr Wright was employed by Mawzones when the priority application was filed in 1990, and for some time prior to this. It is also clear that Mr Wright had been dismissed by the time that the PCT application was filed in 1991.

Mr Collinge had a background in microwave technology and, prior to his association with Mawzones, had some experience of surveying sites and installing satellite antennae and systems, and as General Manager of a company involved in such business. It appears that he was first employed directly by Mawzones in August 1989, but in his affidavit he describes a somewhat earlier connection with the development of zone plates in late 1988 when, as a

self-employed contract engineer in satellite antenna installation, he worked for Mawzones with Mr Wright. He describes how, at one point during this association, he suggested a modification of an existing two-layer zone plate antenna, and says that his idea was greeted enthusiastically by Mr Wright, although the modification proved to have inadequate performance. Mr Wright's account is rather different, since he describes himself as having had "considerable reservations", and categorises his subsequent placing of an order as "a serious mistake for which I hold Mr Collinge largely responsible". Whatever the truth of this particular incident - and I do not regard it as particularly pertinent to the question of whether or not Mr Collinge is properly named as a joint inventor in the patent in suit - it does suggest to me that Mr Wright viewed Mr Collinge as a man whose technical advice was worth taking note of.

Once Mr Collinge became an employee of Mawzones he clearly became more involved in the development of zone plate antennae, but the nature of his involvement is a source of conflict between his evidence and that of Mr Wright.

The derivation of the invention of the patent in suit is not easy to trace from the evidence. Early in 1988, when he describes himself as having been Managing Director of Mawzones but Mr Deville states that he was acting as a consultant, Mr Wright instructed Cambridge Consultants ("Cambridge") to carry out a study related to some aspects of the design of microwave zone plates for satellite signal reception. It appears that not everyone within Mawzones was fully aware of the nature of this study. In a summary progress report dated 3 November 1988, written by Mr Wright and exhibited by Mr Deville, it is stated that Cambridge were contracted to prepare software necessary to print master patterns, and the attached financial summary proposes a payment of £11500 to Cambridge. Mr Deville states that he was reliant upon Mr Wright for information as to technical and commercial progress. On the other hand, excerpts of two technical memoranda prepared by Cambridge on 6 December 1988 and 9 May 1989 and presented in evidence by Mr Wright suggest that the study was somewhat different to this, going to the general design of microwave zone plates, as implied in Mr Wright's description of his original commission. Mr Deville states that he was unaware of the existence of these memoranda, and I note that each document lists the distribution within Mawzones as covering only Mr Wright.

Mr Collinge also says that when he first saw the two Cambridge memoranda, seemingly when they were exhibited to Mr Wright's first affidavit, he was "staggered". He had been aware that Mr Wright was using Cambridge, but had never been informed of the work they were carrying out. Since Mr Collinge only commenced direct employment by Mawzones some months after the two memoranda were produced, this is perhaps less surprising than that Mr Deville, a Director of the company of which Mr Wright describes himself as having been at the time Managing Director, should have been given what appears to have been a misleading picture of Cambridge's brief. This begins to suggest to me a business environment within which misunderstanding might flourish.

According to Mr Collinge, during the early period of his association with Mr Wright, the latter was working on half-wave zone plates both of two layers and, continuing earlier work, of a single layer. Mr Collinge states that the concern at the time was to improve the efficiency of the zone plate so as to make it a viable alternative to conventional antennae. Although Mr Wright's own account of these early stages of progress towards the invention is not very full, I note that he does not dispute Mr Collinge's version up to this point. With this concern in mind Mr Collinge states that he read a considerable number of papers and patents in order to improve his understanding of the theory of zone plates. According to Mr Wright it was he who provided these documents to Mr Collinge, and they included a paper by Black and Wilse dated December 1987 which discussed zone plates, including quarter-wave plates. I note that this paper is referred to in the patent in suit. The two accounts are not inconsistent to this point, since it seems quite probable that Mr Wright should have given his new colleague what amounted to a reading list in order to facilitate the latter's contribution to the zone plate project.

Mr Collinge states that in March or April 1990, as a result of his reading, he considered that if the efficiency of a transmissive half-wave zone plate comprising a single layer of reflective zones could be improved by providing a reflective back layer to form a two-layer reflective zone plate, the provision of more layers might further improve efficiency and thus allow the antenna to be made smaller. He comments that, on hearing of Mr Collinge's suggestion, Mr Wright was not optimistic of success. In this connection Mr Wright comments that Mr Collinge's suggestion of providing further layers was not original, implying that it

derived from a reference in the Black and Wilse paper. He repeated this comment at the hearing, disputing the passage in the counterstatement which claims that "it was Mr Collinge's idea to try a zone plate with more than two parallel planes of reflective portions, *ie* a quarter-wave or higher order zone plate". Since, however, as I have noted, the Black and Wilse paper is cited in the patent in suit, which was approved by Mr Wright, I assume that he does not regard it as impugning the originality of the present invention.

Mr Collinge states that he asked Mr Wright to work out the quarter wavelength zone pattern for a circular zone plate using a computer program he (Mr Wright) had derived. Mr Wright, whilst agreeing that it was he who worked out the pattern in question, expresses how this arose rather differently. His version, as expressed in his first affidavit, is that Mr Collinge

"constructed, according to design data provided by me in accordance with the previous work noted above, a four-layer quarter-wave zone plate on which measurements were made which validated my design principles."

The "previous work" referred to appears to comprise the Cambridge work, together with Mr Wright's own subsequent "extensive review of materials and processes suitable for the design and construction of an experimental four-layer zone plate", and included also derivation by Mr Wright of "a computer programme for the configuration of the separate phase shifting elements required". This was evidently the program to which Mr Collinge refers. I note that both of the Cambridge technical memoranda refer to quarter-wave zone plates. The second memorandum includes drawings of multi-layer half-, third- and quarter-wave plates. I have no reason to doubt Mr Collinge's statement that he was not made aware of either of the memoranda, and in fact I understood Mr Wright to have confirmed this. I am not altogether certain of the full import of Mr Wright's argument as it relates to this stage in the development of the invention, but I would observe that if he is seeking to use the content of the memoranda, as well as of the Black and Wilse paper, to imply that Mr Collinge made no inventive contribution at that point by suggesting the use of additional layers and/or of application to a quarter-wave plate, the same argument might perhaps be used with equal force in relation to his own inventive contribution.

It does not appear to be in dispute that the next event of significance was that Mr Collinge used the figures which Mr Wright gave him to construct at home a first prototype quarter wavelength zone plate antenna, and he exhibited copies of photographs of this prototype. This first attempt failed because the incorrect thickness of dielectric had been used. Mr Collinge describes the realisation that the thickness was wrong in the context of a discussion between himself and Mr Wright, whereas Mr Wright, in his reply evidence, claims that the failures were a consequence of Mr Collinge's insistence on using dielectric of the wrong thickness. I do not regard it as critical to the issue before me which of these versions is more accurate.

In any event, the evidence is broadly consistent as to what happened next. Equipped now with dielectric material of the correct thickness, Mr Collinge tried again, constructing a second prototype on his kitchen table, and testing it late at night by leaning it against his kitchen door and pointing it towards the satellite. Subject to some minor adjustments, the antenna worked, giving a very good picture. The excitement of that moment led to my referring at the hearing to the two resulting telephone calls, first from Mr Collinge to Mr Wright and then, still that same night, from Mr Wright to Mr Deville, as the "Eureka" calls. It appears from Mr Collinge's evidence that it was still in March or April of 1990 when this happened, only shortly after it had first occurred to him, as an outcome of his reading programme, that the provision of extra layers might improve efficiency.

As an aside here, I would mention that Mr Wright contrasted the fact that, according to his account of the "Eureka" calls at the hearing (although not in the evidence itself), he told Mr Deville of Mr Collinge's contribution to the new antenna, with Mr Deville's statement that he had not been informed of Mr Collinge's contribution. Mr Deville's account of his call from "an excited Mr Wright" states that he was informed that "*they [my emphasis]* had made a breakthrough in the construction of an efficient zone plate antenna", and, whilst I do not know enough about the structure of the Mawzones organisation to be certain that Mr Deville must, in using the word "they", have intended to refer to Mr Wright and Mr Collinge together, I am not inclined to regard it as likely that Mr Collinge's contribution that night would have gone unmentioned. This does, therefore, throw some doubt on the accuracy of Mr Deville's statement that he had not been told of Mr Collinge's contribution.

Perhaps, however, it is merely a symptom of the climate of incomplete communication and potential misunderstanding which I have already suggested seems to have existed within Mawzones, at least in relation to the work of Mr Wright.

According to Dr Collins's evidence, the initial discussions between himself and Mr Wright which led to the filing in July 1990 of the initial patent application commenced on 1 May 1990, very shortly after Mr Collinge's successful experiments. Mr Collinge states that he was aware that Mr Wright had approached BWT with this objective, but that he did not know that Mr Wright, whom it is agreed was responsible for initiating and approving the patent application, had named only himself as inventor. Dr Collins states that the naming of Mr Wright as sole inventor was in accordance with Mr Wright's instructions. Mr Wright's own explanation of why he gave such instruction was that "the subject matter was related entirely to the invention implicit in the design I had completed for the first experimental quarter-wave zone plate working model". This is consistent with his stance throughout these proceedings.

The evidence suggests that the next event of any significance was Mr Wright's instructions in November 1990 to Team Consulting Limited ("Team") to investigate a method of large-scale manufacture of four-layer quarter-wave zone plates. This seems to imply that Mr Wright was still at that time seeing potential commercial benefit in the four-layer structure, despite his assertions that he did not, seemingly at any relevant stage, regard this structure as commercially viable. In a letter from Team to Mr Wright dated 16 November 1990, exhibited by Mr Collinge, they confirm that Team was required to generate "a range of concepts for the new design", but I note that the letter also states that "the resulting concepts are to be refined by Mawzones and Team together". Although it does touch directly on the question of inventorship, I note also that Team's terms of business, attached to the letter, include the provision that, subject to completion of all phases of the assignment and to payment of all fees, any patent or other industrial property rights arising directly from Team's work on the assignment would be transferred to the client.

The Team report is undated, but according to Mr Wright it was submitted in early 1991. Mr Wright exhibits a limited extract from it, but Mr Collinge exhibits the entire report. In

his first affidavit Mr Wright implies that all the work was done by Team and that the results were simply announced at a meeting to himself and Mr Collinge, with no inventive content owing anything to himself or to Mr Collinge. Mr Collinge's recollection is different, and he claims that the development of the manufacturing process was derived from brainstorming sessions involving both himself and Mr Wright, together with visits to other companies by Mr Collinge with or without Mr Wright. He refers to one particular visit at which he and Mr Wright saw a "kiss-cutting" technique which was later discussed with Team at a brainstorming session. Kiss-cutting is the term used in the patent to describe the technique disclosed for manufacturing the inventive zone plate. Mr Wright's reply evidence appears to acknowledge that there were meetings with Team attended by Mr Collinge, but denies that Mr Collinge could, on that basis, claim any inventive content. He adds that Team have advised him in a telephone conversation that they endorse his position on this. However, he has provided no supporting evidence of Team's alleged statement, and I must make clear that I can take no account whatever of such uncorroborated hearsay.

The Team report is not conclusive in this regard, referring to a brainstorming session but stating only that it involved "six of Team's personnel". As outlined in an appendix to the report, the brainstorming session entered into detail on which the patent specification is silent. Indeed, although the drawings of the apparatus used in the patent specification appear to be in all material respects identical to those in the Team report, the method claimed goes little beyond that which Mr Collinge describes as having been performed on his kitchen table.

There is no evidence as to whether Mr Wright took matters any further on multi-layer zone plates after receipt of the Team report, but an absence of further action on his part would be consistent with his repeated statement, for example in his reply evidence, that in his view the multi-layer method could not be considered an improvement in terms of cost effectiveness over the conventional circular parabola or dish. He states that he was "summarily" dismissed from his post of Managing Director of Mawzones in May 1991, and that Mr John Billett was appointed by Mawzones to instruct BWT in relation to the patent application. Mr Deville states that, subsequent to Mr Wright's departure, he became aware of Mr Collinge's contribution (by implication, to the design of the zone plate), which had not, he states, been acknowledged by Mr Wright. I have already commented upon a possible inconsistency in

Mr Deville's position regarding his knowledge of Mr Collinge's contribution, but noted that this may reflect the generally poor communications which existed within Mawzones in relation to Mr Wright's work.

In discussions between Mr Deville and Mr Billett it was agreed that Mr Collinge should be named as a joint inventor with Mr Wright in an international application to include the method of manufacture, and Dr Collins confirms that in discussions between himself and Mr Billett in June and July 1991 he was so instructed. It was decided to abandon the original application, and the international application was duly filed on 10 July, claiming priority from the earlier application. Shortly afterwards Mr Wright signed the necessary power of attorney, though he states that he did so in the belief that he was named as sole inventor in the international application. Dr Collins sent a copy of the published specification to Mr Wright in June 1992, at which point Mr Wright protested at Mr Collinge's inclusion as joint inventor.

Dr Collins completes the story by stating that in February 1993, which was very shortly before Mr Wright initiated the present proceedings under section 13(3), he was instructed by Mr Billett to write to Mr Wright explaining that Mr Collinge had been added as inventor as a result of the addition of new material (*viz* the method and apparatus) to the international application. He states in his affidavit, and confirmed at the hearing, that he had originally been given to understand that Mr Collinge's contribution was limited to the manufacturing technique, and only became aware that Mr Collinge had also made a significant contribution to the invention of the initial application, namely the design of the zone plate *per se*, once Mr Wright's section 13(3) action had prompted a closer investigation and a lengthy interview with Mr Collinge. This appears to me to be another symptom of the incomplete communication which occurred within Mawzones in relation to Mr Wright's work.

It is difficult to draw from the evidence a clear idea of the genesis of the invention of the patent in suit. Mr Wright seeks to paint a picture in which all of the inventive originality comes from him, yet in arguing that Mr Collinge's contribution was limited and non-inventive he points *inter alia* to the availability to Mr Collinge of sources which were equally at his disposal, and which therefore might equally argue against his own inventorship, which

I note has not been disputed by anyone speaking on behalf of Mawzones. Mr Collinge, whose evidence I find on the whole somewhat fuller and more forthcoming on relevant detail than that of Mr Wright, does not dispute that when he joined Mawzones he worked with Mr Wright on a zone plate project on which Mr Wright was already actively engaged. It seems clear that, although Mr Wright guided Mr Collinge's reading in order to facilitate his contribution to the project, he did not show him the two Cambridge memoranda, and this may reflect both the fact that there were differences of emphasis between them as to their preferred solutions, and what appears to be a tendency on Mr Wright's part not to inform his colleagues fully as to work upon which he was engaged.

Whilst there appears to be no unique moment in the development of the invention which can be described as its genesis, perhaps the single most important event was the occasion when the device was first made to work to a satisfactory degree, leading to the "Eureka" telephone calls and an acknowledgement by Mr Wright, albeit perhaps shortlived, that a significant breakthrough had occurred. It certainly seems clear that Mr Wright's late-night call to Mr Deville was made for no other purpose than to announce success. It is also clear, by Mr Wright's admission, that Mr Collinge's role in the construction of the zone plate was acknowledged by him at that time, even if he would argue that this role was solely that of a technical assistant carrying out Mr Wright's own design instructions.

With regard to the manufacture of the zone plates, it is relevant that the invention claimed in the main claims refers only to the steps of applying reflective portions to planar substrates and stacking the substrates to form the zone plate. Claims 10 and 14 are silent with respect to the detail disclosed elsewhere in the patent and corresponding to the manufacturing process which emerged from the sessions with Team, but it is not clear to whom the broad concept of the manufacturing process could be attributed. Mr Collinge was the first to construct a working example of a multi-layer zone plate according to the invention. Mr Wright insists that the construction was under his direction.

Were I to be in a position of having to decide *ab initio* who should properly be mentioned as inventor in the patent in suit, I think it likely, on the evidence available to me, that I would be led to conclude that Mr Wright and Mr Collinge had both contributed significantly,

albeit in different ways and to respective extents which do not emerge very clearly from the evidence, and therefore that they should both be named. A factor in this would be the short time which elapsed between Mr Collinge's first thought that a multi-layer zone plate might be worth trying, the production of a successful prototype, and the filing of the patent application, suggesting that Mr Collinge brought fresh impetus and energy, and perhaps a new angle, to the project. However, I am not in that position. As my earlier discussion of onus made clear, it is, in these proceedings, up to Mr Wright to demonstrate to me that Mr Collinge should not have been mentioned as inventor. In other words, Mr Wright has the task of displacing Mr Collinge as inventor, on the evidence. I am quite satisfied that he has not succeeded in that task. Perhaps he misled himself as to the magnitude of the task by his unfounded belief that the burden of proof lay with Mawzones, but, be that as it may, I can only find that Mr Wright's application under section 13(3) for a certificate to the effect that Mr Collinge ought not to have been mentioned as inventor has failed, and I issue no such certificate.

At the hearing both parties asked for an order for costs. Mr Wright has made an application which has failed and, under the powers afforded me by section 107 of the Patents Act 1977 and in accordance with the normal practice in proceedings before the Comptroller, I award to the patentees, Mawzones Developments Limited, the sum of £500 as a contribution to their costs in these proceedings, and order that this sum be paid to them by Mr Wright.

Any appeal from this decision must be lodged within 6 weeks from the date of the decision.

Dated this 19 day of January 1995

Dr F FERDINANDO

Superintending Examiner, acting for the Comptroller

THE PATENT OFFICE

