

SOUTH AFRICA / JUDGMENT

Ausplow (Pty) Limited v North Park Trading 3 (Pty) Ltd (Formerly Marais Engineering CC) (95/0812) [2007] ZACCP 3; 2007 BIP 1 (CP) (30 January 2007) [2007] ZACCP 3

COURT

Court of the Commissioner of Patents

BEFORE

B.R. Southwood

CASE / FILE NUMBER

95/0812

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IN THE COURT OF THE COMMISSIONER
OF PATENTS FOR THE REPUBLIC OF SOUTH AFRICA
Case/Patent No. 95/0812

In the matter between:

AUSFLOW (PTY)
LIMITED
Plaintiff
and
NORTH PARK TRADING 3 (PTY) LTD
(FORMERLY
MARAIS
ENGINEERING CC)
Defendant
In re: Infringement of South African
Patent No 95/0812

JUDGMENT

SOUTHWOOD J

- [1] The plaintiff, the patentee of South African Patent No. 95/0812 entitled Improvements in or relating to Seeding Machinery ('the patent') seeks an interdict restraining the defendant from continuing its infringement of the patent, an inquiry into damages, an order for delivery up and costs. It is common cause that the defendant has used and/or made and/or disposed of and/or offered to dispose of and/or sold a planter under the name Voor Planter.
- [2] The plaintiff alleges that the Voor Planter falls within the scope of the claims of the patent and accordingly infringes it. The defendant admits that the plaintiff is the

patentee of the patent but denies that the Voor Planter falls within the scope of the claims of the patent and infringes the patent. The defendant also denies that the patent is valid. In its counterclaim the defendant seeks the revocation of the patent on three grounds. First, the defendant alleges that in terms of section 61(1)(c) read with section 25 of the Patents Act, 57 of 1978 ('the Act') the invention claimed was not new. Second, the defendant alleges that in terms of section 61(1)(c) read with section 25 of the Act the invention claimed did not involve an inventive step. Third, the defendant alleges that in terms of section 61(1)(f) of the Act, the claims of the patent are not clear. For its attack on the patent on the grounds of lack of novelty and lack of inventiveness the defendant, in its counterclaim, relied on 42 documents which formed part of the state of the art. In its plea to the defendant's counterclaim the plaintiff admitted that 33 of the documents (listed in paragraph 1.1 to 1.33 of the defendant's statement of particulars) were published before the priority date of the claims of the invention (i.e. 3 February 1994) but denied that the invention was not new and that it did not involve an inventive step. The plaintiff also denied that the claims of the patent are not clear.

- [3] The invention of the patent relates to seeding machinery and more particularly but not exclusively to seeding machinery for attachment to a seeding or cultivating tine.

According to the specification –

'It has been found in practice that tined seeding machinery and attachments have difficulty in penetrating soil deeply whilst at the same time maintaining accurate placement of seed and fertilizer. Due to the undulating ground conditions nearly always encountered, and with seeding depth controlled by widely spaced ground wheels, seeding depth cannot be maintained, often with seed and fertilizer placed together on a hard impenetrable barrier causing poor seed germination, loss of plant vigour, low yields, poor water infiltration, waterlogging and fertilizer toxicity and a greater incidence of disease.'

The object of the invention is to overcome or substantially ameliorate these disadvantages.

The specification summarises the invention as follows:

‘There is disclosed herein a seeding assembly to be used with a plough frame supporting at least one plough tine, said assembly comprising:

a seeding tube to extend downwardly into a slot formed in a soil layer by the tine, said tube having a lower extremity through which seed is delivered into the soil layer;

a closing tool fixed with respect to said lower extremity and having a leading surface forward thereof relative to the normal direction of travel of the frame over the soil layer, said closing tool being aligned in said direction with respect to said lower extremity so that it engages soil adjacent said slot to dislodge the soil to partly close the slot and provide a seed bed onto which seed leaving said lower extremity is delivered;

mounting means to attach the tube and closing tool to the frame to permit height adjustment of the tube and the closing tool with respect to the frame; and

ground engaging means operatively associated with the tube and closing tool to engage the soil layer to cause said height adjustment.’

This is the essence of the patent’s first claim.

[4] The parties agree that the integers of claim 1 are as follows:

A seeding assembly to be used with a plough frame supporting at least one plough tine, said assembly comprising:

(A) a seeding tube

- (i) to extend downwardly into a slot formed in a soil layer by the tine,
- (ii) said tube having a lower extremity through which seed is delivered into the soil layer;

(B) a closing tool

- (i) fixed with respect to said lower extremity and
- (ii) having a leading surface forward thereof relative to the normal direction of travel of the frame over the soil layer,
- (iii) said closing tool being aligned in said direction with respect to said lower extremity so that it engages soil adjacent said slot
- (iv) to dislodge the soil to partly close the slot and
- (v) provide a seed bed onto which seed leaving said lower extremity is delivered;

(C) mounting means

- (i) to attach the tube and closing tool to the frame
- (ii) to permit height adjustment of the tube and the closing tool with respect to the frame; and

(D) ground engaging means

- (i) operatively associated with the tube and closing tool
- (ii) to engage the soil layer to cause said height adjustment.

Onus

- [5] The onus of proving infringement rests on the plaintiff – Ensign-Bickford (SA) (Pty) Ltd and Others v AECI Explosives and Chemicals Limited 1999
- (1) SA 70 (SCA) at 75H-I (1998 BIP 271 (SCA) at 274H). The onus of proving that the patent is invalid rests on the defendant – Gentiruco AG v Firestone SA (Pty) Ltd 1972
- (1) SA 589 (A) at 629E-F (1971 BP 58 (A) at 108B) ('the Gentiruco case'): Roman Roller CC and Another v Speedmark Holdings (Pty) Ltd [1995] ZASCA 78; 1996
- (1) SA 405 (A) at 412F-G (1995 BIP 199 (A) at 208E-F).

The role of expert evidence

- [6] The principal issues in this case are –
 - (1) whether the patent has been infringed;
 - (2) whether the patent must be revoked because the invention was not new (section 61(1)(c) read with section 25 of the Act);
 - (3) whether the patent must be revoked because the invention does not involve an inventive step (section 61(1)(c) read with section 25 of the Act); and
 - (4) whether the patent must be revoked because the claims of the complete specification are not clear (section 61(1)(f) of the Act).
- [7] The parties tendered the evidence of three expert witnesses, all claiming to be skilled addressees of the patent. The plaintiff tendered the evidence of Professor Gert Andries Agenbag and Mr Jacobus Pieter le Roux and the defendant tendered the evidence of Mr Jan Carel Horak van Niekerk. The defendant delivered a notice and summary in respect of Mr Marais Steyn but did not call him to testify. According to the summary of his evidence, Mr Steyn developed the Voor Planter. All the witnesses expressed opinions.
- [8] Professor Agenbag is a professor in the Department of Agronomy at the University of Stellenbosch. He analysed the operation of the plaintiff's seeding assembly which forms part of the Ausseeder DBS Cultivator Bar (and is hereinafter referred to as the Ausseeder) in relation to the problems presented by no-tillage planting methods. He expressed the view that the Ausseeder (i.e. the product of the invention) is a no-tillage planter which overcomes the problems associated with prior no-tillage planters and is the first no-tillage planter which can be successfully and economically used in a variety of soil and climate conditions. He also expressed the opinion that the Ausseeder brought about a revolution in no-tillage planting operations and that the combination of the elements is not present in any of its predecessors. None of these predecessors is identified.

[9] Mr Le Roux has a BSc in agricultural engineering (1962) and a MBA (1989) and more than 40 years practical experience of agricultural mechanisation. He analysed the features of the Ausseeder and the Voor Planter and concluded that the appearance, components and configuration of the seeding assembly of the Voor Planter (depicted in photographs 17 and 18 of Annexure JCLR2 to his summary) are for all practical purposes identical to and at least substantially

similar to those of the seeding assembly which is described in the specification and which is shown in the drawings of the patent

specification. He further expressed the view that these features of the Voor Planter fall within the scope of the patent's claims. Le Roux also analysed the state of the art documents relied on by the defendant for its attack on the validity of the patent. He stated, in respect of each of the four patents relied on to show lack of novelty, that it does not disclose all the integers of any one of the claims of the patent. On the issue of obviousness he considered the Ausseeder against the background of the state of the art patents relied upon by the defendant. He described the inventive step involved in the Ausseeder, the state of the art relevant to that inventive step, the respect in which the inventive step goes beyond or differs from the prior art and why taking that step would not be obvious to him. Finally, he explained why the expressions relied upon by the defendant do not lack clarity.

[10] Mr Van Niekerk has a BSc in agricultural engineering (1971) and a Diploma in Business Administration and more than 30 years experience in developing, manufacturing and selling agricultural equipment and implements. He set out the integers of the claims of the patent (which are the integers agreed) and compared the features of the Voor Planter with these integers. He concluded (and this was his opinion) that the Voor Planter does not exhibit all of the integers of these claims. Van Niekerk also analysed the four patents relied upon by the defendant for its attack on the patent based on lack of novelty and expressed the general opinion that the claims of the patent do not differ from what is disclosed in these documents. He also expressed this opinion in respect of each of the four patents. With regard to the attack based on the lack of an inventive step Van Niekerk referred to the four patents relied on for lack of novelty and expressed the opinion that the invention of the patent does not involve a step over and beyond that disclosed in these patents but that, if it did, such step would have required no inventive ingenuity to arrive at the alleged invention of the claims of the patent. Van Niekerk also relied on a further patent which he considered exhibits all but one of the integers of claim 1 of the patent. He expressed the view that a skilled person would have imported this feature from one of the other four patents to arrive at the invention of the patent. Finally, Van Niekerk expressed the opinion that each of the expressions relied upon by the defendant lacks clarity.

Evidence regarding infringement

[11] Infringement requires that the claims of the patent be construed. The principles governing the construction of a patent were formulated in the *Gentiruco* case at 613-618 (1971 BP at 85-93). In order to properly construe a patent the court may receive extrinsic evidence as to the ordinary meaning of technical words of the art or science involved in the invention: i.e. as they are ordinarily understood in the particular art or science (614C-D: 87A). The court may also receive expert evidence in so much of the art or science, commonly known at the time, as is necessary to enable it to construe the specification properly: i.e. *par excellence*, evidence of circumstances surrounding the specification to place the court as near as may be in the position of the patentee and the interested skilled members of the public to whom it is addressed, as at the relevant date (614E-G: 87B-G). The opinion of an expert as to the meaning of any part of the specification, including the claims, is not admissible and must be disregarded (616D-618E: 89G-92F). So too, the opinion of an expert that the patent has been infringed – *Johnson and Johnson (Pty) Ltd v Kimberly-Clark Corporation and Kimberly-Clark of South Africa (Pty) Ltd* 1985 BP 126 (A) at 135C: *Selero (Pty) Ltd and Another v Chauvier and Another* 1984

(1) SA 128 (A) at 139C-H (1983 BP 175 (A) at 188E-189D).

Evidence regarding lack of novelty (anticipation)

[12] This issue of lack of novelty (anticipation) also requires that the claims of the patent as well as the alleged anticipatory document be construed. Where the alleged anticipatory document is a patent the same rules of construction apply. The claims of the patent in issue and the prior patent, properly construed, are then compared to ascertain whether the prior patent describes the invention claimed in the patent: i.e. whether it sets forth or recites the essential integers of the claims in such a way that the same or substantially the same process or apparatus is identifiable or perceptible – *Netlon Ltd and Another v Pacnet (Pty) Ltd* 1977

(3) SA 840 (A) at 861H-862B (1977 BP 87 (A) at 108F-109C; *Schlumberger Logelco Incorporated v Coflexip* 2003

(1) SA 16 (SCA) (2002 BIP 35 (SCA)) paras 20-24. The opinion of expert witnesses that the patent does not anticipate a claim of the patent in suit must be disregarded for that is for the court to decide – the *Gentiruco* case at 646H (1971 BP 139D-E); *Schlumberger Logelco Inc v Coflexip* supra paras 20-24. Where the allegedly anticipatory publication is not a patent the court must look at the documents through its own eyes and not through the eyes of a skilled worker in the art – *Letraset Ltd v Helios Ltd* 1972

(3) SA 245 (A) at 267A-C (1972 BP 243 (A) at 272D-273C); *Filta Matix (Pty) Ltd v Freudenburg and Others* [1997] ZASCA 110; 1998

(1) SA 606 (A) at 615G-H (1997 BIP 284 (SCA) at 293F-G). Only in exceptional circumstances, where the court is unable to properly interpret what is depicted in an allegedly

anticipatory photograph or drawing, may the court have regard to the opinions of expert witnesses as to what is depicted –

Schlumberger Logelco Inc v Coflexip supra para 24.

Evidence regarding lack of inventiveness (obviousness)

[13] The issue of lack of inventiveness (obviousness) requires that the following four matters be determined –

- (1) what the inventive step said to be involved in the patent is;
- (2) what, at the priority date, the state of the art (as statutorily defined) relevant to that step, was;
- (3) in what respect the step goes beyond, or differs from, that state of the art; and
- (4) whether, having regard to such development or difference, the taking of the step would be obvious to the skilled man.

Ensign-Bickford (SA) (Pty) Ltd v AECl Explosives and Chemicals Ltd 1999

- (1) SA 70 (SCA) at 80H-J (1998 BIP 271 (SCA) at 280E-G). The technical evidence of expert witnesses is admissible with regard to the first three matters ('the primary evidence') but is inadmissible in respect of the fourth matter – Schlumberger Logelco Ltd v Coflexip supra para 34; the Gentiruco case at 618A.

Evidence regarding lack of clarity (uncertainty of claiming)

[14] For a patent to be valid the patentee must state clearly and distinctly the nature and limits of his claim. The standard is 'reasonable certainty'. To decide whether reasonable certainty exists the court may receive expert evidence – Roman Roller CC and Another v Speedmark Holdings (Pty) Ltd [1995] ZASCA 78; 1996

- (1) SA 405 (A) at 409D-E (1995 BIP 199 (A) at 222C-D); the Gentiruco case at 618E-G (71 BP 92F-G). In Reeves Bros and Another v Furpile 1971 BP 21 (CP) at 37D Nicholas J said that the test is whether the expressions would be ambiguous to a person skilled in the art. Because no evidence was led he found that the ground of invalidity was not established. In Unilever Ltd v Colgate-Palmolive Company 1977 BP 200 (CP) at 204E-205A the court held that the question is a pure question of fact to be determined by the evidence of persons skilled in the relevant art.

[15] It is apparent from these principles and the summary of the expert evidence that a great deal of the evidence is not admissible and must be disregarded by the court. This will be dealt with further when the principal issues are considered.

Infringement

[16] At the commencement of the trial reference was made to the integers set out in para 4 and it was recorded that the defendant admitted that the following integers are present in the Voor Planter –

- (1) A seeding assembly to be used with a plough frame supporting at least one plough tine, said assembly comprising (Introduction);
- (2) a seeding tube ((A));
- (3) mounting means ((C));
- (4) to attach the tube (and bracket) to the frame ((C)(i));
- (5) to permit height adjustment of the tube (and bracket) with respect to the frame ((C)(ii));
- (6) ground engaging means ((D));
- (7) operatively associated with the tube (and bracket) ((D)(ii));
- (8) to engage the soil layer to cause said height adjustment ((D)(ii)).

The admission of integers (C)(i) and (C)(ii) and (D)(i) and (D)(ii) is qualified in that the defendant does not admit that the Voor Planter exhibits a closing tool. Consequently the issues as far as the plaintiff's infringement claim is concerned are whether the Voor Planter exhibits –

- (1) Integers (A)(i) – the dispute being whether the seeding tube extends into the slot;
- (2) Integer (A)(ii) – the dispute being whether the seed is delivered into or onto the soil layer;
- (3) Integers (B)-(B)(v) – the dispute being whether the Voor Planter has a closing tool with these features;
- (4) Integers (C)(i), (C)(ii), (D)(i) and (D)(ii) – the dispute being whether the Voor Planter has a closing tool.

[17] As already mentioned the patent is common cause and the defendant admits that it has made, used, exercised, disposed of or offered to dispose of the Voor Planter. It is also common cause that the Voor Planter is depicted in the drawings in bundle E p7-19 and the photographs in bundle E p20-32. The Voor Planter seeding assembly depicted in the photographs in bundle E p21-26 is exhibit B. The issue is whether the Voor Planter is covered by the claims of the patent. The parties dealt only with claim 1 as it is clear that if the defendant has not infringed claim 1 there is no infringement of the patent.

[18] In *Letraset Ltd v Helios Ltd* 1972

- (3) SA 245 (A) at 274E-275A the court set out the principles relevant to infringement as follows:

‘The determination of the question as to whether or not plaintiff has proved an infringement of his patent turns upon a comparison between the article or process, or both involved in the alleged infringement and the words of the claims in the patent. If the article or process falls within the ambit of the claims, properly construed, an infringement is proved. But the article or

process will not be regarded as falling outside the scope of the claims if such differences as the comparison may disclose are not matters of any substance. In making the comparison the law looks at the issue of what is contained in the claim and will not allow what is described as the “pith and marrow” of the protected invention to be pirated. The evaluation of what is the substance or essence of an invention is a matter for the “good sense” of the judicial tribunal seized with the enquiry.’

See also *Stauffer Chemicals Co v Sasfan Marketing and Distribution (Pty) Ltd* 1987

(2) SA 331 (A) at 342D-E (1986 BP 462 (A) at 477).

In *Johnson & Johnson (Pty) Ltd v Kimberly-Clark Corporation and Kimberly-Clark of South Africa (Pty) Ltd* 1985 BP 126 (A) at 130G-131B the court said –

‘The determination of the question of infringement involves a two-stage inquiry: firstly, the claims must be properly construed, including the ascertainment of the essential integers; then the infringing article or process must be considered – to constitute infringement the article of process must take each and every one of the essential integers of at least one of the claims. If it does not, there is no infringement.’

See also *Stauffer Chemicals Co v Sasfan Marketing and Distribution (Pty) Ltd* supra at 346I-347D (1986 BP 485E-486C).

- [19] These principles are of importance in the present case where the plaintiff’s product, the Ausseeder (exhibit A) and the Voor Planter (exhibit B) have been placed alongside each other in the court and there was a comparison between the two products in the evidence. As was emphasised in *Weltevrede Nursery v Keith Kirstens (Pty) Ltd and Another* 2004
- (4) SA 110 (SCA) para 8 the basis of comparison for purposes of infringement of any registered intellectual property right is the right as registered in whatever form is required for the particular right. The plaintiff’s counsel agreed that the Ausseeder before the court could be used for one purpose only: to demonstrate that it was manufactured in accordance with the patent. It may be observed however that the patent claim in issue makes no reference to the fertilizer tube which is clearly incorporated in the product itself and is shown in the drawings referred to by the experts.
- [20] In the present case it is not contended that the integers in issue are not essential. There is also no dispute about the terminology used in the patent and the parties did not tender evidence as to the meaning of any words or phrases in the patent – the *Gentiruco* case at 614B-C (1971 BP at 86G-87A). There was also no attempt to instruct the court by expert evidence in so much of the art or science commonly known at the time as is necessary to enable the court to construe the specification properly: i.e. evidence of circumstances surrounding the specification that is admissible in order to place the court as near as may be in the position of the patentee and the interested skilled members of the public to whom it is addressed, as at the relevant date – the *Gentiruco* case at 614E-G (1971 BP at 87B-D). The patent must therefore be construed in accordance with the rules of interpretation set out in

the Gentiruco case at 613-618 (1971 BP at 85-93) without recourse to the evidence tendered. On the issue of infringement expert evidence is not admissible as to the meaning of the specification – the Gentiruco case at 618E (1971 BP at 92F) – and it is not admissible on the question whether or not there has been an infringement – Johnson & Johnson (Pty) Ltd v Kimberly-Clark Corporation and Kimberly-Clark of South Africa (Pty) Ltd supra at 135C: Selero (Pty) Ltd and Another v Chauvier and Another 1984

(1) SA 128 (A) at 139C-H (1983 BP 175 (A) at 188E-189D).

[21] In the light of the authorities already referred to, none of the evidence of the expert witnesses is admissible on the issue of infringement. The court must construe the claims of the patent and decide whether the Voor Planter incorporates all the integers of claim 1. The main issue is whether the Voor Planter incorporates integers (B)(i)-(v), i.e. a 'closing tool' with the relevant features. 'Closing tool' has no special or technical meaning. The words 'closing tool' must therefore be read grammatically and in their ordinary sense. The ordinary meaning of the word 'tool' according to the Shorter Oxford English Dictionary is 'a mechanical implement for working upon something in any process' and 'closing' means 'to enclose, confine, shut up in (within)'. This is consistent with the function which it is to perform i.e. to engage soil adjacent to the slot created by the tine and to dislodge this soil to partly close the slot. This is supported by the detailed description of the preferred embodiment which describes a slot closing plate which is attached at the bottom of the seed/fertilizer pipe which is double the width of the tine and which, in operation, is drawn over the loosened soil closing the slot made by the blade. It is also supported by the detailed description of the second embodiment which refers to a closing tool which has a leading surface which engages the soil adjacent to the slot formed by the blade to partially close the slot and form the seed bed. It is clear that the closing tool is attached to the pipe following the blade making the slot and partially or completely closes the slot by engaging and dislodging soil adjacent to the slot. Claim 1 does not specify any particular shape for the closing tool. It defines or describes the tool with reference to its function.

[22] The Voor Planter has a plate which at the top is attached to the L- shaped frame of the seeding assembly and at the bottom is attached to the bottom end of the seeding pipe. About halfway it bends 45 degrees to the rear so that the leading surface faces towards the normal direction of travel of the seeding assembly. The plate is 40 mm wide at the top and tapers to about 32 mm at the bottom. The drawings refer to this part of the seeding assembly as the 'Planter Toe Assembly Scraper Detail'. Where the seeding pipe meets the plate it starts to taper because the plate is bent inwards towards the seeding pipe to give it the appearance of angle iron. These features appear on the drawings at bundle E p7, 8, 9, 10 and 17 and the photographs at bundle E p20, 21, 23, 24 and 27. As appears from the photographs at bundle E p23, 24, 25 and 26 the plate follows in the slot created by the tine and because it is wider than the slot will engage the soil adjacent to the slot and dislodge it causing it to partially close the slot. Accordingly, the scraper may be properly described as a closing tool. It is fixed with respect to the lower extremity of the seeding tube. It has a leading surface in front of the

seeding tube relative to its normal direction of travel. It is aligned in the normal direction of travel with respect to this lower extremity of the seeding tube so that it engages the soil adjacent to the slot and will dislodge the soil to partly close the slot. The dislodged soil will provide a seed bed onto which seed leaving the lower extremity of the seeding tube is delivered. All the integers of (B)(i)-(v) are therefore exhibited in the Voor Planter. This finding that the scraper is a closing tool disposes of the issues relating to integers (C)(i), (C)(ii), (D)(i) and (D)(ii). All these integers are present in the Voor Planter. The remaining issue is whether integers (A)(i) and (A)(ii) are present in the Voor Planter.

[23] The defendant contends that the seeding tube of the Voor Planter does not extend downwardly into the slot formed in a soil layer by the tine because the seeding tube is 26 mm in diameter and therefore

wider than the tine. The defendant contends that the seeding tube extends into the slot created by the scraper which is wider than the tine and the seeding tube. This is what is contemplated by claim 1. The fact that the scraper widens the slot made by the tine does not mean that the seeding tube does not extend into the slot made by the tine. It is also clear that the seeding tube has a lower extremity through which seed is delivered into the soil layer. Integers (A)(i) and (ii) are therefore present in the Voor Planter.

[24] Subject to the validity of the patent the Voor Planter infringes claim 1 of the patent.

Novelty

[25] In terms of section 61(1)(c) of the Act a patent may be revoked on the ground that the invention concerned is not patentable. In terms of section 25(1) of the Act, in order to be patentable an invention must be new. With regard to this requirement, section 25(5) provides that an invention shall be deemed to be new if it does not form part of the state of the art immediately before the priority date of that invention, and section 25(6) provides that the state of the art shall comprise all matter (whether a product, a process, information about either, or anything else) which has been made available to the public (whether in the Republic or elsewhere) by written or oral description, by use or in any other way – Schlumberger Logelco Incorporated v Coflexip 2003

(1) SA 60 (SCA) (2002 BIP 35 (SCA)) para 20.

[26] The defendant bases its case on anticipation on only four of the patents referred to in its counterclaim –

- (i) US patent 4, 762, 075 (bundle E p78-88) ('the Halford patent');
- (ii) US patent 4, 691, 645 (bundle E p89-95) ('the Anderson patent');
- (iii) US patent 4, 726, 304 (bundle E p96-113) ('the Dreyer patent');
- (iv) SA patent 80/8911 (bundle E p114-137) ('the Van Tonder patent').

[27] For a successful attack on the novelty of the patent it must be shown that, in substance, the same invention was described in any one of the allegedly anticipatory publications. In *Netlon Ltd and Another v Pacnet (Pty) Ltd* 1977

(3) SA 840 (A) at 861H-862B (1977 BP 87 (A) at 108F-109C) the court set out the principles applicable as follows –

‘[T]he defence (or objection) of anticipation relates to the claims and not to the description of the invention in the body of the specification in suit (see too, the *Letraset* case, *supra* at pp264-5). The prior printed publication alleged to be anticipatory must be construed, for the exercise is primarily one of construing

and comparing the two documents; moreover it must be construed as at the date of its publication to the exclusion of information

subsequently discovered; the question then considered is whether the prior publication ‘describes’ the invention in suit as claimed; that is, whether it sets forth or recites at least the latter’s essential integers in such a way that the same or substantively the same process or apparatus is identifiable or perceptible and hence made known or the same or substantially the same product can be made from that description in the prior publication; if the description in the prior document differs, even in a small respect, provided it is a real difference, such as the non-recital of a single essential integer, the anticipation fails; the opinions of expert-witnesses that the prior publication does or does not anticipate a claim in suit must be disregarded for that is for the Court to decide.’

See also *Schlumberger Logelco Inc v Coflexip* *supra* para 23; the *Gentiruco* case at 646C-647A (1971 BP at 138-139); *Veasey v Denver Rock Drill and Machinery Co Ltd* 1930 AD 244 (*Veasey’s* case) at 282.

[28] To constitute an anticipation the description in the prior publication must be contained in a single prior publication. It cannot be synthesised or mosaiced from two or more publications.

[29] These publications will be considered in turn to see whether any one ‘describes’ the invention in the patent: i.e. whether any one sets forth or recites the patent’s essential integers in such a way that the same or substantially the same apparatus is identifiable or perceptible and hence made known. The defendant contends that each one of the patents sets forth the patent’s essential integers.

Halford Patent

[30] The Halford patent is entitled ‘Seed/Fertilizer Minimum Tillage Planter’. According to the abstract the patent relates to an apparatus for seed and fertilizer placement in the ground and comprises a knife followed immediately by a first tube for depositing fertilizer and a second tube spaced therefrom for depositing the seed. The second tube can be adjusted horizontally and vertically and particularly to a position scraping the side of the furrow

formed by the knife to deposit the seed at the side. A packer wheel mounted on the same support as the second tube follows the second tube and runs in the furrow to press down soil over the seed and fertilizer. The packer wheel is rotationally molded from polyethylene. The plaintiff contends that integers (B), (C)(ii) and (D)(ii) are not present in the Halford patent. In argument the plaintiff's counsel dealt only with integer (B).

- [31] The detailed description of the apparatus, commencing in column 2 line 64, clearly does not refer to a closing tool. The defendant contends that the description of the modified apparatus, commencing in column 6 line 14 does refer to such a tool. According to the description a front edge of the lower portion of the second tube 442 carries a tip or rod 443 which projects beyond the lowermost edge of the tube 44 and acts to scrape the surface of the ground. The rod 443 which can be circular in cross-section acts to reduce wear on the front edge of the tube and also reduces the possibility of damp soil being forced backwards up the tube 44 thus preventing the seed from being properly deposited on the ground. In order to assist this effect, the tube end is chamfered so that the front end engages the soil and allows the seed indicated at 444 to drop out of the tube onto the ground (column 6 line 6 – column 7 line 3). The description proceeds as follows –

‘As shown in Fig 8, the tube 44 is adjusted relative to the tube 18 so that it lies higher than the end of the tube 18 and such that it is twisted to one side. In this way the lowermost edge of the tube 44 scrapes the side of the furrow formed by the knife 15 pushing the soil forwardly so as to partially fill the furrow with soil as indicated at 445. Thus, as shown in Figs 5 and 8, the furrow as cut by the knife is indicated at 151 and a side wall of the furrow is indicated at 152 where the tube 442 scrapes the side to deposit the seed in unturned soil at the side away from the fertilizer escaping from the tube 18 and indicated at 153.’ (Column 7 lines 4-15).

It is clear from this description that it is the lowermost edge of the tube 44 which scrapes the side of the furrow formed by the knife 15 pushing the soil forwardly so as to partially fill the furrow with soil. It is also clear that the spacing between the first and second tubes is essential for soil to fall between the tubes. Nowhere is it stated that the purpose of the rod is to close the furrow by engaging with soil adjacent to the furrow and dislodging the soil. Integer (B) is not present in the Halford patent.

Anderson Patent

- [32] The Anderson patent is entitled ‘Seed Planter Attachment’. According to the abstract the patent relates to an improved seed planter for a chisel plow which includes a boot connected by a pair of leaf spring rods to the vertical shank of the plow. A bracket for connecting the spring rods to the boot and for gauge or press wheel attachments is detachably coupled to the rear of the boot by a quick-releasing pin that engages apertures in tabs fixed to the boot. The tabs mate with slots on the bracket. Thus, the depth of the boot may be regulated independently of the spring rod bias.

[33] In the plaintiff's further particulars for trial the plaintiff formally admitted that the Anderson patent discloses a seed planter attachment forming a seed assembly for use with a plough frame; that it discloses a seeding assembly which supports at least one plough tine and that the seeding assembly has a seeding tube that extends downwardly into a slot formed in a soil layer by the tine and which has a lower extremity through which seed is delivered into the soil layer and that it has a ground engaging means. The plaintiff therefore admitted that the patent discloses integers (A), (A)(i) and (ii) and (D). However, the plaintiff denied that the patent discloses the following integers: (B), (B)(i)-(v), (C), (C)(i), (C)(ii), (D)(i) and (D)(ii). In argument the plaintiff contends that the patent does not disclose integers (B)(iii) and (iv) and (C)(ii) and (D)(ii). These integers will be considered in turn.

Integers (B)(iii) and (iv)

[34] In the detailed description of the invention the patent states –

‘An earth working foot 16 may be attached to the cylinder 14 by means of bolts 18, and as such, different types of foot may be used as desired. The foot 16 is crescent-shaped and serves to close the soil over the fertilizer which is injected through a tube (not shown) on the chisel plow 10 prior to the deposit of seeds in the ground.’ (Column 3 lines 8-14)

‘In this way, the distance between the fertilizer injected into the soil through knife 11 and the seeds deposited through cylinder 13 can be regulated. This enables the soil to fill in on top of the fertilizer in the wake of knife 11 and allows it to be pressed into the ground by the shape of foot 16 prior to the deposit of a seed thereon’. (Column 4 lines 48-53).

[35] The defendant contends that although the foot 16 is shown in fig 2 as narrower than the chisel plow 10 the first passage states pertinently that different types of foot may be used as desired. Therefore, according to the argument, by selecting and using a wider foot, one wider than the chisel plow will engage the soil adjacent the slot. Therefore integer (B)(iii) is present. Furthermore, if the slot formed by the chisel plow is open the foot will close the soil over the fertilizer only if (a) the foot 16 obtains the soil by engaging the soil adjacent to the soil or (b) by scraping soil that flows back naturally into the slot between the plow 10 and the foot 16. The defendant argues that, in the latter case, the natural flow characteristics of soil flowing into a slot will result in the soil forming a furrow having sloping side walls. The foot 16 scrapes these side walls to close the soil over the fertilizer. According to the argument, this is a further reason for finding that integer (B)(iii) is present in the Anderson patent. It is further contended that as the foot 16 is partially below the soil surface this closing effect of the foot is to partly close the slot and accordingly that integer (B)(iv) is present.

[36] These passages do not describe the integers in such a way that the same apparatus is identifiable or perceptible. As appears from other passages the foot is intended to follow precisely in the wake of the slot and it closes soil over the fertilizer injected into the slot (column 3 line 66-68 and 10-14); the distance between the fertilizer injected into the soil through knife 11 and the seed deposited through cylinder 14 allows the soil to fill in on the top of the fertilizer in the wake of the knife 11 and allows it to be pressed into the ground by

the shape of the foot 16 (column 4 lines 48-53) and it appears from fig 2 that the foot 16 follows directly behind the chisel plow 10 and knife 11 and the operational width of the foot 16 is narrower than that of the plough 10. Nowhere, therefore, is it stated or does it appear that the foot engages the soil adjacent to the slot and dislodges it. Integers (B)(iii) and (iv) are therefore not present in the Anderson patent.

Integers (C)(ii) and D(ii)

[37] These integers will be considered together. The issue is whether the mounting means and ground engaging means permit an automatic height adjustment of the tube and closing tool, with respect to the frame, in use. In the Anderson patent the boot (and foot) is connected to the chisel plow by means of a pair of leaf spring rods 20a and 20b. The defendant contends that these leaf spring rods permit the boot to move vertically relative to the plough (integer (C)(ii)) and that this occurs when the wheel 42 follows the contours of the soil layer: i.e. causing vertical movement by flexing the leaf spring rods (integer (D)(ii)). The characteristics and function of leaf spring rods are not described in the Anderson patent. The defendant's counsel submits that it is a characteristic of leaf spring rods that they are able to flex and allow movement and that it is for that reason that they are often used in suspension systems of motor vehicles and trailers. Accordingly, he submits that when an operative downwards or upwards force is applied to the boot 12, this will cause the leaf spring rods to flex and allow the boot 12 to move vertically relative to the plough 10 (not the frame). This will occur when the press wheel 42 follows the contours of the soil layer. However, there is no evidence that it is a characteristic of leaf spring rods that they are able to flex and allow vertical movement. It also does not appear that there would be height adjustment with respect to the frame. The defendant has therefore not established that integers (C)(ii) and (D)(ii) are present in the Anderson patent.

Dreyer Patent

[38] In its response to the defendant's request for further particulars the plaintiff admitted that the Dreyer patent discloses integers (A), (B), (B)(i), (B)(ii), (C), (C)(i), (C)(ii), (D), (D)(i) and (D)(ii). The plaintiff denied that the Dreyer patent discloses integers (A)(i), (A)(ii), (B)(iii), (B)(iv) and (B)(v).

[39] The defendant's counsel contends that the plaintiff's expert Le Roux is of the opinion that, with the exception of integer (A)(i) all the integers are disclosed in the Dreyer patent. As already mentioned, such an opinion must be disregarded, for this is a matter for the court to decide – the Gentiruco case 646A (1971 BP 139D-E); Letraset Ltd v Helios Ltd 1972

(3) SA 245 (A) at 267A-C (1972 BP 243 (A) at 272D-273C); Netlon Ltd and Another v Pacnet (Pty) Ltd 1977

(3) SA 840 (A) at 842A (1977 BP 87 (A) at 109B).

[40] The plaintiff contends that integers (A)(i), (A)(ii), (B)(iii), (B)(iv) and (B)(v) are not disclosed in the Dreyer patent.

[41] The Dreyer patent is entitled 'Seed Drill' and according to the abstract the seed drill has a frame, reservoirs, sowing shares, at least two separate inlets and outlets for two different materials and a depth-guide or pressure roller behind each sowing share. Variable amounts of one material are conveyed to the forward outlet and of the other material to the rear outlet through separate conductors inside the sowing share for application of the soil. The outlets are separated along the direction of travel. There is a narrow ripping structure on the forward edge of each sowing share to rip up the soil and produce a furrow. An expansion structure that extends down into the furrow is positioned in the vicinity of the rear outlet of each sowing share. The expansion structure is at least somewhat wider than the ripping structure. The bottom end of the expansion structure is higher than the bottom of the point of the ripping structure.

[42] The summary of the invention states:

'The object of the present invention is to attain a reliably separated deposit of two materials, such as seed and fertilizer, even in heavy soils and especially in zero tillage.

This object is attained in accordance with the invention in that an expansion structure that extends down into the furrow is positioned

in the vicinity of the rear outlet of each sowing share, in that the expansion structure is at least somewhat wider than the ripping

structure, and in that the bottom end of the expansion structure is higher than the bottom of the point of the ripping structure.

The expansion structure on the sowing share between the forward and the rear outlet ensures that the material deposited in the furrow through the first outlet will be covered with soil in such a way that the fertilizer and seed will be separated by a layer of soil even when the soil is very heavy or a lot of soil is thrown up. The expansion structure always pushes at least a little soil ahead, forcing it over the material deposited in the furrow from the first outlet. The material coming from the rear outlet on the sowing share will then always fall on top of the soil covering the first material' (Column 1 line 50-Column 2 line 5).

[43] There are two outlets 29 and 30 through which seed and fertilizer can be deposited into the furrow (column 7 lines 25-26). Seed or fertilizer, as the case may be, are fed through inlets 46 (column 8 line 31-33) into either one of the two separate channels 27 and 28, to be deposited, as the case may be, through outlets 29 and 30. All the figures show outlet 30 above the ground. Nowhere in the specification is it stated that outlet 30 extends down into the furrow formed by the share. Outlet 29 is in the furrow below ground level. If the seed is channelled down 27 to outlet 29 the expansion structure 41 (464) covers the seed with soil. Integers (B)(iii)-(v) are not present. If the seed is channelled down 28 to outlet 30 the seeding tube does not extend downwardly into the furrow formed by the share. In that case integer (A)(i) is not

disclosed.

- [44] The defendant's counsel agrees that in fig 10, outlet 29 is located below the ground level while outlet 30 is shown above ground level. However he points out that the share is mounted in such a way that it can move in a vertical plane (column 6 lines 36-40) and this movement in the vertical plane is controlled by the roller 7 (column 6 lines 49-52). He contends that because channel 28 and outlet 30 are integral to share 1 (or 62) the vertical lowering of the share 1 (or
- 62) will result in outlet 30 being lowered. He contends that as there is no limit on this vertical lowering it is possible for the share 1 (or 62) to be lowered to such an extent that outlet 30 will be located below the soil layer. In addition, he contends that because the position of outlet 30 can be varied and moved towards outlet 29 (column 8 lines 7-12), when the partition 40 is moved towards the chisel 25 (or towards outlet 29) the size of the outlet 30 will be increased and it will at least partially extend below the soil layer. Finally, he contends that by the simultaneous adjustment of the partition 40 and the vertical lowering of the share 1 (or 62), outlet 30 could be located below the soil layer so that it extends into the furrow.
- [45] As already mentioned, this possibility is not described in the body of the specification or shown in a figure. The Dreyer patent therefore does not describe the integer in such a way that integer (A)(i) is identifiable or perceptible. It is clearly not essential for the seed outlet 30 to extend downwardly into the furrow formed by the share.
- [46] Integer (A)(ii) is disclosed in the Dreyer patent. Outlet 30 is at the lower extremity of channel 38 and seed will be delivered through this outlet 30 (column 10 lines 23-28).
- [47] The Dreyer patent does not disclose all the integers of the patent.

Van Tonder Patent

- [48] The invention is described generally in the body of the specification –

‘According to the invention a mechanical seed planter comprises a frame adapted to be pivotably mounted to a draw bar; a hopper assembly associated with seed and fertilizer dispensing means; ducts to direct seed and fertilizer to planting level; means to part soil in preparation for planting; wiper blades for partially covering seed and fertilizer; trailing wheels adapted to cover and compact seed after planting; and drive linkage to activate the seed and fertilizer dispensing means.’

In a preferred embodiment the following features are found in combination –

- (1) a Basically ‘L’ shaped frame adapted to incorporate the sheath and the blade for parting of the soil, the blade being adjustable for depth of penetration and having a variable angle dependent on soil conditions;

- (2) directly behind the blade or chisel are located two outlets of the ducts, placed one behind the other, and located at the rear of each of these outlets are two wiper blades, the front outlet being for fertilizer and the rear outlet for seed. The function of the front wiper blade is to partially cover the fertilizer with soil so that the seed does not come into direct contact with the fertilizer; the rear wiper blade is to cover the seed with soil;
- (3) behind the two outlets are located two trailing wheels, whose axes of rotation are angled from a horizontal plane downwardly in an outward direction, giving a 'camber' while being angled from a vertical plane which is transverse to the direction of motion outwardly in a rearward direction, giving a 'toe-in' at the same time. The result is that the two wheels, by virtue of the toe-in, and the camber, cover and compress the channel containing the seed, soil and fertilizer;
- (4) the 'L' shaped frame of the planter is pivotably mounted on any conventional tractor draw bar. Associated with this pivotable mounting is a self-levelling spring mechanism which is fully adjustable. This spring mechanism is biased so as to keep the planter at the desired planting level while also allowing sufficient free movement for the planter to rise over any solid obstruction;
- (5) a large capacity partition hopper bin from which is supplied the seed and fertilizer, utilising a suitable distribution method.

[49] The invention is described with reference to the accompanying drawings:

The mechanical seed planting unit comprises a basically 'L' shaped frame work 12 which is pivotably mounted by means of bearings 14 to a conventional tractor draw bar 16 (p8 line 21-p9 line 1). Incorporated in the frame 12 is a blade or chisel 24 which is adjustable in the vertical plane by means of a plurality of holes 26 (p9 line 8-10). Seed and fertilizer is carried in one large hopper bin which is divided into two compartments 32,1 and 32,2. Seed and fertilizer is metered out of the hopper

30. The seed fertilizer once dispensed, is then guided by means of flexible ducts 36,1 and 36,2 to openings 38,1 and 38,2 in the frame 12 positioned directly behind the blade or chisel 24. According to fig 1 these outlets are flush with the edge of 'L' shaped frame and do not project below it. Associated with these ducts 38,1 and 38,2 are two 'wiper blades' 40,1 and 40,2 which are designed so as to partly cover the planted seed/fertilizer before same is properly covered and compacted by a pair of trailing wheels 42.

It is clear from the further description that each wiper blade acts to cover the material from the outlet behind which it is located. From the first chute or duct 38,2 fertilizer is deposited in the bottom of the trench opened by the blade or chisel 24. The action of the first 'wiper blade' 40,2 then causes a thin layer of soil to be placed over the fertilizer. From the second chute 38,1 a seed is then placed on top of this layer of soil and the second wiper blade 40,1 then covers the seed. Finally, the trailing wheels 42 completely cover and compact the trench (p11 lines 9-19).

- [50] The plaintiff contends that the Van Tonder patent does not disclose integers (A)(i), (B)(iii), (B)(iv), (B)(v), (C)(ii) and (D)(ii).
- [51] As appears from the description of the Van Tonder patent there is no seeding tube which extends downwardly into the furrow made by the blade. Integer (A)(i) is therefore not described.
- [52] Nowhere is it said or does it appear that the wiper blade 42,2 engages soil adjacent the furrow, thereby dislodging the soil to partly close the furrow and to provide a seed bed onto which the seed is delivered. Integers (B)(iii), (iv) and (v) are therefore not disclosed.
- [53] None of the patents relied upon by the defendants anticipates the patent's invention and this ground of revocation must be dismissed.

Obviousness

- [54] In terms of section 61(1)(c) of the Act a patent may be revoked on the ground that the invention is not patentable. In terms of section 25 of the Act, in order to be patentable an invention must involve an inventive step. With regard to this requirement, subsection 25(10) provides –

‘Subject to the provisions of section 39(6), an invention shall be deemed to involve an inventive step if it is not obvious to a person skilled in the art, having regard to any matter which forms, immediately before the priority date of the invention, part of the state of the art by virtue only of subsection (6) (and disregarding subsections (7) and (8)).’

The provisions of subsection 25(6) have already been referred to.

- [55] The starting point is all available knowledge. The issue of lack of inventiveness arises only if the invention has survived the attack on novelty – see *Ensign-Bickford (SA) (Pty) Ltd and Others v AECI Explosives and Chemicals Ltd* 1999

(1) SA 70 (SCA) at 80E-F (1998 BIP 271 (SCA) at 280A-B).

- [56] The necessary first step for the application of these provisions is the determination of (i) what the art is to what the invention relates; (ii) what the state of the art was at the relevant time and (iii) who is to be regarded as a ‘person skilled in the art’ – *Roman Roller CC and Another v Speedmark Holdings (Pty) Ltd* [1995] ZASCA 78; 1996

(1) SA 405 (A) at 413D (1995 BP at 210D-F).

- [57] After this step the structured enquiry described in the *Ensign-Bickford* case must be undertaken and the four matters referred to in paragraph 13 answered. These include, or restate in part, what was said in the *Roman Roller* case.

- [58] On the question of whether what has been claimed is inventive is obvious the court in the *Ensign-Bickford* case said at 81C-I –

‘Firstly, the question to be determined is whether what is claimed as inventive would have been obvious, not whether it would have been commercially worthwhile ... Secondly, the emphasis must lie on the technical features. A passage in the judgement of Sir Donald Nicholls, Vice Chancellor, in the case of *Mölnlycke v Proctor & Gamble* (supra) bears repetition. At 113 the Vice Chancellor said:

“In applying the statutory criterion and making these findings the Court will almost invariably require the assistance of expert evidence. The primary evidence will be that of properly qualified expert witnesses who will say whether or not in their ‘opinions the relevant step would have been obvious to a skilled man having regard to the state of the art’. All other evidence is secondary to that primary evidence. In the past, evidential criteria may have been useful to help to elucidate the approach of the common law to the question of inventiveness. Now that there is a statutory definition, evidential criteria do not form part of the formulation of the question to be decided.

...

What with hindsight, seems plain and obvious, often was not so seen at the time. It is for this reason that contemporary events can be of evidential assistance when testing the expert’s primary evidence. For instance, many people may have been industriously searching for a solution to the problem for some years without hitting upon the allegedly obvious invention ... Yet again, evidence of the commercial success of the invention can lead into an investigation of the reasons for the success; there may be commercial reasons for this success unrelated to whether the investigation was or was not obvious in the past.

Secondary evidence of this type has its place and the importance, or weight, to be attached to it will vary from case to case. However, such evidence must be kept ‘firmly in its place. It must not be permitted, by reason of its volume and complexity, to obscure the fact that it is no more than an aid in assessing the primary evidence’”.

[59] The law requires only that there be inventiveness. It is not a requirement that the invention involves a large step forward. In *Veasey’s case* at p282 Stratford JA said:

‘On the issue of subject-matter the difference between the plaintiff’s invention and prior common knowledge must be measured and valued. If there is no difference, there is no subject-matter; if there is a difference but it calls for no inventive ingenuity to bring it about, there is also no subject-matter; but if there is a real inventive step forward, no matter how small, that is sufficient to give subject-matter to the patent.’

In the *Roman-Roller* case at 417E-J (1995 BP at 219C-E) the court emphasised that simplicity is no obstacle and that experience has shown that a number of simple inventions have constituted patentable subject-matter.

In *TA Blanco White Patents for Inventions* 5 ed p83 para 4-209 the learned author said –

‘Invention is not anything that can be quantified. If any invention – a “scintilla” of invention – was needed to arrive at the subject-matter of a claim, then there is room for a patent: the subject-matter is not obvious. It does not matter at what stage in reaching that subject-matter the invention was required: “When once the idea of applying some well-known thing for a special and new purpose is stated, it may be very obvious how to give effect to that idea”, but so long as there is invention in the idea and the means of giving effect to it, taken together, then there is room for a patent. Nor is it material whether the invention “be the result of long experiments and profound research, or whether by some sudden and lucky thought, or mere accidental discovery: The question remains in all cases one of fact: was the alleged invention obvious or not.’

In deciding whether there is an inventive step an objective test is applied. The court decides on the difference between the prior art and the invention whether the difference is a step forward and, if so, whether it is obvious to a person skilled in the art – see section 25(10) of the Act; *General Tyre and Rubber Co v Firestone Tyre and Rubber Co Ltd* 1972 RPC 457 (CA) at 498 line 3-27.

[60] The essential evidence in this case is common cause. The defendant admits the existence and contents of the patent. The plaintiff admits the

existence and contents of the publications which form the state of the art before the priority date. The issue is whether in the light of the prior art the invention of the patent involved an inventive step; i.e. a step which was not obvious to the skilled man.

[61] The plaintiff contends that the inventive step is the combination of a tine (to form a slot), a separate closing tool (which engages the sides of the slot and forms a seed bed with the soil dislodged from the sides of the slot), a seeding tube (which extends into the slot to deposit seed on the seed bed) and a mounting means which allows height adjustment of the seeding tube and closing tool relative to the frame and the ground engaging means which causes height adjustment.

[62] In its counterclaim the defendant relied on 42 prior art documents referred to in paragraph 1.1-1.42 of the defendant’s Statement of Particulars. However, in the expert summary of the defendant’s expert witness, Van Niekerk, and in the defendant’s heads of argument the defendant relied on the four patents already referred to and one of these patents, the Anderson patent, and US Patent No. 5, 161, 472 (‘the Handy patent’) and copies of photographs of an implement called ‘Soilmaster’ (bundle D p150 and exhibit C). The defendant contends that except for integer (B)(iv) the Handy patent discloses all the integers of the patent and that the skilled addressee would have considered importing the Anderson boot 12 into the Handy draft implement to replace the planting sweep

23. With regard to the Soilmaster implement the defendant contends that insofar as it does not disclose a closing tool the skilled addressee would have considered substituting the Anderson boot with a Soilmaster boot.

The art

[63] The art of the invention is no-tillage mechanical seeding assemblies.

The skilled addressee

[64] The skilled addressee is a person with a tertiary qualification in mechanical or agricultural engineering and experience of

manufacturing seeding assemblies for use in agriculture. Professor Agenbag does not fall in that category but both Messrs Le Roux and Van Niekerk do.

The state of the art immediately before the priority date of the invention

[65] Initially the defendant relied on 42 previous publications (41 of which are patents) from the United States, France, Germany and South Africa dating from 1939-1991. At the trial the defendant relied on only four of the patents for its attack on novelty and on the same four patents and a further patent (and a photograph of an implement) for its attack on inventiveness. These patents relate to mechanical seed planters for use in agriculture. The photograph of the Soilmaster will be considered later.

From a reading of the patents it appears that, broadly speaking, the object of the inventions is greater efficiency in the planting of seed. To achieve in this the following must be done –

- (1) Reduce the drag on the machine towing the planter;
- (2) Reduce the damage to the structure of the soil;
- (3) Combine the operations necessary for creating the furrow, placing the seed and/or fertilizer in the furrow and closing the furrow over the seed and/or fertilizer so that this is done in one pass;
- (4) Place the seed and/or fertilizer in the furrow at a consistent depth;
- (5) Place the fertilizer and seed in the furrow so that they do not come into contact with each other;
- (6) Compact the soil around the seed so that effective germination of the seed takes place;
- (7) Plant the seed at optimum depth for germination.

[66] These objects are achieved by a variety of combinations of mechanical means or apparatus:

- (1) Reducing the drag and damage to the soil structure is achieved by using a very narrow tool to make the furrow (a tine or knife or blade or chisel);
- (2) Combining the means for creating the furrow, planting the seed, placing the fertilizer in the furrow, planting the seed at a consistent optimum depth and compacting the soil into one assembly makes it possible for all the operations to be performed during a single pass;

- (3) Consistent depth of seed and fertilizer is achieved by providing a means of mounting the seed delivery devices so that they move vertically up and down with the contour of the land being planted;
- (4) Contact between fertilizer and seed is avoided by placing them away from each other and/or by covering the fertilizer before the seed is placed in the soil;
- (5) Compacting the soil around the seed is achieved by a wheel running over the furrow after the seed has been placed in the soil;
- (6) Planting seed at optimum depth is achieved by setting the assembly to place the seed in the soil at the required depth.

The step forward: Was it obvious?

- [67] The plaintiff contends that the invention reveals a step forward. It is the unique combination of the components with their special features. Mr Le Roux expresses this view with regard to the Ausseeder itself which he states is different from any invention disclosed in the prior art. The defendant contends that there is no step forward but, if there is, it would have required no inventive ingenuity to arrive at the claims of the invention in suit. Van Niekerk expresses this view with reference to the four patents relied on to show a lack of novelty. He refers in support of his opinion to his evidence that each of the four patents exhibits all the integers of the claim in suit and his description of the integers of these patents. However the real point made by Van Niekerk relates to the combination of the features of the Handy and Anderson patents.
- [68] Van Niekerk contends that with the exception of integer (B)(iv) the Handy patent discloses all the integers of the patent and that the skilled addressee, knowing this, would have imported the Anderson boot 12 into the Handy draft implement in the place of the planting sweep 23. A similar argument is adopted with regard to the Soilmaster. In my view the basic premise of the argument is not correct and the conclusion is not supportable.
- [69] The Handy patent does not disclose all but one of the integers of the patent. The Handy patent does not disclose a seeding tube which descends downwardly into a slot formed in the soil layer by the tine. It discloses an upstanding tubular housing 21 to which is fixed at its lowest extremity a planting sweep 23. The tubular housing is not stated to extend the whole way, nor is it said to extend into the slot formed by the tine. Integers (A) and (A)(i) are therefore not disclosed. The Handy patent does not disclose a seeding tube having a lower extremity through which seed is delivered into the soil layer. It discloses a planting sweep attached to its lower extremity through which seed is delivered into the soil layer. Integer (A)(ii) is therefore not disclosed. The Handy patent does not disclose a 'closing tool' with the features described by the patent. As already mentioned the ordinary meaning of 'tool' is a mechanical implement for working upon something in industry and the ordinary meaning of 'closing' is to enclose, confine, shut up in (within). The Handy patent describes a 'planting sweep' fixed to the lower extremity of the tubular housing (the defendant's heads of

argument referred to this as a seeding shoe). The function of this planting sweep is to cut a horizontal shelf on either side of the slot made by the knife opener and deposit seed on the shelf. Nowhere is it suggested that its function is to engage soil adjacent the slot, to dislodge the soil to partly close the slot and provide a seed bed onto which the seed is delivered. Integers (B)(i)-(v) are therefore not disclosed. For present purposes it is not necessary to deal with the remaining integers.

[70] Similarly, it is not clear what the photographs of the Soilmaster disclose. No evidence was led to explain what the photographs show – Schlumberger Logelco Incorporated v Coflexip SA supra para

24. It is not clear that a tine (blade/knife/chisel) is disclosed. Nor is it clear that a seeding tube (rather than a fertilizer tube) is disclosed. Furthermore it is not clear that a closing tool is disclosed. The defendant's concession that integers (B)(i)-(v) are not disclosed is justified.

[71] The combination of the integers of the invention was therefore different from any in the prior art. It is significant that the defendant has not produced any evidence to show that products made in accordance with this prior art have been and are in commercial production. The invention therefore involves a step forward. This step was also not obvious to the person skilled in the art. If it was obvious to combine the feature of the Handy patent with the boot of the Anderson patent the question must be asked why that was not done. The answer seems to be that they aim at different results. The Anderson patent aims at the vertical placement of fertilizer and seed and the Handy patent at the horizontal placement. Both are done to avoid contact between fertilizer and seed.

[72] It is significant that none of the 33 patents forming part of the state of the art referred to in the defendant's counterclaim

discloses all the integers of the patent despite the obvious search for an invention which would perform all the tasks necessary for preparing the soil and planting the seed in one pass. In my view the inventiveness of the invention is in the combination of various means together with the dedicated closing tool fixed to the lower extremity of the seeding tube whose location, size and shape enables it to engage and dislodge the soil adjacent the slot to partly close the slot and provide a seed bed onto which the seed is delivered. This resulted in a simple and effective seeding assembly which is commercially viable.

[73] Finally, it must be recorded that Mr Kilroy's evidence of commercial success of the Ausseeder does not assist the plaintiff. All that the evidence shows is that a number of the seeding assemblies have been sold in Australia and South Africa. There is no suggestion in the evidence that the product is enjoying extraordinary commercial success compared to other similar products or that the market has welcomed the advent of the Ausseeder because of its new features.

Lack of clarity

[74] Section 61(1)(f) of the Act provides that a patent may be revoked on the ground that the claims of the complete specification are not clear.

[75] In *Roman Roller CC and Another v Speedmark Holdings (Pty) Ltd* [1995] ZASCA 78; 1996

(1) SA 405 (A) at 419B-G (1995 BIP 199 (A) at 222A-B) the court set out the relevant principles as follows –

‘This ground of invalidity/revocation is sometimes referred to as “ambiguity”. It is the duty of a patentee to state clearly and distinctly the nature and limits of his claim: to define his monopoly. Only if this is done will others know exactly what they may do and what they may not do. The degree of clarity required is that which leads to “reasonable certainty”’

In determining whether a patent claim stakes its monopoly with a sufficient degree of clarity, the Court must view the patent through the eyes of the skilled addressee in the relevant art; and the Court must take into account that such addressee is expected to use reasonable skill and intelligence in interpreting the language of the patent. He is not required to struggle unduly with it, but he must make the best of it and not adopt an attitude of studied obtuseness. If words or expressions in a claim are affected or defined by what is said in the body of the specification, the language of the claims must be construed accordingly. Moreover, uncertainty or ambiguity in a claim may be resolved by what appears in the body of the specification, which may be thus resorted to not only when the language in question has been expressly defined in the body of the specification, but also, in the absence of such definition, where there is material in the body from which the intention of the draftsman can be gathered. Where the words permit it, an interpretation should be adopted which is consistent with the description of the problem to be overcome and the method of doing so described in the body of the specification. Another source of elucidation of apparently unclear language may be the prior art itself.’

[76] In the defendant’s counterclaim the defendant alleges that in six respects (five in claim 1 and 1 in claim 6) the terms used in the claims are unclear and have no reasonably ascertainable meaning. In argument the defendant persists with only two, both in claim 1. The defendant contends that the phrase ‘into the soil layer’ in integer (A)(ii) is unclear because the tine has made a slot – the soil has been deformed in vertical cross-section. Accordingly the seed is either deposited onto the deformed soil layer (onto the seed bed) or into the slot. The defendant contends that the phrase ‘is delivered’ in integer (B)(v) is unclear because the phrase is an active and not a passive phrase which intimates that the apparatus must have a seed passing through the seed tube. Accordingly, it is further contended, claim 1 recites both an apparatus and a method for using the apparatus.

[77] The evidence of Van Niekerk on this issue is unconvincing. Apart from stating that the words are unclear and in context have no reasonably ascertainable meaning (he repeats this in respect of each phrase objected to) he gives no reasons to justify his statements. There is no reason to prefer this evidence to that of Le Roux who has furnished reasons for his view that the words are not unclear.

- [78] The words 'into the soil layer' clearly refer to the same soil layer in which the tine has formed a slot. In context the seed is delivered into the slot made by the tine. There is no merit in this objection.
- [79] It is significant that the defendant has raised no objection to the words 'is delivered' in integer (A)(ii). There it clearly describes the function of the tube. Similarly in integer (B)(v) the phrase is used to describe the function of the closing tool. Read in context the phrase is not unclear. There is no merit in this objection.

Certificate in terms of section 74

- [80] The plaintiff seeks an order in terms of section 74 of the Act that the court certify that claim 1 of the patent is valid. There is no objection to such an order being granted. In view of the defendant's efforts to show that the patent is invalid such a certificate is justified.

Costs

- [81] The plaintiff seeks an order that the qualifying fees of Professor Agenbag be included in the costs order which it seeks and that Mr Kilroy, who travelled to South Africa from Australia, be declared a necessary witness. I am not satisfied that either order is justified. Professor Agenbag is not a skilled addressee of the patent and was not competent to comment on the issues relating to the patent. Mr Kilroy's evidence did not advance the plaintiff's case in any material way and he cannot be found to be a necessary witness. No argument was advanced on the court's power to declare a person to be a necessary witness and under what circumstances the power should be exercised.

Order

- [82] The following order is made:

- (1) The defendant's counterclaim for revocation of SA Patent No 95/0812 on the grounds of lack of novelty, lack of inventiveness and lack of clarity is dismissed;
- (2) The defendant is interdicted and restrained from infringing SA Patent No 95/0812 by making, using, exercising, disposing of, offering to dispose of and importing the versions of the Voor Planter depicted in the drawings and photographs in bundle E on p7-32;
- (3) It is ordered that there be an enquiry into the damages suffered by the plaintiff as a consequence of the infringement of SA Patent No 95/0812;
- (4) In the event of the parties being unable to reach agreement as to the future pleadings to be filed, or being unable to reach agreement as to discovery, inspection or other matters of procedure relating to the enquiry, the parties are authorised to make application to court for directions in regard thereto;

- (5) The defendant is ordered to deliver up to the plaintiff any seed assembly or seed planter in the defendant's possession which infringes SA Patent No 95/0812 and any article or product in the defendant's possession of which such seed assembly or seed planter forms an inseparable part;
- (6) In terms of section 74 of the Patents Act, 57 of 1978 claim 1 of SA Patent No 95/0812 is certified to be valid;
- (7) The defendant is ordered to pay the plaintiff's costs, such costs to include the qualifying fees of the plaintiff's expert witness Mr J.P. le Roux.

B.R. SOUTHWOOD

JUDGE OF THE HIGH COURT

CASE NO: P95/0812

HEARD ON: 7 November 2006 and 10 November 2006

FOR THE PLAINTIFF: ADV. D.R. HARMS

INSTRUCTED BY: Mr Dohmen from Rademeyer & Freimond Attorneys

FOR THE DEFENDANT: ADV. C.J. VAN DER WESTHUIZEN

INSTRUCTED BY: Mr Johan Peijper from Peijper Inc

DATE OF JUDGMENT: 30 January 2007

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