Commonwealth of Australia
Patents Act 1990

In the matter of: Australian Patent Application Number 2013202351
Applicant: ESCO Corporation
Title: 'Wear and assembly'
-and-
Opposition thereto by Talon Engineering SDN. BHD. (Opponent)

OPPONENT'S SUBMISSIONS

Opposed patent application:	2013202351
Filing date:	3 April 2013
Effective date:	23 March 2007
Priority date:	30 March 2006
Acceptance advertised:	20 October 2016
Notice of opposition:	20 January 2017
Grounds:	18(1)(b)(i) and (ii); 40(3)
Evidence in Support	Neil Dennis 18 April 2017 **(1 Dennis)** Neil Dennis 5 July 2017 **(1 Dennis B)** Barry Newman 18 April 2017 **(Newman)** *including, inter alia,* Benjamin David Hughes **(Hughes)** Desmond Erickson **(Erickson)** Howard William Robinson (**Robinson)**
Evidence in Answer	Terry Lee Briscoe 19 October 2017 **(Briscoe)**
Evidence in Reply	Neil Dennis 20 September 2017 **(2 Dennis)** Neil Dennis 5 December 2017 **(2 Dennis B)**

Introduction

1. This case purportedly concerns the attachment of wear members (known in the art as 'Ground Engaging Tools', or 'GET') to excavating equipment, typically to the lips or edges of earth-mover buckets.

2. The patent application in question is a divisional application, claiming an ultimate parent date of 2007. The specification is directed primarily to the internal geometry of GET and receiving members. A secondary aspect of the specification is a locking mechanism for holding a GET and a receiving member together. The claims of this application are directed to a 'method of shipping' which then refers to this secondary aspect.

3. An immediate parent of this application, patent application number 2013200107, is the subject of concurrent opposition proceedings. The immediate parent of that application, patent number 2011201135, was the subject of extensive litigation in Esco Corporation v Ronneby Road Pty Ltd. These opposition proceedings cover much of the same ground, and to some extent rely on the evidence provided to the Federal Court in *Ronneby Road*[1].

Issues of construction – the question of 'essential integers'.

4. A striking feature of this case is the fundamental disconnect between the purported subject matter of the claims as 'a method of shipping' and their substance as 'a locking assembly for an excavating wear assembly'.

5. Although not formalised as grounds of opposition, it is open for the delegate (under s60(3)) to find that these claims do not represent a manner of manufacture; are not useful; and do not define the invention. It is also open for the delegate to find that the specification does not disclose the best method (or indeed any method) for performing the claimed invention.

[1] Ronneby Road Pty Ltd v ESCO Corporation [2016] FCA 588

6. Putting these issues aside, we would argue that this disconnect leads to the clear conclusion that virtually all of the integers of the claims are inessential to the nature of the invention as a 'method of shipping'.

7. There is a fundamental question here regarding the nature of 'an essential integer'. The long-standing definition is 'an essential feature is a feature which the invention cannot do without.'[2]

8. This is an unusual case in that virtually no integer of the claim is essential to the carrying out of the invention. The leading recent Australian case on this issue, Smith & Nephew[3], reveals the problem by its clear and simple explanation: 'The integers must interact to bring about the desired result.' In the present case, the integers simply do not relate to the result.

9. The notion of essential integers being required to bring about a desired result is a well-established one. Any patent which is a combination of integers is only valid to the extent that the '… integers that are utilized must be combined so as to react or interact one with another and thus produce a new result … In applying the test thus stated, it is always important to determine what is the result which the combination achieves.'[4] Put another way, 'The point in a combination patent must always be that the elements of which the combination is composed are combined together so as to produce one result.'[5]

10. In the present case the purported result is '*a method of shipping an excavating wear assembly*'. Any integer which does not lead to producing this result, or bringing about this result, cannot be essential.

11. When considered in this light, it becomes apparent that all of the claims read, in essence, 'A method of shipping an excavating wear assembly, the method comprising the steps of providing [a wear assembly] and shipping it.'

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[2] Rodi & Wienenberger A.G. v Henry Showell Ltd [1966] RPC 17 447 at 48
[3] Smith & Nephew Pty Ltd v Wake University Health Sciences [2009] FCAFC 142; (2009) 82 IPR 467 at 24
[4] Palmer v Dunlop Perdriau Rubber Company Limited [1937] HCA 43
[5] In the matter of Klaber's patent [1906] RPC 22, per Lord Davey

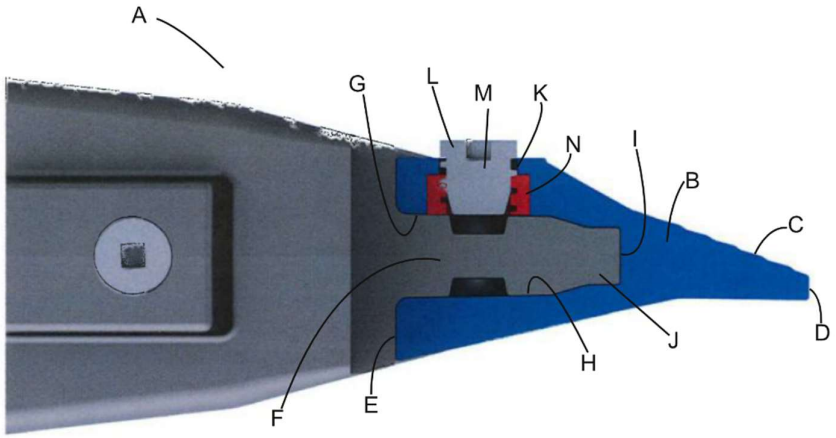
12. Such claims cannot be considered either novel or inventive.

Novelty

13. Putting aside the question of 'essential integers', we submit that Claim 1 at least lacks novelty on its face. The prior art relied on to demonstrate a lack of novelty is the '*Torq Lok'*, which was thoroughly described in *Ronneby Road*.

14. Claim 1 reads as follows, with letters added to indicate features:
*A method of shipping an excavating wear assembly **A,** the method comprising providing a lock **L** having a body **M** and resilient member **N**: providing a wear member **B** having a socket **F** adapted to receive a nose **J** fixed to excavating equipment and a through-hole **K** in communication with the socket for receiving the lock, inserting the lock [integer D] into the through-hole such that the lock is integrally secured to the wear member and retained in the opening (i) in a first position for installation of the wear member on the nose of the excavating equipment, and (ii) for adjustment to a second position where the lock remains secured to the wear member and retains the wear member on the nose, and [integer G].*

15. The picture reproduced below is from the exhibit BDH-7 of Hughes in *Ronneby Road*. It is one of a 'series of drawings of the Torq Lok and wear attachment'. Reference letters have been added to demonstrate the features referred to above.



16. Using the table evidenced by the applicant as annexure TLB-2[6], it is common ground that at all integers other than (d) and (g) are clearly present in the Torq Lok.

17. On the issue of integer (g) (shipping the wear member with the lock retained in the through-hole in the first position), Desmond Erickson describes shipping of the Torq Lok: '*When the wear components were packed for shipping at the Foundry the screw was in place and the bottom of the screw was approximately flush with the retainer, so the screw was located within the wear assembly and the wear assembly was ready to be fitted to the excavator.*'[7]

18. Mr Erickson's evidence, upon which he was cross examined but ultimately not challenged, is that the foundry went as far as creating a gauge for use in assembly of a lock into a wear member to ensure that the lock was put into the first position for shipping.

19. Mr Hughes' evidence in cross examination was as follows: 'the surface of the locking pin is generally flush with the level of the polymer retainer … [which is the same as the position in which] I saw the retainers on the pallet inside when I put my head down and looked inside the cavity'[8].

20. Jessup J notes[9] that 'there appears to be no doubt as to the truth of this evidence'.

21. The limited information provided to Mr Briscoe may not have enabled him to say with certainty that integer (g) was taken by the Torq Lok. The totality of the evidence clearly indicates that it was.

22. That brings us to the question of integer (d): 'inserting the lock with the body and the resilient member secured together as a unit into the through-hole'.

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[6] Briscoe
[7] Erickson at 23
[8] BSN-5, page 50, lines 44ff
[9] Ronneby Road (*ibid*) at 40

23. There are two relevant questions regarding this integer. Firstly, whether or not the skilled addressee would read this as requiring the steps of 'inserting' and 'securing' to be done in a particular order. Secondly, whether this order represents an essential feature of the claim.

24. Referring to the Torq Lok, the body **M** and the resilient member **N** are clearly secured together (and are, in use, secured to the wear member as was common ground in *Ronneby Road*), and are installed in and function as a unit within the through-hole of the wear member. They are installed within the through-hole from either side; that is, they are not secured together prior to installation.

25. Any novelty can thus only reside in the order in which 'inserting' and securing' take place. To construe the claim as requiring such an order is to ignore the basic principles of purposive claim construction as outlined in *Catnic*[10].

> *The question in each case is: whether persons with practical knowledge and experience of the kind of work in which the invention was intended to be used, would understand that strict compliance with a particular descriptive word or phrase appearing in a claim was intended by the patentee to be an essential requirement of the invention so that any variant would fall outside the monopoly claimed, even though it could have no material effect upon the way the invention worked.*

26. Mr Dennis' evidence is that he understood the integer in functional terms, rather than defining an order of assembly. Mr Briscoe, it must be inferred, thought differently. As a matter of construction, it therefore falls to the delegate.

27. There is nothing in the specification which suggests that the integer should be read in narrow, literal terms.

28. The specification mentions the 'securing together as a unit' aspect in a consistory statement at paragraph [20a]. This is merely a copy of the claim.

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[10] Catnic Components Limited v Hill and Smith Limited (1981) FSR 60

29. The next reference is at paragraph [79]. This refers to the body and resilient member (and a third component, a shield) being secured together, but is silent as to whether that securing occurs before or after installation.

30. Installation is referred to at paragraph [83]. This merely notes that installation occurs at the time of manufacture (before shipping). It is silent as to whether or not the securing occurs before installation.

31. The specification suggests no reason that 'securing' should occur before 'installation'. There is no advantage shown. Functionally, it makes no difference to the operation of the invention. It is far from clear that even a literal reading of the claim requires the assembly to be performed in this order. There is nothing which remotely suggests that '*strict compliance with [the order of assembly] was intended by the patentee to be an essential requirement of the invention.*'[11] On a purposive construction of the claim, it clearly fails the 'reverse infringement test'.

32. In any event, the question of the order in which the components are placed together during assembly of a wear member prior to shipping cannot be relevant to the question of shipping an assembled wear member. They cannot be essential integers of the claim. Our primary submission is that no integers of the claim can be considered essential. This is an alternative, narrower submission: that even if some integers are essential, this integer is not.

Claims 2 to 5

33. We accept Mr Briscoe's evidence that the Torq Lok does not include integer (g) of claim 2; integer (c) of claim 3; integer (g) of claim 4 and integer (b) of claim 5.

34. None of these integers lead to the result of a method of shipping. They cannot be considered essential integers of such a claim. As all other integers of the claims are found in the Torq Lok, all claims must be found invalid for want of novelty.

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[11] Improver v. Remington (Consumer Products Ltd) ([1990] FSR 181)

Inventive Step

35. For the reasons outlined above, all claims lack an inventive step as the only possible 'inventive-step' conferring features are inessential integers of the claims.

36. In the alternative, it is necessary to consider the hypothetical skilled addressee and relevant common general knowledge and section 7(3) information.

37. We submit that a skilled addressee would clearly be an engineer working within the field of design of ground engaging tools. The case features evidence from a number of skilled addressees falling within this definition, including Neil Dennis, Howard Robinson, Benjamin David Hughes, Desmond Erickson, and Terry Lee Brisco.

Common General Knowledge (CGK)

38. There is some disagreement between the parties about whether or not particular locking systems were CGK as of the priority date. We consider that the case can be adequately made without reference to 'disputed' CGK, and thus our arguments in this instance will rely only on prior art which is agreed by both sides to be CGK.

39. Both parties agree that hammerless locks were CGK (e.g. Robinson at 26, 1 Dennis at 5, Brisco at 4.9).

40. Both parties agree that 'pry-in, pry-out' locks such as *Toplok*, *K-series* and *SV2* were CGK. There may be dispute around the edges of which particular locks were CGK, but the general style of lock was clearly well known. The opponent's submissions will concentrate on the *Toplok* as a representative example. The Toplok (shown in US 5,088,214) is clearly agreed CGK (1 Dennis at 6; Brisco at 4.14).

41. Both parties agree that Hensley XS series (shown in US 6708431) was CGK (1 Dennis at 8; Fisher (Evidence in concurrent opposition to 2013200107 at 5) .

42. Both parties agree that Shark Blue Pointer (shown in AU 2001277401) was CGK (1 Dennis at 8, Fisher at 10).

Section 7(3) information (Torq Lok)

43. Threshold question: was the Torq Lok information which could have been reasonably expected to be ascertained, understood and regarded as relevant?

44. We submit that that the last two 'legs' of this test are self-evidently met. Indeed, the evidence shows that Mr Hughes immediately understood the Torq Lok on seeing it, and appreciated its relevance to the field[12].

45. We submit that the first leg too is beyond doubt.

46. Four of the five experts providing evidence have declared familiarity with the Torq Lok prior to 30 March 2006. While this might not be sufficient to demonstrate that the Torq Lok was CGK, it certainly indicates that it was widely known.

47. Evidence of Erickson was that the Torq Lok was developed in Canada prior to 2000, and that by July 2005 about 500 teeth units and about 100 shrouds and adaptors were sold per month[13].

48. Videos of the Torq Lok were distributed at a trade show in or about 2002[14]. It is reasonable to assume that other promotional activities were undertaken, although we have no direct evidence of them.

49. Robinson and Dennis agree that 'the large mining industries in at least Canada, the US and Australia all use the same machines and techniques and commonly exchange personnel'[15].

50. Ascertained means 'discovered or found out' (Lockwood no 2)[16] at 149:

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[12] Hughes 23-29
[13] Erickson at 24
[14] Erickson at 27
[15] Robinson at 28, 1 Dennis at 20
[16] Lockwood Security Products Pty Ltd v Doric Products Pty Ltd [No 2] [2007] HCA 21

> The exercise, of which s 7(3) is an integral part, is the exercise of determining whether "an invention" (s 7(2)) as disclosed "in any claim" (s18(1)) "involve[s] an inventive step when compared with the prior art base" (s 7(2)). The "prior art base" for s 7(2) is enlarged by s 7(3), so as to go beyond common general knowledge and to bring into consideration "prior art information" which "could ... be reasonably expected to have [been] ascertained, understood and regarded as relevant to work in the relevant art" (s 7(3)) by "a person skilled in the relevant art" (s 7(2)). This brings to mind Lord Reid's reference to a "diligent searcher" in Technograph Printed Circuits Ltd v Mills & Rockley (Electronics) Ltd [203] and suggests a person skilled in the relevant art familiar with some, but not necessarily every piece of, publicly available information in the relevant art beyond common general knowledge.

51. It is unquestionably reasonable to expect that a diligent searcher would have ascertained the Torq Lok, which was widely available in Canada at the time. The skilled addressee would immediately have understood the Torq Lok and regarded it as relevant – as the evidence shows that Mr Hughes did.

52. In the alternative, it is apparent that the Torq Lok is the commercial embodiment of the device described in AU766917, and most of the relevant features can also be seen in this document.

Claim 1

53. In order to determine whether or not a claim includes an inventive step it is useful firstly to consider which parts of the claim are common general knowledge, that is, are parts of '*the background knowledge and experience which is available to all in the trade in considering the making of new products, or the making of improvements in old, and it must be treated as being used by an individual as a general body of knowledge.*'[17]

[17] Minnesota Mining and Manufacturing Co v Beiersdorf (Australia) Ltd [1980] HCA 9; 144 CLR 253; 29 ALR 29

54. The Esco Toplok is agreed CGK in this case. There is some confusion about exactly which prior art documents show Toplok, but for the avoidance of doubt we propose to consider US 5,088,214, filed as RD-4.

55. The first half of Claim 1 of the present application reads onto the Toplok as follows (with reference to the drawings of US 5,088,214):
*A method of shipping an excavating wear assembly **30,** the method comprising providing a lock **38** having a body **42** and a resilient member **46**, providing a wear member **30** having a socket **37** adapted to receive a nose **29** fixed to excavating equipment **24** and a through-hole **39** in communication with the socket for receiving the lock, inserting the lock with the body and the resilient member secured together as a unit into the through-hole …*

56. The second half of Claim 1 of the present application reads onto the Torqlok as detailed above:
… such that the lock is integrally secured to the wear member and retained in the opening (i) in a first position for installation of the wear member on the nose of the excavating equipment, and (ii) for adjustment to a second position where the lock remains secured to the wear member and retains the wear member on the nose, and shipping the wear member with the lock retained in the through-hole in the first position.

57. Evidence was given by Neil Dennis[18] (and Bruce Leslie in table D1 of his evidence in the opposition by CQMS) that the Torq Lok could have been assembled with its body and resilient member secured together. Mr Briscoe argues that from his understanding of the photographs supplied this might not be straightforward. Mr Dennis, with personal knowledge of the product, argues otherwise.

58. The fundamental test for inventive step was confirmed by the High Court in AstraZeneca[19] at [15], quoting Wellcome Foundation Ltd:

[18] 2 Dennis B at 5
[19] AstraZeneca AB v Apotex Pty Ltd [2015] HCA 30

'whether the hypothetical addressee faced with the same problem would have taken as a matter of routine whatever steps might have led from the prior art to the invention, whether they be the steps of the inventor or not.'

59. The difficulty in the present case lies in identifying the purported problem the claimed invention seeks to solve. We suggest that the problem to be considered is the propensity for locks to become separated from wear members during shipping.

60. *Astrazenica* further clarifies (at [67]) the enquiry by reference to the 'directed to try' test. Taking the lead from *Astrazenica* and modifying the question referable to the invention claimed in the Patent application, we submit that the relevant enquiry is:

Would an engineer in the mining industry, and who has particular expertise in ground engaging tools, at the relevant date in all the circumstances, which include the common general knowledge considered separately or together with prior art information publicly available in a single act relevant to the problem that locks can become separated from wear members during shipping, directly be led as a matter of course to try securing the lock to the wear member in the expectation and shipping the lock in an open position that it might well produce a useful alternative to or better result than the best system then available?

61. Expressing the problem in this form makes it clear that there can be no inventive step in this claim. If the problem is one of locks becoming separated, there can be no inventive step in the solution of securing a lock to the wear member. Even one chooses to do that, it is clearly preferable to ship in the open position, and obvious to do so[20]

[20] Hughes at [43]; BSN-5, page 52 lines 1 to 20

62. We submit that, therefore, claim 1 lacks an inventive step on the basis of CGK alone. In the alternative, we submit that the claimed solution had already been discovered and commercially implemented, and constitutes 7(3) information.

63. There is a clear parallel to the present case in Lockwood (no. 2) before the Federal Court (full bench). In this case (at [90])[21]:

> The specification admits that integers (i) – (v) of claim 1 were part of the common general knowledge at the relevant date. … It was common ground amongst the expert witnesses that feature (vi) of claim 1 is found in each of [the s7(3) prior uses]. …
>
> From [178]: On the basis of the evidence … in our view a skilled addressee could reasonably be expected to have ascertained the storeroom locks, and understood and regarded them as relevant. … The word "ascertained" simply means discovered or found out. … In the present context, the word "understood" means that, having discovered the information, the addressee would have comprehended it, or appreciated its meaning or import. There could be no doubt about that. The language is plain; the concepts simple, especially to a skilled addressee. The evidence establishes that a skilled addressee would know of the problem … and the consequences that could flow from the problem. Such a person who read … the brochures … could be in no doubt that that information was relevant to the solution of the problem.
>
> [Note that the findings of the Full Bench in relation to the inventive step of Claim 1 were not appealed to the High Court, which nonetheless in *obiter* at 169 clearly endorsed them].

64. The parallel is a close one. In the present case, the only integer not CGK is the secure connection of lock to wear member in the 'unlocked' state. The skilled addressee seeing the Torq Lok could be in no doubt that this idea was relevant to the solution of the problem.

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[21] Lockwood Security Products Pty Ltd v Doric Products Pty Ltd (2005) 226 ALR 70

Alternative formulation

65. There is an alternative approach to identifying the problem to be solved, where one starts from the s 7(3) information. This approach, based on European practice, is unsafe in Australia because it is can lead to the 'starting point approach' problem identified by the Full Bench of the Federal Court in *AstraZeneca*[22]. Nonetheless, for completeness the approach will be considered.

66. Using this approach, one can formulate the problem as: assembling the lock body into the resilient member within the wear member is difficult.

67. The enquiry becomes:

Would an engineer in the mining industry, and who has particular expertise in ground engaging tools, at the relevant date in all the circumstances, which include the common general knowledge considered separately or together with prior art information publicly available in a single act relevant to the problem that assembling the lock body into the resilient member within the wear member is difficult, directly be led as a matter of course to try securing the lock body and the resilient member together before installation in the expectation that it might well produce a useful alternative to or better result than the best system then available?

68. Again, the lack of inventive step is clear. If the problem is that assembling two components together *in situ* is difficult, it's obvious to assemble them together before installation.

Claim 3

69. The same arguments apply when comparing Claim 3 to CGK and to the Torq Lok, as the additional feature claimed (a lack of threads) is clearly CGK and is present in the Toplok as well as in Shark Blue Pointer and Hensley XS and indeed most of the prior art in evidence.

[22] AstraZeneca AB v Apotex Pty Ltd [2014] FCAFC 99 at 192 ff

70. If one is using the 'start with 7(3) information approach' then the only problem to be solved is: the use of threads in the Torq Lok to move the lock within the through-hole is undesirable.

71. The enquiry becomes:

Would an engineer in the mining industry, and who has particular expertise in ground engaging tools, at the relevant date in all the circumstances, which include the common general knowledge considered separately or together with prior art information publicly available in a single act relevant to the problem that threads can be problematic in mining operations, directly be led as a matter of course to try using a means other than threads to operate the lock in the expectation that it might well produce a useful alternative to or better result than the best system then available?

72. Again, the lack of inventive step is clear. If the problem is that threads are bad, it is obvious to try without threads.

Clarity

73. The test for clarity is a generous one: '*The consideration is whether, on any reasonable view, the claim has meaning*.'[23]

74. In the present case, the claims purport to define a method of shipping, but are silent as to any steps related to shipping. The claim has no meaning.

Fair basis (external)

75. The relevant test is described in Multigate v B Braun[24] :

> *Relevantly, the test derived from Regulation 3.12 (1) (c) as then in force: whether in the earlier specification there had been a real and reasonably clear disclosure of the invention that is claimed.*

[23] Flexible Steel Lacing Company v Beltreco Ltd [2000] FCA 890
[24] Multigate Medical Devices Pty Ltd v B Braun Melsungen AG [2016] FCAFC 21; 117 IPR 1

76. The question which arises is: does the parent specification provide a real and reasonably clear disclosure of a method of shipping a wear assembly?

77. The parent specification describes a wear assembly in some detail. The only references to shipping or transport of any sort are the following:

> *[14] In one other aspect of the invention, the lock is integrally secured to the wear member for shipping and storage as a single integral component. The lock is maintained within the lock opening irrespective of the insertion of the nose into the cavity, which results in less shipping costs, reduced storage needs, and less inventory concerns.*
>
> *[16] In a further aspect of the invention, the lock and wear member can be maintained as a single integral component through shipping, storage, installation and use through an easily movable system without reliance on threaded members. This arrangement enables improved part management and easier installation of the wear member with less risk of losing the lock.*
> *[82] … In the preferred construction, lock 17 never needs to be removed from through-hole 81 in wear member 12. Lock 17 is installed into wear member 12 (in the release position) at the time of manufacture and shipped to a customer (Fig. 30a). The customer stores the wear member with the lock in it until needed for use. … This arrangement reduces shipping and storage costs, virtually eliminates losing the locks in storage or at the installation site in the field, and eases the installation process. Nevertheless, lock 17 could be completely removed from wear member 12 if desired for shipping, storage, replacement, installation and/or removal.*
>
> *[83] As noted above, lock 17 is placed in the hold position to secure wear member 12 to base 15. Lock 17 is preferably shipped and/or stored in combination with wear member 12 in the release position*

without base 15. Lock 17 could be structured to store and/or ship in the hold position or some rearward position if desired. …

78. We submit that none of these incidental references to shipping disclose a method of shipping. As a result, the claims cannot validly claim an early priority date.

Fair basis (internal)

79. Simply put, a 'method of shipping' is entirely outside of the field of the invention, which is 'a wear assembly for securing a wear member to excavating equipment'.

80. We note that methods of shipping are not described in the detailed description of the invention at all. The only references to methods of shipping are contained in consistory clauses, which are not sufficient to provide fair basis. As noted in Lockwood (no 1)[25]:

*… The inquiry is into what the body of the specification read **as a whole** discloses as the invention. An assertion by the inventor in a consistory clause of that of which the invention consists does not compel the conclusion by the court that the claims are fairly based nor is the assertion determinative of the identity of the invention.*

Conclusion

81. For these reasons Talon submits that the patent application should not be accepted, and the opposition should be upheld with costs awarded to the opponent.

[25] Lockwood Security Products Pty Ltd v Doric Products Pty Ltd [2004] HCA 58