

PATENTS ACT 1977

BETWEEN

Loadhog Limited

Claimant

and

Polymer Logistics BV

Defendant

PROCEEDINGS

Application under section 72 of the Patents Act 1977 in
respect of patent N^o GB 2,440,699 B

HEARING OFFICER Stephen Probert

Dr Anna Edwards-Stuart (instructed by Dickinson Dees) as Counsel for the claimant
Mr Richard Davis (instructed by Beresford & Co) as Counsel for the defendant

Hearing dates: 19th & 20th April 2010

DECISION**Introduction**

- 1 In this revocation action, Loadhog Ltd (“Loadhog”) seeks revocation of patent GB 2,440,699 B in the name of Polymer Logistics BV (“Polymer”). Polymer opposes the application. There are four distinct prongs to Loadhog’s attack against the patent:
 - i) Lack of novelty
 - ii) Lack of Inventive step
 - iii) Insufficiency
 - iv) Added matter
- 2 The patent concerns a combination dolly-pallet — a load-bearing deck that may be used as either a dolly or a pallet. As separate entities, dollies and pallets have been well known for many years as (alternative) arrangements for storing and transporting produce. It was common ground between the parties that manufacturers and suppliers prefer pallets, but retailers prefer dollies. There are several reasons why manufacturers and suppliers prefer pallets; eg. they can

carry substantial loads, they can be used on automated conveyor systems and they are cheap (being very simple devices mechanically). On the other hand, retailers tend to prefer dollies because they can be moved without mechanical handling equipment (eg. forklift trucks).

- 3 These different preferences can lead to what was described as the “crossover problem”. One of the solutions to the “crossover problem” involves packing the goods onto pallets at a supplier’s factory, and transporting the pallets to a distribution centre geographically located to serve a number of retail premises. At the distribution centre, the goods are divided into smaller quantities and transferred to dollies. The dollies are then loaded into trucks (and secured by locking bars) for transport to eg. the supermarkets.

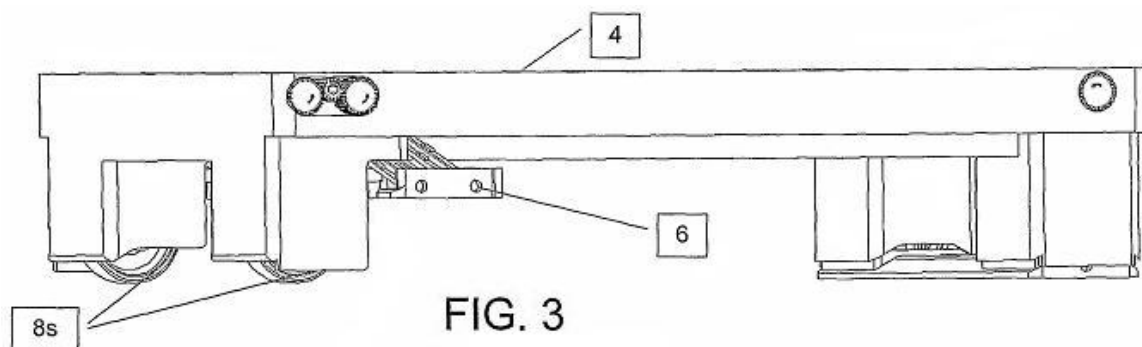
The Invention

- 4 Polymer’s solution to the problem is a dolly-pallet device, having a set of wheels fixed to the deck and a pair of retractable support skids. When the support skids are down, the device is said to be in a “pallet condition”, and when the support skids are retracted up into the device (leaving the wheels to support it on the ground), it is said to be in a “dolly condition”. The dolly-pallet device is defined in claim 1 as follows¹:

1. A dolly-pallet device which can be converted between a dolly condition in which the device is usable as a dolly and a pallet condition in which the device is usable as a pallet, comprising:

- (a) a deck;
- (b) a set of wheels attached to the deck in a fixed relationship for supporting the deck for movement over a ground surface when the device is in the dolly condition; and
- (c) a pair of movable support skids each having an undersurface portion for engaging the ground when the device is in the pallet condition;
- (d) wherein the support skids are movable relative to the deck by means of a displacement mechanism to convert the dolly-pallet device between the dolly condition and the pallet-condition;
- (e) and wherein the support skids are formed with openings through which the wheels extend when the device is in the dolly condition.

- 5 Figure 3 from the patent (below) gives an indication of how such a device may appear. (NB. the left hand skid **6** is shown in the retracted position.)



¹For convenience, the integers (a) to (e) are as set out in the claimant’s statement of case.

6 The last part of the claim, paragraph (e), will be particularly interesting because it was added during the examination process. The words themselves do not appear anywhere in the application as filed, although several of the drawings clearly show wheels extending through the support skids.

The Witnesses

7 Both parties filed evidence by expert witnesses. The experts were: Professor John Robert Yates for the claimant and Mr Michel ten Bok for the patentee. Professor Yates works in the department of mechanical engineering at the University of Sheffield. Mr ten Bok works for Curver BV in Holland as a designer of plastic products for use in the transport of consumer products. He is also a graduate in mechanical engineering.

8 The claimant also filed witness statements by Mr Hugh David Facey (Chairman of Loadhog) and Mr Edward John Peter Stubbs (General Manager of Loadhog). The evidence rounds in these proceedings were simultaneous; both experts filed reply evidence, and Messrs Facey and Stubbs also filed brief witness statements at the second stage. All four witnesses attended the hearing, and were cross-examined; the two expert witnesses were cross-examined at length.

9 I had previously said that it would be helpful to have a joint statement from the experts witnesses setting out (at least) the common general knowledge in the relevant technical field. However, I did not compel the parties to do this because, among other things, it seemed to me that the technology involved is not particularly complex.

10 During cross-examination, all the witnesses came across as honest professional men. I was satisfied that the expert witnesses understood, and accepted, that they had a responsibility to assist me on technical matters within their areas of expertise. There were very few occasions when I had doubts as to whether the experts' evidence might have been influenced by loyalty to the party that had called them to give evidence. I will come to that later.

11 Mr Davis was very critical of Professor Yates' suitability as an expert witness on the grounds that he had, by his own admission, no personal knowledge in the logistics industry. However, I think the real issue was not so much whether Professor Yates was a satisfactory witness, but whether he was the right expert for most aspects of this case. I had said at an earlier stage in the proceedings that evidence from an expert witness was only likely to be helpful in this case if it helps to establish what was common general knowledge at the priority date of the patent. Unfortunately I think the claimant had already chosen its expert by that stage, perhaps on the basis that I would require an expert in mechanical engineering to help me understand the technology involved. In the event, I don't think this was necessary; as both Dr Edwards-Stuart and Mr Davis agreed, the relevant technology is refreshingly simple. Of the two experts, Mr ten Bok was much closer to the notional skilled person, and I have relied on his evidence more than Professor Yates' to give me an insight into the likely thinking of the skilled person.

The Combination Dolly / Pallet or “Combo”

- 12 There was some disagreement between the parties and their respective experts over the extent to which combination units (ie. capable of operating as either a dolly or a pallet) were available before the priority date of the patent. This will be an issue later when I come to consider what was common general knowledge, but the claimant has relied on the following statement on page 1 of the patent:

“The prior art is replete with wheeled dollies and pallets with retractable wheels.”

- 13 Mr Davis sought to resile from this statement in his patent. The Court of Appeal in *Gerber*² decided that if you say something in a patent, there is a rebuttable presumption that it is true. Therefore, if a patentee wishes to resile from such a statement, he has to eg. put in evidence to rebut it. Mr Davis said that the patentee had done just that, when their expert witness (Mr ten Bok) said in his witness statement:

“In 2005, subject to this exception, in the retail industry either pallets or dollies were used. So far as I am aware, neither the retail industry nor any other industry had ever used any sort of combination dolly/pallet at any time.”

- 14 I did not think this was a sufficiently clear rebuttal of the statement in the patent, not least because it doesn't refer to the statement itself. I would also have expected the rebuttal to come from the patentee and not from a witness — especially an expert witness whose role is to assist the tribunal.
- 15 Mr Davis also argued that the patentee had given notice that it was resiling from the statement in the patent when it confirmed in writing (to the claimant) that it disagreed with the evidence of the claimant's expert (Professor Yates) when he quoted the passage from the patent. But this was in correspondence that I presume at the time was “without prejudice”. It wasn't submitted as evidence in these proceedings.
- 16 For these reasons I decided that it was not unreasonable for the claimant to have relied upon the statement in the patent. Consequently the patentee could not now resile from it. Having said that, I note that the statement refers to the “prior art” being replete with pallets with retractable wheels. That is not the same as saying that pallets with retractable wheels are part of the common general knowledge. For example, the prior art is replete with magnetic core memories, but no-one would seriously suggest that they are common general knowledge³ today.

The Pally demonstration

- 17 There was one other preliminary issue that I had to decide at the beginning of the hearing. This time it was the claimant who wanted to wriggle out of a statement previously made. Well over a year after these proceedings commenced, the claimant amended its statement of case to rely upon a prior use which took place

² *Gerber Garment Technology Inc v Lectra Systems Ltd* [1995] FSR 492

³ Magnetic core memory technology was abandoned around 30-40 years ago, like an unprofitable seam in a coal mine. But it remains part of the “prior art”.

before the priority date of the patent. The prior use was a demonstration of a prototype combination dolly/pallet called the "Pally". The Pally was demonstrated to his Royal Highness the Duke of York and Mr Martin Delamere, on 22 June 2005 at Loadhog's premises in Sheffield. The prior use was pleaded as follows:

"The invention claimed in the UK Claims is not novel with regard to:-

- 6.1.1 the demonstration on 22 June 2005 by Mr Leigh Jowett at The Hog Works, Carbrook Street, Sheffield ... of a prototype dolly device which disclosed features (a) to (e) of claim 1 of the Patent to at least His Royal Highness the Duke of York and Mr Martin Delamere ("the Prior Disclosure") in the absence of any confidentiality obligations. The claimant will rely in this regard upon:
 - 6.1.1(a) a photograph taken during the demonstration of the Prior Disclosure;
 - 6.1.1(b) the prototype demonstrated during the Prior Disclosure;
 - 6.1.1(c) a CD video taken on 9 February 2010 during an inspection of the prototype demonstrated during the Prior Disclosure by the Defendant's representatives; and
 - 6.1.1(d) a copy extract from the Court Circular for the 22nd June 2005 which states that "The Duke of York, Special Representative for International Trade and Investment ... visited the Hog Works, Carbrook Street, Sheffield".

18 In a letter dated 13 April 2010, Loadhog's solicitors indicated that the claimant intended to rely on the Pally prototype itself, and not merely the demonstration of the Pally to the Duke of York and Mr Delamere. Dr Edwards-Stuart reinforced this indication in her skeleton argument supplied shortly before the hearing, and also sought leave to file a further (third) witness statement by Mr Facey dealing specifically with the circumstances of the Pally demonstration.

19 Mr Davis resisted what he saw as a fundamental change in the claimant's pleaded case, and I agreed with him. It was too late to broaden out the attack based on the Pally demonstration. In the event, I don't think the claimant could have succeeded with the broader attack anyway, for reasons which I will give later.

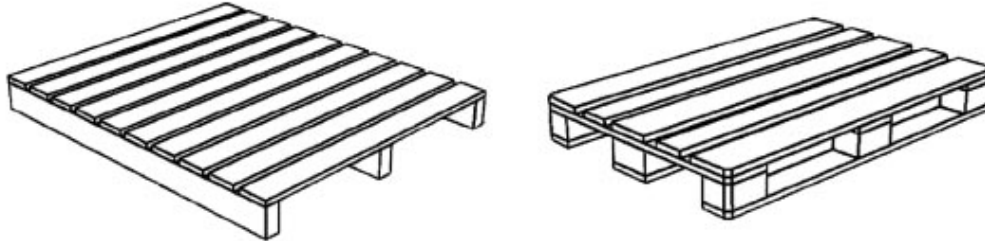
20 Nevertheless, in the circumstances I could see no reason not to allow Mr Facey's third witness statement to be admitted into the proceedings. The evidence in it would probably have come out during cross-examination anyway, and also, Mr Davis had said that he would not oppose the admission of Mr Facey's third witness statement if Dr Edwards-Stuart was held to her pleaded case.

The Skilled Addressee and the Common General Knowledge

21 There was no real disagreement about the identity of the skilled addressee. In this case, it would probably be a team of individuals each possessing specific skills relevant to the design and manufacture of pallets and dollies. As such, the members of the team would have a good knowledge of the logistics industry.

22 The common general knowledge was a bit more contentious. Clearly pallets and dollies as separate items were common general knowledge. As already stated above, it was agreed that suppliers prefer pallets, and retailers prefer dollies.

- 23 A pallet consists of a low deck or platform on which goods can be stored for transport and storage. Pallets must be lifted in order to be moved and the platform is therefore open on at least one side to enable the tines of fork lift trucks to be inserted into the pallet so that the loaded pallets can be lifted and moved. Two typical styles of wooden pallet are reproduced below.



- 24 Pallets used in the logistics industry almost invariably have skids — sometimes called bearers. Under cross-examination Mr ten Bok agreed that pallets without skids are also well known, but he maintained that such pallets were not used in the logistics industry. The lack of skids on a pallet would be a severe handicap in the logistics industry because of the difficulty of moving such pallets on conveyor systems.
- 25 The size of pallets is in general standardised. As the retail industry became increasingly global, there was a need for increased compatibility so that pallets could be lifted and stored using equipment originating in different countries and stored next to and in combination with pallets originating in different countries. In 2002 the principal dimensions for flat pallets were enshrined in a British Standard (BS EN 13382:2002).
- 26 A dolly is a wheeled platform for moving a load. Typically it will have four wheels, arranged at or close to the corners. The most common combination is two fixed wheels and two castoring wheels which facilitates steering. They enable the stacked goods to be moved without the need for eg. a fork lift truck. Whereas dollies are useful for moving stacked goods (particularly within a confined space such as a warehouse) they are less useful for transportation as dollies have a tendency to move around in transit. They are also less useful for storage as dollies cannot be stored on inclined or uneven platforms. The wheels make the dollies harder to stack when not in use and add to the unit cost.
- 27 Both parties would agree so far with this description of the common general knowledge. But the same cannot be said of the position of combination units (ie. dolly/pallets) in the common general knowledge. The claimant takes the position that combination units were well known, based in part on the admission in the patent that the prior art is replete with pallets with retractable wheels. On the other hand, Mr ten Bok maintained under cross examination that such products were not at all well known. He accepted quite readily that there was, and had been for some time, a desire to increase efficiency and handling of goods in the logistics supply chains, but this did not mean that there was a demand for a convertible dolly/pallet. In fact, I got the distinct impression from Mr ten Bok that he was not particularly enthusiastic about the concept of combining pallets and dollies at all. (In this respect I thought he came across as a neutral expert witness.)

28 I therefore conclude that while combination dolly/pallet units were part of the state of the art at the filing date of the patent, they were not common general knowledge in the logistics industry, and would not have been well known to the skilled addressee.

Construction - “support skids”

29 Several issues of construction arise in this case. Mr Davis submitted that “support skid” is a term of art, referring to elongate load bearing members. They perform at least two specific functions:-

- i) They spread the load (which may be considerable) over a large area, and
- ii) They permit the use of the pallet on roller/conveyor belt systems.

30 In Mr Davis’ view, they are not the same as “legs” (or stoppers), which fulfil neither of these functions. He also relied on the sense in which the term “support skid” is used in the patent.

31 Dr Edwards-Stuart did not agree that “support skid” is a term of art. She pointed out that although the term is typically used to refer to an elongated weight bearing member of a pallet (or similar device) it is sometimes used to describe the pallet itself. Furthermore, the term “skid” is not used at all in the British Standard for flat pallets, which uses the term “bearing surface”. But I thought Dr Edwards-Stuart’s best point was that the patent contains the following passage (bridging pages 15 and 16) which appears to cast doubt on the meaning of “skid”:

“It should be noted that although the embodiments described herein make reference to the retractable support skid as the contact surface when the dolly-pallet of the present invention is deployed in a non-rolling state, this is not intended as a limitation and a dolly-pallet configured with individual retractable contact surfaces associated with each leg is within the scope of the present invention.”

32 Ultimately I have to determine the meaning of “support skid” from the context in which it is used, having particular regard to what a person skilled in the art would have understood the patentee to have used the term to mean. I think that the passage at pages 15 & 16 of the patent (above) is distinctly at odds with the general usage of “support skid” everywhere else in the patent. Most importantly, I don’t think it is possible to sensibly construe the language of claim 1 if “support skid” can mean a leg or stopper. That is because the last part of claim 1 requires that the support skids are formed with “openings through which the wheels extend”. Therefore I conclude that a “support skid” is an elongate load-bearing member, and that a leg or stopper is not a support skid.

Construction — “Dolly condition” & “pallet condition”

33 The patent refers to the device having a dolly condition and a pallet condition. The precise meaning of both of these terms came into question, and I need to establish the correct construction. The only definition of these terms in the patent is the somewhat unhelpful one found at page 2 which refers to:-

“... a dolly condition in which the device is usable as a dolly and a pallet condition in which the device is usable as a pallet”

34 Dr Edwards-Stuart wanted me to adopt the language used in the priority application which speaks of changing the device between:-

“a non-rolling pallet state and a rolling dolly state”

35 But these words do not appear in the patent, and Mr Davis argued that I should not resort to the priority application in order to construe the patent. I think that must be right. The different interpretations of “pallet condition” could be significant in this case because of the design and operation of Loadhog’s Pally product, as demonstrated in front of, among others, the Duke of York. Dr Edwards-Stuart submitted that there is no requirement in claim 1 of the patent that the wheels be lifted off the ground in the pallet condition. She added that if this was a requirement of claim 1, then claim 9⁴ would serve no useful purpose. And yet, when she cross-examined Mr ten Bok on this point, he was adamant (as the following exchange demonstrates) that the wheels could not remain in contact with the ground in the pallet condition.

Dr Edwards-Stuart — “But if it is in the pallet condition for automatic handling, it doesn’t matter whether or not the wheels are touching the ground. All that matters is whether or not the dolly cannot be rolled?”

Mr ten Bok — “Let me put it the other way round. If it’s on a conveyor or a rolling board or whatever, we have to be absolutely sure that the goods or the stuff on the pallet are standing on feet for automatic handling. Wheels are always a problem for automatic handling. You have to be 100% sure that the wheels are not touching the floor or are not interfering with automatic handling. So the wheels are for humans and the skids are for automatic handling.”

36 On balance, I would go with Mr ten Bok’s understanding of the meaning of “pallet condition” — ie. the wheels must be off the ground — because he is more typical of the person to whom this particular patent is addressed. I am also aware that there are such things as braked dollies commonly used to distribute refreshments along the aisles of trains and aeroplanes. In some of these, a stopper or leg can be moved vertically downwards to contact the floor in order to prevent or restrict horizontal movement. In these situations the wheels may still be bearing the majority of the load; such an arrangement cannot be described as a “pallet condition”.

37 The meaning of “dolly condition” is important because claim 1 requires that the wheels extend through openings in the support skids in the dolly condition. This is feature (e) in claim 1. However, most of the embodiments in the patent describe a device with a two-stage retracting skid mechanism. In the first stage, the skids are retracted vertically upwards until all the weight is transferred from the skids to the wheels. Then, in a second stage, the skids are swung upwards in an arcuate path away from the wheels so that, for example, they are free to swivel. However, the patent does envisage circumstances in which the second stage of the

⁴ Claim 9 - A dolly-pallet device according to any preceding claim, wherein the support skids are such that when the device is supported on a ground surface in the pallet condition, the wheels are clear of the ground surface.

retraction would not be required — eg. when the wheels are not configured to swivel.

- 38 Therefore I conclude that “dolly condition” refers to the state of the device when all of the weight is carried by the wheels, regardless of the position of the skids. In passing, I note that a complementary definition of “pallet condition” — where all of the weight is carried by the skids — seems to be consistent with the evidence of Mr ten Bok, without depriving claim 9 of its purpose.

Lack of Novelty

- 39 Section 1(1)(a) and section 2 of the act are so well known that I need not reproduce them here. Claim 1 of the patent will lack novelty (and as a result the patent will be invalid), if something falling within the scope of the claim was disclosed before the relevant date — 9 September 2005.
- 40 The patentee accepts now that features (a) to (d) were found in the prior art before 9 September 2005, but does not accept that feature (e) had been disclosed at that time.

DS Smith Plastics — GB2436553A

- 41 Loadhog initially claimed that claim 1 was not new having regard to GB2436553A (DS Smith plastics). Polymer accept that all the features of claim 1 are disclosed in this document. But the earliest filing date of GB2436553A is 29 March 2006, so it would only anticipate Polymer’s patent if Polymer was not entitled to the priority date. It is clear to me that Polymer **is** entitled to the earlier priority date, as I think Dr Edwards-Stuart accepted before the end of the hearing, so this attack fails.

Pally demo

- 42 A slightly stronger novelty attack against claim 1 arises from the demonstration of the prototype, but it doesn’t really get to first base. I decided at the hearing that Dr Edwards-Stuart must adhere to her pleaded case, which was restricted to the demonstration of the Pally prototype at Loadhog’s factory on 22 June 2005, rather than the prototype itself.
- 43 Mr Davis insisted, as he had every reason to, that I was bound by the judgment of Mr Peter Prescott QC (sitting as a Deputy Judge) in the *Folding Attic Stairs* case⁵. The circumstances of the Pally demonstration were similar to the alleged prior disclosure in *Folding Attic Stairs*, namely an inspection of a device occurring in a private place by a small and defined class of people — in both cases during a factory tour by a visiting dignitary. I have carefully read paragraphs 81 to 89 in particular of *Folding Attic Stairs* and I accept that what was made available to the public as a consequence of the Pally demonstration must be limited to what the Duke of York and Mr Delamere discerned from the demonstration. It was made available to the public because the Duke of York and Mr Delamere were free in law to divulge the information to anyone else as they pleased — not because the

⁵ *Folding Attic Stairs Limited v The Loft Stairs Company Limited* [2009] EWHC 1221 (Pat)

demonstration itself was in public. (As far as I can tell from the claimant's statement and evidence, it was not a public demonstration.)

- 44 The following photograph taken at the demonstration was attached to the claimant's statement.



- 45 Prior to the hearing, the claimant also supplied a short (6 minute) video clip that was taken earlier this year when the defendant's patent attorney inspected the Pally prototype. The video clip was also played several times during the hearing. Mr Davis was very sceptical of the value of the video. He says in his skeleton argument:

"The status of video JRY9 appears to be being vastly over-inflated. It is not a contemporaneous video taken at the opening of the Hog Works. Instead it is a selective record of some parts of a detailed inspection made by the patentee's technically qualified patent attorney in 2010. It does not therefore assist either in what was visible to the Duke or what he actually saw.

Specifically, large sections of the video were taken with the cameraman clearly sprawling about on the floor and/or zooming in on various features. There is no evidence that either of these occurred at the Duke's inspection or would have been permitted."

- 46 Clearly the video is not as useful as it would have been if it had been recorded at the demonstration before the Duke of York. Nevertheless I found it helpful because even with the close-up sections focussing attention on specific features of the Pally prototype, which probably go a lot further than what is likely to have occurred at the demonstration before the Duke, I still don't think the Duke of York or Mr Delamere would have appreciated enough about the operation of the Pally prototype to threaten the novelty of claim 1. For example, I viewed the video several times on a 20" computer monitor and I could not tell whether it was the wheels or the supports that were retracting when the prototype was switched between the rolling and non-rolling states.

47 The Duke of York visited Loadhog's new factory in Sheffield in order to open the factory and to unveil "The Heron" — a piece of sculpture outside the building. The balance of the evidence, including the cross examination of Mr Facey at the hearing, indicates that the primary purpose of the demonstration that took place during the visit was to present the 'Loadhog Lid'. The Loadhog Lid, one of the claimant's production items, can be seen strapped on top of the crates in the photograph above. However, it seems that the Duke must also have been interested in the operation of the Pally prototype, because after being shown how the Pally could be simply converted from the rolling to the non-rolling state, he asked for the demonstration to be repeated.

48 But unless he had got down on his hands and knees, or turned the Pally prototype upside down to see how the mechanism operated, the most that he could have taken away from the demonstration is the idea of a single device that can function as a dolly or a pallet, and which can be converted between the two states by means of a foot pedal. That falls a long way short of anticipating claim 1. There was no suggestion that the Duke did get down on his hands and knees to inspect the prototype more closely, or that it was turned upside down to reveal the operating mechanism underneath. Consequently I do not think that the demonstration of the Pally prototype anticipates claim 1 of the patent.

49 Dr Edwards-Stuart submitted that Mr Delamere, who was present at the demonstration, was a person skilled in the art, and that consequently he would have learned more than the Duke from the demonstration. I suspect she had in mind the last sentence of paragraph 87 of *Folding Attic Stairs* where Mr Prescott QC considers what the Irish Minister for Trade and Tourism and a photographer from the Irish Times would have learned from seeing a new type of loft ladder. I.e.:

"I would take a very different view if one of those present had been a person interested in constructing folding attic ladders."

50 However, there is no evidence to support the suggestion that Mr Delamere is a skilled person in the art of dollies and pallets. I think the most that can be said is that he works for a logistics company. As Mr Davis commented, he could well be salesman or a finance director with no technical interest in the operation of the prototype. So I have no reason to suppose that Mr Delamere was likely to derive any more or any less from the demonstration than the Duke of York.

51 Although I had already decided that Dr Edwards-Stuart had to stick to her pleaded case regarding the prototype, I did allow her to cross-examine Mr ten Bok in relation to the broader attack — in which the prototype itself is the prior use, and not just the demonstration in front of the Duke. I permitted this in case I was wrong to hold her to her pleaded case, because otherwise there would be no opportunity to hear on appeal what the expert witness(es) had to say about the prototype.

52 Mr ten Bok was therefore given an opportunity, at the hearing, to inspect the Pally prototype. The device was turned on its side so that he could clearly see the operating mechanism underneath. This was right in front of me, so I also saw it. Dr Edwards-Stuart tried hard to get Mr ten Bok to accept that all the features (a) to (e) of claim 1 could be found in the prototype. But Mr ten Bok was adamant that the Pally prototype does not have skids. The following exchange between

Dr Edwards-Stuart and Mr ten Bok during cross-examination gives some indication of the results of Mr ten Bok's inspection of the prototype:-

Q. Do you accept that the device has a pair of moveable support skids?

A. No. This device has no skids.

Q. Do you accept that the device has load bearing elements that have an under surface portion that engages the ground when the device is in the pallet condition?

A. For me, this device has no skids. Can you rephrase it?

Q. I am rephrasing it to avoid using the word "skids". Do you accept that the device has load bearing portions?

A. Do you mean the four strips?

Q. Exactly. That engage with the ground?

A. Yes.

Q. So it has load bearing portions that engage in the ground when the device is in the pallet condition?

A. It is touching the ground. It works as a stop.

Q. So they engage the ground when it is in the non-rolling condition?

A. Yes.

Q. The devices that we have referred to, the four vertical plates — I have called them load bearing elements and I think you understand what I mean by that — are moveable relative to the deck by means of a displacement mechanism?

A. Yes.

Q. And that converts the device between a dolly condition and pallet condition or, to use more neutral terminology, a rolling condition and a non-rolling condition?

A. For me this device is still a dolly with stoppers. It is not a pallet configuration.

Q. But it is a non-rolling configuration?

A. Yes.

Q. And the vertical plates, the load bearing vertical plates, are formed with openings through which the wheels extend, ... in which the device is in the dolly condition?

A. No. You have four stoppers or plates alongside the wheels.

Q. And the wheels extend through those stoppers or plates, as you call them?

A. No. The wheels are fixed to a kind of sub-frame in the device and the four plates are coming down and working as stoppers for the dolly device. So you have four stoppers at the end and the front end mechanism that retracts the wheel. So the front is standing on the corners and the back it stands on four strips.

Q. Would you accept that there is a gap or opening between the vertical plates and strips and that the wheels pass through that opening as the skids retract, or as those devices retract?

A. So I have four wheels on a sub-frame and I have two plates that elongate beside the wheels. This is a kind of wheel protection for the wheel and this is just a device that stops them rolling along.

53 Mr ten Bok inspected the prototype in front of me, and although I am not an expert in the field of pallets and dollies, I agreed entirely with his assessment. I saw no skids. What I did see was two pairs of vertical plates, acting as stoppers, either side of two of the wheels, as illustrated in the following two photographs⁶.



54 So on the evidence of Mr ten Bok, and the evidence of my own eyes, the prototype itself could not anticipate claim 1 because it does not have skids “formed with openings through which the wheels extend”.

Lack of Inventive Step

55 The law on inventive step was conveniently summarised by Mr Prescott QC in *Folding Attic Stairs*:

66. The law on obviousness is this. An invention cannot validly be patented if, having regard to the state of the art, it would have been obvious to a person skilled in the art at the relevant date. As I have explained, the state of the art includes anything that has been made available to the public – even a single person, if he is free in law to use the information as he pleases – whether by documentary description, ocular exposure or word of mouth. Because there is such a vast repository of prior art in the world, it is not permissible to combine two disparate items of prior art unless, for some reason, it would be obvious to the skilled person to do so.

67. In assessing whether or not an invention would have been obvious it is easy to confuse oneself e.g. by using hindsight. Therefore it has become the practice to approach the question in a step-by-step way, as first laid down in the *Windsurfing* case [1985] FSR 59 at 73. More recently it has been restated by the Court of Appeal in *Pozzoli Spa v. BDMO SA* [2007] EWCA Civ 588 at §23. In the words of Jacob LJ:-

I would restate the *Windsurfing* questions thus:

- (1) (a) Identify the notional “person skilled in the art”
- (b) Identify the relevant common general knowledge of that person;

⁶ Annex 11 to Prof Yates’ witness statement

- (2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it;
- (3) Identify what, if any, differences exist between the matter cited as forming part of the “state of the art” and the inventive concept of the claim or the claim as construed;
- (4) Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?

56 Dr Edwards-Stuart presented the claimant’s obviousness attack based on four distinct starting points:

- (1) the Pally prototype
- (2) Bunn — US3247931
- (3) Hutchinson — US3216531
- (4) Common general knowledge

57 However, the teaching of Bunn and Hutchinson is, for present purposes, identical and I therefore propose to treat them together. This is not a mosaic; there was no suggestion that the teaching of Bunn and Hutchinson needs to be combined in order to show a lack of inventive step. They are both part of the state of the art, and they each disclose a dolly/pallet with retracting skids. Mr Davis conceded that both Bunn and Hutchinson have all of features (a) to (d) inclusive of claim 1.

58 The first two steps of the *Windsurfing/Pozzoli* test are common to all three attacks. Summarising what I have already found regarding them:

59 Step 1(a) — The notional person skilled in the art. In this case the ‘person’ is likely to be a team of individuals each possessing specific skills relevant to the design and manufacture of pallets and dollies. The members of the team would also have a good knowledge of the logistics industry

60 Step 1(b) — The relevant common general knowledge. Between them, the team would have a thorough knowledge of pallets and dollies, but only as separate items. They would not be familiar with combination dolly/pallet units, because such devices were not well known. Considering pallets, they would be familiar with the relevant British Standard (BS EN 13382:2002), and the different standard sizes of pallet used in the logistics industry. They would also know that suppliers prefer pallets, and retailers prefer dollies, and they would know the reasons for these preferences.

61 Step 2 — The inventive concept. Having carefully and repeatedly reviewed the submissions from both counsel on this point, I conclude that the inventive concept in claim 1 is a dolly-pallet device with retractable support skids that are formed with openings through which the wheels extend when the skids are retracted.

The Pally Prototype

62 As with the attack under novelty, the claimant’s pleaded case must be restricted to the demonstration of the Pally prototype at Loadhog’s factory on 22 June 2005, rather than the prototype itself. I will nevertheless comment later on what my

decision would have been if I had allowed Dr Edwards-Stuart to run the broader case based on the prototype itself (as I did with novelty above).

- 63 Step 3 — The differences between the inventive concept and the Pally demo.
Based on my findings of fact, the demonstration of the Pally prototype showed a device that could be converted between a rolling and a non-rolling state. I do not think the Pally demonstration revealed a device with a pallet condition — at least, not what the notional skilled person would call a pallet condition. For example, in a pallet condition, the device would have to be suitable for carrying goods on a conveyor system. According to the evidence, the demonstration on 22 June 2005 did not clearly and unambiguously show a device capable of carrying goods on a conveyor system. The demonstration showed what would have looked like a dolly with a foot-operated brake. It would have been impossible to discern from the demonstration alone how the prototype worked — ie. how it is converted from a rolling to a non-rolling state — not least because it has protective covers at the four corners which effectively conceal the wheels and the vertical stoppers.
- 64 The video of the later demonstration includes close-up sections filmed from a position much closer to the ground than the observers appear to have been at the original demonstration. I didn't learn much, if anything, about the operation of the prototype by viewing and reviewing the video, so I was interested to hear what the expert witnesses discerned from it. Professor Yates, when questioned by Mr Davis at the hearing, accepted that when the prototype is converted from eg. the non-rolling to the rolling state, what actually happens is that the legs retract upwards at one end and the wheels are lowered down at the other end⁷. He also accepted that neither of his written reports mentioned this, which caused Mr Davis to ask him whether he had learned this from watching the video or whether he had found out later.
- 65 I questioned Professor Yates further about this because I was not entirely clear about what he was telling me. At the time, I thought his answers were rather defensive. Listening to the recording of his evidence again, I can see that he was indeed being very careful with his answers. I reproduce here a few of my questions, and Professor Yates' replies:
- Q. You have said a couple of times, Prof. Yates, that the prototype has two mechanisms ... so that at one end the wheels go up and at the other end the feet go up. When did you realise that that was the case? Was it before or after you were able to have a look underneath the mechanism, bearing in mind you are here to assist me now. When did you realise that?
- A. It is hard to say from the video, but the first time it is moved the ends move slightly differently, so you get a hint then that there are possibly two different mechanisms.
- Q. You worked that out from looking at the video?
- A. You can just see that the left hand end moves in a slightly different way to the right hand end.

⁷This was quite a revelation to me at the hearing. I came to the hearing wondering whether the prototype had retractable wheels or retractable legs/skids. In fact, it had both ! The prototype was described at the hearing as having two mechanisms, one at either end. In fact, it was a single pivoting mechanism — rather like a seesaw — having legs or stoppers at one end, and castor wheels at the other.

66 There were then some further exchanges as I attempted to clarify exactly what Professor Yates meant by "... a hint that there are possibly two different mechanisms". I then asked him a final question:

Q. So I think we need to be clear now. Was it when someone told you that there were two different mechanisms that that is when you realised that at one end the wheels were retracted and at the other end the legs were retracted? Or are you saying that you saw it from the video?

A. I believe I saw that the ends were different.

67 I believe Professor Yates was taking great care with his choice of words, and I am going to take them at face value. What Professor Yates saw from the video was that the two ends were different, in the sense that they moved in a slightly different way. He did not say that he appreciated just from watching the video that at one end the wheels were retracted, and at the other end the legs were retracted. (It seems that another Loadhog employee, Mr Jowett, told him about this, but Professor Yates did not say when this conversation took place.)

68 Mr ten Bok's written evidence shows what he learned from watching the video. It is clear, as paragraphs 48 to 52 of his first report expert report show, that he learnt a lot more than I did:-

The Loadhog Video

48. The video 1 have been shown is clearly of a prototype device operable as a dolly, and having two fixed wheels at one end and two castor wheels at the other end. The deck is dimensioned approximately 0.8 x 0.6m, as it is shown to accommodate two standard British retail bail arm crates side by side.

49. The dolly has no skids, but has wheel protection structures at each corner with clearances between them which I assume are to allow entry of fork truck tines from the side or from the end. Each end has a central foot pedal at the short 600 mm side.

50. At the end of the prototype with the fixed wheels, "stoppers" in the form of vertical plates are mounted next to the wheels. By operating the pedal, the stoppers can be moved down so that their edges contact the floor, preventing rolling of the dolly. Further operation of the pedal lifts the stoppers off the floor, allowing the dolly to roll again.

51. At the castor wheel end, there are no stoppers. The castor wheels are raised by the operation of the pedal, to make the wheel protection structures at this end touch the ground and thus prevent rolling. The next operation of the pedal is in three stages, and lowers the wheels to lift the wheel protection structures at the castor end off the floor, allowing the dolly to roll. Both ends of the dolly are operated by the same pedal movements.

52. The prototype shown in the Loadhog video has no elements I would call skids. Each of the stoppers at the fixed wheel end is made up of a pair of vertical plates, one plate on each side of the wheel. The stoppers at the fixed wheel end and the legs at the castor end are not long or wide enough to be termed skids. There is no skid to spread the load as is conventional in a pallet. From the video it appears that the device is at all times supported on its wheels, and is convertible from a rolling condition to a braked condition by two different brake arrangements. The prototype does not appear to have a "pallet condition" in which the wheels are raised off the ground and the load is supported only by the

legs and the stoppers. I would not consider the prototype to be a "convertible dolly/pallet", but rather a braked dolly.

69 However, in his second expert report, prepared in reply to Professor Yates' expert report, Mr ten Bok makes it clear that what he was able to learn about the prototype by viewing the video would not have been apparent to even a skilled observer at the actual demonstration on 22 June 2005. He said:

25. ... I have been asked to consider what would have been apparent to an observer standing a few metres from the device and seeing it operated as described in Mr Facey's statement (and shown in his Annex 3). My view is that even a skilled observer would not have been able to see how the device operates, even assuming he was looking in the right place at precisely the right time, because the moving parts are substantially hidden by the depending wheel protection at the corners of the deck. Again, because the wheels are substantially hidden it would not be possible to work out the arrangement of the stoppers and wheels and their spatial relationship.

26. The demonstration video has been largely taken from vantage points at or near ground level, and this sort of view and the detailed information it conveys would not have been apparent from the vantage point of an observer (even if that observer was a skilled person) viewing the device in the manner and for the time described by Mr Facey's witness statement.

70 So from all this I find that the difference between the inventive concept and what was made available to the public at the Pally prototype demonstration is the use of retractable support skids with openings through which the wheels extend when the skids are retracted.

71 Step 4 — Would the difference be obvious? Viewed without any knowledge of the alleged invention as claimed, I consider that the difference(s) do not constitute steps that would have been obvious to the person skilled in the art. The attack based on the Pally demonstration fails.

72 If I had allowed Dr Edwards-Stuart to run the broader case based on the prototype itself (rather than merely the demonstration to the Duke of York and Mr Delamere), the outcome would have been exactly the same. Even if the prototype itself had been made available to the public, the differences at step 3 of the *Windsurfing/Pozzoli* test would, if possible, have been greater.

73 Referring to the findings I have already made in relation to the Pally prototype, it does not have skids. Dr Edwards-Stuart tried to persuade me that it would be a simple and obvious step to mount a skid between the two inner vertical plates (stoppers) of the Pally prototype; but that argument fails for at least two reasons: First, the stoppers on the prototype are, as Mr ten Bok described them, brakes. They do not lift the wheels clear of the ground, so bridging the gap between the two inner stoppers would still not lift the wheels clear of the ground. That being so, even when the stoppers are joined together, the element would still only operate as a brake, and not as a skid. (I.e. there would be no pallet condition.)

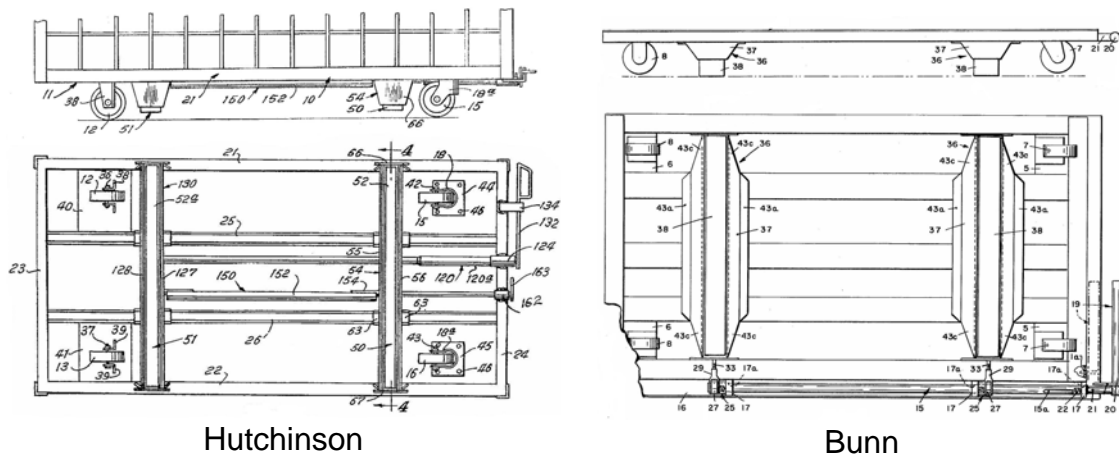
74 Secondly, even if joining the inner stoppers did provide the prototype with a skid, it would be the only skid. The Pally prototype does not have a similar arrangement of stoppers at the other end because at that end it is the (swivelling) castors that are raised and lowered. A device with only one skid could not operate

as a pallet, and would still be outside the scope of claim 1 which requires “**a pair of movable support skids**”.

Bunn & Hutchinson

75 As stated above, I am taking these two pieces of prior art together, not as a combination (or mosaic), but because for practical purposes they both disclose the same thing. I will say here that this appeared to me to be the claimant’s strongest attack in these proceedings, and a significant amount of time was spent at the hearing exploring the difference between the dolly-pallet devices disclosed in these earlier documents and the inventive concept.

76 Step 3 — The differences between the inventive concept and the prior art. Bunn (US 3247931) and Hutchinson (US 3216531) both concern dolly-pallet devices with retractable skids. The drawings below, taken from the respective citations, will be enough to show how similar they are to each other, and to illustrate the difference between them and the inventive concept:—



77 The patentee accepts that both Bunn and Hutchinson disclose integers (a) to (d) of claim 1. The only difference between them and the inventive concept is that the retractable skids in Bunn and in Hutchinson are not formed with openings through which the wheels extend. In both Bunn and Hutchinson, the skids are positioned separately to the wheels, and are located closer to the centre of the device than the wheels.

78 Step 4 — Would the difference be obvious? Dr Edwards-Stuart sought to persuade me that it would be obvious to take the support skids in either Bunn or Hutchinson and move them to the outer edges of the device so that they would be coterminous with the wheels. This was obvious, she argued, because it would increase the stability of the device. Both experts were cross-examined at length to help me decide whether or not it was a simple matter to move the skids outwards, and make openings in them for the wheels. Professor Yates thought it would be obvious to the skilled addressee that moving the skids outwards would increase stability, and that once that had been realised, it would have been a simple enough job to redesign the mechanism so that openings could be made for the wheels. Mr ten Bok on the other hand could see nothing but difficulties with such a redesign. He certainly did not think it would be a simple task. I felt that the subject of redesigning Bunn or Hutchinson to make the skids coterminous with

the wheels was one on which Professor Yates' expertise was more relevant and more credible; therefore I have relied on Professor Yates' evidence rather than Mr ten Bok's on this point.

- 79 Mr ten Bok said under cross examination that the skilled person would dismiss both Bunn and Hutchinson because neither document discloses a device that would be suitable for use in the logistics industry. More specifically, he said that he would not be interested in Bunn⁸ because the skids would get in the way of the tines of a forklift truck. He said that he would dismiss it completely because "it will not work in our field of industry".
- 80 Of course, strictly speaking the question is not whether it would be obvious to move the skids outwards in either Bunn or Hutchinson, because the claim (and the inventive concept) does not require the skids and the wheels to be in the extreme corners of the device. The inventive concept is the idea of forming openings in the skids through which the wheels extend. I understand that Dr Edwards-Stuart's submission was that it would be obvious to move the skids in Bunn or Hutchinson outwards (to enhance stability), and that in order to achieve this, it would be necessary to solve the problem of having the skids and the wheels in the same place.
- 81 The weakness with this argument is that if it was obvious that the skids should be as close to the outside as possible (to increase stability), then why was there no attempt in either Bunn or Hutchinson to put the skids (and the wheels) closer to the outer edges. The answer may be that the dolly-pallets in Bunn and Hutchinson were intended for specific applications where the stability provided by the skids in the positions shown is more than sufficient. It struck me at the hearing that the dolly-pallets in Bunn and Hutchinson would have to be loaded very unevenly for the centre of gravity to fall outside the rectangle formed by the two skids, and thus cause problems with stability. It was accepted as common sense at the hearing that, faced with a choice, one would always put the wheels closer to the outside than the skids, because the increased stability would be more important when the device is in the moving (dolly) condition than when it is in a stationary (pallet) state.
- 82 But in the end, I have answered this question not only by considering whether the skilled person, reading Bunn or Hutchinson, would think it obvious to move the skids outwards to increase stability, but whether the skilled person (who has a special interest in devices for use in the logistics industry) would think it obvious to modify either Bunn or Hutchinson to make them suitable for use in the logistics industry — eg. by making space for the tines of a forklift truck, because that is why Mr ten Bok said he would disregard these earlier publications.
- 83 Mr ten Bok agreed under cross examination that the logistics industry was always looking for opportunities to improve the efficiency of handling goods, but he did not accept that there was a demand specifically for a convertible dolly-pallet. For the record, I see no contradiction between these two statements.
- 84 Nevertheless, after carefully reviewing the evidence of both experts, I have concluded that the difference between the inventive concept and the prior art

⁸Or, by analogy, Hutchinson

(whether Bunn or Hutchinson) is not a step that would be obvious to the skilled person.

- 85 Mr ten Bok's evidence indicates to me that the skilled person would be interested in a device that could improve handling efficiency in the logistics industry, for example, by solving the "crossover" problem. Therefore I think the skilled person would be attracted to the 'potential' solution shown in Bunn or Hutchinson. The physical constraints imposed by the use of forklift trucks and conveyor systems, resulting in the standard sizes of pallet laid down in British Standard BS EN 13382:2002, would mean that the skids and wheels would both need to be positioned in the same, narrowly defined region at the outer edges of the device. To be precise, one will want to put the wheels as close to the corners as possible, and also have skids that extend along the full length of two opposing sides. Clearly this leads to a conflict between the wheels and the skids.
- 86 Professor Yates was quite clear that it would be a fairly simple job to redesign the retracting mechanism to allow the skids and the wheels to be located at the edge of the device, and I accept his evidence. For what it is worth, I also agree with him. But I don't agree with him that it would be obvious to make the skids surround the wheels — which is essentially just another way of expressing the inventive concept. The prior art consistently shows the wheels closer to the corners than the skids. Furthermore, as I have already observed, everyone agreed that it was obvious to put the wheels closer to the outside than the skids because stability is more likely to be an issue when the device is in the dolly condition than when it is in a pallet condition. Making the skids surround the wheel (or forming the skids with openings for the wheels) means that the device would have a greater degree of stability in the stationary pallet condition than it would in the rolling dolly condition. This is contrary to all of the evidence in the case. The evidence suggests that if there was an obvious way to modify the dolly-pallet in Bunn and Hutchinson it would involve locating the wheels in the corners, and moving the skids to the outer edges but entirely between the wheels. In which case there would be no need to form the skids with openings for the wheels because the skids would stop short of the wheels.
- 87 There was a suggestion that making the skids surround the wheels would provide the additional benefit of protecting the wheels. But one would not find that from Bunn or Hutchinson, since neither of them shows any protection for the wheels. I also note that the wheel protection is not part of the claimed invention; indeed, the the patent is completely silent about the need to protect the wheels. Moreover it seems to me that if protecting the wheels is an important consideration, there may be other ways of doing it that work equally well regardless of whether the device is in the dolly condition or the pallet condition.
- 88 So the attack based on Bunn and Hutchinson fails.

Common general knowledge

- 89 Dr Edwards-Stuart summarised the claimant's case based on common general knowledge by suggesting that there were only three possible ways in which a pallet could be modified to make a dolly-pallet:

(1) Locate the wheels in the exposed open ends of a pallet.

- (2) Cut away the corners of the skids and position the wheels in the corners.
- (3) Position the wheels in the corners and cut opening through the base of the skids.

90 She submitted that the first was not viable because of the need to be able to stack pallets, and the second was not viable because the wheels would be exposed to damage. So according to Dr Edwards-Stuart, option 3 was the only and obvious solution.

91 I reject this argument for two reasons. Firstly, it begins with the assumption that the skilled person is looking to modify a pallet to make a combination dolly-pallet device. According to the evidence presented in this case, combination dolly-pallet devices were not common general knowledge, so Dr Edwards-Stuart's starting point is not realistic. One first has to appreciate that a combination dolly-pallet device might find practical application in the industry. According to Mr ten Bok, there would be significant prejudice against such an appreciation.

92 Secondly, the evidence does not support the argument that option 2 would be dismissed as unviable. Both Bunn and Hutchinson show arrangements that leave the wheels totally exposed.

93 It was suggested in the claimant's written evidence that there was a range of devices having fixed wheels and retractable supports (legs) that were clearly part of the common general knowledge and that would point towards the invention. I was provided with several photographs of trailers, caravans and cranes having fixed wheels and retractable supports. I accept that these are common general knowledge, but none of them looked remotely like a pallet and I think it would be extremely bizarre to find that the invention was an obvious step from any one (or more) of these.

94 Having failed to show that the skilled person, endowed with the common general knowledge, would not find the inventive concept to be obvious after reading either Bunn or Hutchinson (both of which disclose dolly-pallet devices with fixed wheels and retractable skids), it is perhaps not surprising that an obviousness attack based on common general knowledge alone has also failed.

95 Mr Davis conceded that if claim 1 of the the patent was found to be invalid, then the patentee would rely upon claim 3 and/or claim 4. He was not maintaining that the other claims were valid independently of claim 1. In the event, this concession was unnecessary because the novelty and obviousness attacks on claim 1 have failed.

Insufficiency

96 I can deal with this briefly, since there was very little argument on the issue at the hearing, and I gave the strongest possible indication at the time that I was not persuaded that the patent is insufficient. Section 14(3) of the Act requires that the specification of an application shall disclose the invention in a manner which is clear enough and complete enough for the invention to be performed by a person skilled in the art.

97 The claimant says that the patent does not disclose the invention completely enough (or clearly enough) for it to be performed, because the figures showing various embodiments of the invention are flawed, and consequently none of the retraction mechanisms could be made to work without undue effort. Professor Yates in his expert report gives (at paragraph 14) a long list of the deficiencies he has found in the figures and associated text, I prefer the more optimistic attitude he adopts in paragraph 7.6 where he says:

7.6 There were a large variety of method for retracting skids and/or legs and numerous devices across a range of industries that required retractable skids or legs. Providing the devices complied with industry standards, there was no impediment to the transfer of these methods and technologies to use in dolly/pallets.”

98 In the above paragraph, Professor Yates is primarily giving evidence to show that the invention is trivial, and would therefore be obvious to the skilled person. But I think the same credit must be given to the skilled person when he reads the patent specification. He would not need minutely detailed and accurately described drawings in order to understand the invention.

99 I have looked at the figures included in the patent, and I agree that there are several flaws in them. But I don't think they are significant. For example, figure 6 shows a worm gear driving two shafts; it doesn't take very long to realise that the arrangement could not work precisely as shown, but the skilled reader would immediately appreciate what the author intended, and would use one of several well known techniques to switch the direction of rotation of one of the shafts — eg. using an extra gear wheel. Also, the figures do not always show how the mechanism would be attached to the body of the device, but I believe that the draftsman has deliberately omitted some of these details to avoid unnecessary complication of the figures. The figures are intended to supplement the written description to aid understanding; they do not have to stand on their own as fully detailed engineering drawings. I conclude that the invention is sufficiently described in the patent.

Added matter

100 The claimant's case here, is that there is no express disclosure in the text of the specification that refers to a requirement for openings in the skids. The text corresponding to feature (e) in claim 1 was added after the application was filed. Adding matter to an application after it has been filed is prohibited by section 76(2) of the Act. But “adding matter” is not necessarily the same as “adding text”. In this case, several of the figures included in the patent at the filing date (eg. figures 4, 5, 6, 7, 8, 9 and 15) show openings formed in the support skids. So I conclude that the introduction of the text referring to feature (e) during the examination stage did not add matter to the application. That matter was already present in the application because it was clearly disclosed in the figures.

Costs

101 Both counsel asked me to stay the issue of costs until my substantive decision had been issued. I agreed that they could have a period of time in which to provide either an agreed order as to costs, or written submissions in the event that I need to decide the issue. I will allow 21 days from the end of the appeal

period for the parties either to agree a costs order or provide submissions. I would propose to stay the issue of costs in the event of an appeal. In the hope that it will assist the parties to reach agreement (or at least minimise time spent on submissions), my preliminary evaluation of the position is that I see no reason to depart from the published scale of costs.

Summary

- 102 The claimant has not succeeded on any of the grounds of revocation pleaded in its statement of case, and therefore the application for revocation has failed. The patent remains in force.

Appeal

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

S PROBERT

Deputy Director acting for the Comptroller