Lucas v Peterson Portable Sawing Systems Ltd

High Court Auckland CP 6/99
24, 25, 26, 27, 28, 31 March; 1, 2, 3, 4 April; 9 May 2003
Fisher J

Patents – Infringement – Principles for interpreting specification – Principles for determining obviousness – Patents Act 1953, ss 10(1), (3), (4), 41(1) and 74.

The plaintiffs sued the defendants for damages and injunctions for the infringement of a patent for a portable sawmill. Broadly, the claim for novelty of the plaintiffs' machine related to a moving device for raising in unison the two parallel rails along which the saw mechanism ran. At this stage in the proceeding the Court was required to decide whether the defendants' design infringed claim 7 of the plaintiffs' specification. The defendants argued that claim 7 was invalid on grounds of insufficiency, ambiguity, lack of fair basis, novelty and obviousness.

Held: 1 The relevant principles for interpreting a patent specification included the following:

(a) the interpretation of a patent specification was a question of law for the Court to determine but expert evidence could be received as to the meaning of technical terms and concepts found within the specification;

(b) the specification had to be construed through the eyes of a skilled but unimaginative addressee; the test was what an addressee skilled in the particular art in question would understand from the document as a whole;

(c) the specification had to be given a purposive construction;

(d) the Court had to have regard to the surrounding circumstances as they existed at the priority date, and these included matters of common general knowledge at that time;

(e) it was assumed that redundancy was not intended, and consequently separate effect should be given to each word and phrase unless no sensible additional meaning could be ascertained from them;

(f) the specification had to be interpreted as a whole;

(g) for the purpose of construing the description or consistory clauses of the specification, the question was what the skilled addressee would understand as the essential and novel features of the invention; and

(h) the overriding requirement was always to view the specification purposively through the eyes of the technically skilled addressee and not those of a lawyer conducting a line-by-line analysis of a legal document (see para [28]).

2 The following principles applied when it claimed that a specification was invalid for obviousness:

(a) where the invention was the combination of features all of which were individually known, the Court had to avoid the danger of concentrating on the integers rather than the whole concept;
(b) the Court had to put out if its mind developments since the invention and view the question of obviousness from the perspective of persons skilled in the art immediately before the priority date;
(c) there was no inventive step when a known article was applied to a new and analogous purpose, or if known features were brought together into a single whole in which each component part continued to perform its own function unaffected by the other parts;
(d) obviousness related to the technical subject-matter claimed to be inventive, and not to its commercial worth; and
(e) the mere fact that the claim was merely to an improvement to a product that was already on the market did not preclude an inventive step (see para [69]).

3 Claim 7 of the specification was not invalid on any of the grounds claimed by the defendants, and the defendants had infringed the plaintiffs' patent. The first defendant, which had manufactured, marketed and sold the infringing machines, was the primary infringer. The second defendant (the managing director, employee and sole or principal designer of the first defendant) was jointly liable with the primary infringer by participating in a common design or concerted action with it (see para [92]).

Result: Judgment for plaintiffs.

Cases mentioned in judgment

Ancare New Zealand Ltd v Cyanamid of NZ Ltd [2000] 3 NZLR 299 (CA).
C Van der Lely NV v Ruston's Engineering Co Ltd [1985] RPC 461 (CA).
Catnic Components Ltd v Hill & Smith Ltd [1982] RPC 183 (HL).
Fichera v Flogates Ltd [1983] FSR 198.
General Tire & Rubber Co v Firestone Tyre & Rubber Co Ltd [1972] RPC 457 (CA).
Glaverbel SA v British Coal Corporation [1995] RPC 255 (CA).
Hickman v Andrews [1983] RPC 147 (HC & CA).
International Paint Co Ltd's Application [1982] RPC 247.
MCA Records Inc v Charly Records Ltd [2002] EMLR 1.
Morgan and Co v Windover and Co (1890) 7 RPC 131 (HL).
Non-drip Measure Co Ltd v Stranger's Ltd (1943) 60 RPC 135 (HL).
Sabaf SpA v Meneghetti SpA [2003] RPC 264 (CA).
Smale v North Sails Ltd [1991] 3 NZLR 19.
Technograph Printed Circuits Ltd v Mills & Rockley (Electronics) Ltd [1972] RPC 346 (HL).
Unilever PLC v Gillette (UK) Ltd [1989] RPC 583 (CA).
Windsurfing International Inc v Petit (1983) 3 IPR 449; 73 FLR 224.
Windsurfing International Inc v Tabur Marine (Great Britain) Ltd [1985] RPC 59 (CA).
Wood v Gowshall Ltd (1937) 54 RPC 37 (CA).

Action

This was an action for infringement of a patent brought by the first and second plaintiffs (R C Lucas and G W Lucas & Sons Pty Ltd respectively) against Peterson Portable Sawing Systems Ltd, the first defendant, and C J Peterson, the second defendant. The Court was required to determine the issue of liability in relation to one only (claim 7) of claims 7 to 19 of the plaintiffs' complete specification.

J G Miles QC for the plaintiffs.
C L Elliott for the first defendant.
Second defendant in person.

Cur adv vult

FISHER J.

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Introduction

[1] Mr Lucas and his company claim damages and injunctions for the infringement of a patent for portable sawmills on the part of Mr Peterson and his company. The latter deny infringement and plead invalidity of the patent. The primary challenges to validity are lack of novelty and obviousness.

Factual background

[2] Mr Lucas and other members of his family were Australians involved in the design, manufacture, and sale, of outdoor machinery. Their principal product was originally a mechanical device known as a "grabber" for picking up logs. They incorporated the second plaintiff in about 1992.

[3] Mr Peterson was a New Zealander involved in the design, manufacture and sale of portable sawmills. He incorporated a company of which he was the managing director. His company manufactured the mills in New Zealand and sold them in New Zealand, Australia, the Pacific Islands, and elsewhere.

[4] A portable sawmill usually takes the form of a powered saw mounted on a carriage which runs on wheels along rails supported by a steel framework. By erecting the framework over the log, the log can be cut into planks in successive longitudinal passes with the saw. One variety has a circular saw that can be switched through 90 degrees (a swingblade) to make vertical cuts on one pass and horizontal cuts on the other. By this means the log is successively cut into planks that are rectangular in cross section. When all possible planks have been cut at one level the operator must lower the saw by the width or thickness of the next level of planks (the vertical gauge). The manner in which this repetitive lowering process is achieved is crucial to the present case.

[5] Mr Peterson was an ingenious designer. From 1989 he and his company designed, manufactured, marketed, and sold, an innovative series of portable sawmills. The first was the "Jack the Giant Killer" or "Log Dog". That mill used spaced-apart tracks which could be raised or lowered to achieve the vertical gauging required for milling. To lower the saw for each new vertical level it was necessary for the operator to unscrew locking bolts on collars at each of the four corners of the framework that supported the rails. In addition to the time that this required, the presence of horizontal cross-braces at approximately the level of the rails was an impediment to the operator's access to the log from each end. This was a precursor to a design which Mr Peterson described as his "standard frame" mill.

[6] In 1991 Mr Peterson developed the "tube frame" version of the standard frame. It had two rectangular end-frames joined by two parallel horizontal tracks. The rails were mounted between the end-frames with sufficient room for the log, the operator, the saw, and the carriage for the saw, between the rails. The rails were bolted to couplings that slid vertically on the end-frames. A carriage bearing a swingblade circular saw, and spanning the rails, moved along the rails in a longitudinal direction. The saw head could also be adjusted in a direction transverse to the log through its mobility across the saw carriage. A significant operating advantage was that the top horizontals of each of the end-frames were high enough to allow unimpeded walk-through access for the operator. But the disadvantages included the slowness involved in releasing and tightening locking bolts at each of the four end-frame uprights on every occasion that the saw height required adjustment for vertical gauging.

[7] Aware of the slowness of vertical gauging in the standard frame, Mr Peterson developed a new design known as the "production frame". He achieved this late in 1991. It utilised stationary tracks which remained substantially at ground level although in the "Hi Lo" version one rail was higher than the other. The main point of distinction between the standard and production frame mills was the method of vertical adjustment. In the former a vertical adjustment was achieved by vertical movement of the entire rails while in the latter the rails remained stationary and vertical movement was achieved through vertical movement of the saw carriage alone. The latter made one-point vertical gauging possible rather than the four-point required for the standard frame mill.

[8] In 1992 Mr Lucas and Mr Peterson met for the first time at a forestry industry expo in Australia. As a result of discussions each agreed to sell the other's products in his own country. In consequence, Mr Lucas and his brother acted as agents for the sale of Peterson mills in Australia from 1992 to 1994. Over that period they sold approximately 70 production frame mills and one standard frame.

[9] Mr Lucas found it increasingly difficult to sell the Peterson mills due to growing competition from an American mill designed by a Mr Lewis. The Lewis mill similarly consisted of a demountable framework having two end-frames linked by twin rails. A circular saw was similarly mounted on a carriage which ran longitudinally along rails. Like the Peterson standard frame, vertical adjustment on the Lewis mill was achieved by raising and lowering the rails. Differences between them, however, included the facts that in the Lewis mill the rails had only enough space between them to accommodate the saw; that the operator did not walk between the rails; that there was no access for the operator through the end-frames; that the rails were raised and lowered by a winch at each end-frame; and that the rails were attached by swivelling crossbeams at each end-frame. Advantages of the Lewis mill were quick vertical adjustment and quick realignment with the log by moving the rails and crossbeams from a rectangle into a parallelogram.

[10] Customers told Mr Lucas that the Peterson production frame was too slow to set up and was difficult to realign with the log. The standard frame was slow to adjust vertically and was underpowered. But Mr Lucas considered the Lewis mill itself to have disadvantages, these including slowness in horizontal gauging, lack of operator access, and lack of power. He resolved to design his own mill. His evidence was that this intention was a long-standing one that pre-dated his encounter with Mr Peterson.

[11] Mr Lucas duly designed his own mill and filed a provisional patent for it in the Australian Patent Office on 24 March 1994. The application resulted in the patent now sued upon. One of the diagrams forming part of the complete specification is annexed to this judgment. In common with the Peterson standard frame, the Lucas design had a swingblade circular saw movable transversely on a carriage spanning two vertically movable rails mounted between, and projecting beyond, two end-frames; the saw carriage being longitudinally movable on the rails; the rails being sufficiently separated to accommodate the log and the operator between them; the rails also being independent of each other except to the extent that when the framework was assembled the rails were attached to common end-frames; and there being end access for the operator to and from the log through the end-frames. It will be convenient to refer to the features up to this point as "the basic Peterson standard layout".

[12] To the basic Peterson standard layout Mr Lucas' design added some additional features. A winding gear enabled the rails to be vertically adjusted in unison at each end-frame by turning a winch handle. A positive downward pull on the rails was the equivalent of Mr Peterson's standard frame locking bolts which promoted rigidity and prevented tipping of the rails when the carriage was on a cantilever. A diagonal telescopic multi-directional end-frame bracing was adaptable for longitudinal use during assembly, transverse use for stability during operations, and ready adjustment when changing frames and rails in parallelogram form for realignment with the log. Longitudinally sliding rails enabled the end-frames to be moved closer or further apart according to the length of the log. The complete specification included diagonal bracing at an intermediate point on the rail between the end-frames.

[13] Mr Lucas' provisional application was filed on 23 March 1994 as Australian patent application PM 4643. The complete specification applicable in New Zealand was finally published in New Zealand on 22 September 1997.

[14] The Lucas mill was first displayed in March 1994 at the Warragul Farm World Show in Australia. Later in the same year Mr Lucas filed two further applications in relation to other refinements to the principal invention. It is common ground that these do not have any bearing on the present case. The second plaintiff company has been manufacturing, marketing and selling the Lucas mill under licence from Mr Lucas ever since. The mill has achieved considerable commercial success and is now the world's largest-selling portable mill of its type.

[15] In April 1994 Mr Peterson visited Mr Lucas. He inspected and photographed the new Lucas mill and obtained from Mr Lucas a copy of his provisional specification. He immediately set about adding his own refinements to the basic Peterson standard layout. He named the result the "Islander".

[16] The Islander Mark I was first marketed in New Zealand in about June 1994. It was displayed at Toowoomba, Australia in September 1994. It was essentially the basic Peterson standard layout with the addition of winches to raise the rails without positive downward pull, a rail-frame coupling which allowed the rail to slide longitudinally and diagonal bracing on the rail at an intermediate point between the end-frames. It is the plaintiff's contention, denied by the defendants, that this development of the basic Peterson standard layout copied some of the critical features of the Lucas mill. In the same month, June 1994, Mr Peterson filed his own patent application. It related to a winding mechanism for lifting and lowering an object with particular application to the lifting and lowering of two parallel tracks used in a sawmill.

[17] Mr Peterson continued to refine the Islander. Later in 1994 his company displayed the Islander Mark II. It differed from the Mark I in that there were no upper horizontal members spanning the end-frames and there were two new features which had something in common with the Lucas mill. One was diagonal bracing which could be used in both longitudinal and lateral directions, albeit at an intermediate point between the end-frames. The other was that the winding mechanism for raising and lowering the rails included a positive downward pull. Unlike the Lucas mill, there was no upper horizontal member on the end-frames. The shaft linking the winding mechanism on one side of the framework with the winding mechanism on the other was contained in the horizontal member at ground level. The Mark II was displayed in New Zealand in 1994 and in Orange, Australia in 1995.

[18] Mr Peterson's third and final version of the Islander, the Mark III, was first displayed at a show at Mystery Creek in New Zealand in June 1997. In common with the Lucas mill, it had winding gear enabling the rails to be adjusted in unison, a positive downward pull on the rails as well as an upward one, diagonal telescopic end-frame bracing, and rail-frame brackets which allowed the rails to slide longitudinally. Features distinguishing the Islander Mark III from the Lucas mill were that it did not have a horizontal member across the top of the end-frames, that the rotating shaft for linking the winding mechanisms between the two sides of the framework was in the lower horizontal member of the end-frames, that the winding mechanism used sprocket chain instead of rope, and that although the diagonal braces were now attached to the end-frames they were not adaptable to longitudinal use for assembly and disassembly purposes. The first defendant, Peterson Portable Sawing Systems Ltd, manufactured a number of Islander Mark III mills in New Zealand and sold them both locally and overseas.

[19] Mr Lucas and his company issued the present proceedings on 10 February 1999. Later in the same year Mr Peterson and his company distributed a pamphlet which stated, inter alia:

> "Key elements of Peterson design technology have been blatantly copied by other manufacturers in New Zealand and Australia. In order to prevent further abuse, Petersons have been acquiring patent protection wherever possible. Elements of Peterson design technology are now protected by letters of patent grant in several countries. Other design aspects are currently subject to patent applications in various stages of acceptance. Take note that Petersons are determined to prosecute patent and copyright infringements energetically, which may also involve purchasers of infringing equipment."

[20] The proceedings came on for trial in April 2001. In the course of that hearing the defendants elected to be nonsuited on their counterclaim. The trial was then abandoned on terms as to costs and an interim injunction. The interim injunction has restrained the defendants from producing further Islander mills down to the present.

Issues

[21] The plaintiffs seek permanent injunctions, damages, and other remedies, for the infringement that the Islanders are said to represent. They also seek an injunction to restrain the defendants from making unjustified threats of infringement action contrary to s 74 of the Patents Act 1953. The Islander mills are said to infringe claims 7 to 19 of the Lucas complete specification. It is agreed that the present hearing is confined to liability only.

[22] The defendants deny infringement and, in addition, advance a series of challenges to the validity of the Lucas patent. The challenges are advanced both by way of defence to the infringement action and by way of counterclaim seeking declarations of invalidity. The defendants do not seek revocation of the patent in whole or in part.

[23] There have been protracted difficulties over the defendants' pleadings prior to, and during, the hearing. The issues now before the Court for determination are confined to those found in the plaintiffs' original statement of claim of 10 February 1999 and in the defendants' sixth amended statement of defence and counterclaim of 1 April 2003. For reasons recorded elsewhere in more detail, the defendants' pleadings preclude them from challenging at this hearing the plaintiffs' contention that the priority date attaching to all the claims in their patent was 11 March 1994. They are also precluded from arguing that the complete specification, as finally published in New Zealand on 22 September 1997, was not fairly based on the priority documents. That is not to encourage any belief that either argument would have succeeded on the merits even if procedurally available.

[24] Both defendants originally challenged the validity of claims 7 to 19 on the grounds of lack of novelty, obviousness, insufficiency, ambiguity and lack of fair basis. The claims to be challenged, and the grounds of challenge, were narrowed to some extent in the course of the hearing. Mr Elliott began the trial representing both defendants. Part-way through the trial Mr Peterson withdrew his instructions to Mr Elliott and from that point represented himself. Mr Elliott continued to represent the company for the remainder of the trial.

[25] For the first defendant company, Mr Elliott explained that if the validity of claim 7 were upheld the company would mount no challenge to the validity

of any of the subsequent claims. If claim 7 were found to be invalid the company would challenge the validity of subsequent claims at a further hearing to be confined to submissions on evidence already provided at trial. The company abandoned the insufficiency challenge in any event (paras 36 and 37 of the sixth amended statement of defence and counterclaim).

[26] On his own behalf as second defendant, Mr Peterson made it clear that he continued to rely upon all five invalidity grounds pleaded and further that his challenge to the validity of claims 8 to 19 would continue regardless of the Court's finding as to the validity of claim 7.

[27] With that background, the logical sequence is to ascertain what the Lucas complete specification means on its face, to proceed through the grounds of insufficiency, ambiguity, lack of fair basis, novelty and obviousness, and then to consider infringement, all in relation to claim 7 alone. It is agreed that after a decision on those matters there will be an opportunity for further submissions on outstanding issues.

Principles for interpreting specification

[28] The general principles for interpreting specifications can be drawn from authorities cited by counsel including *Catnic Components Ltd v Hill & Smith Ltd* [1982] RPC 183 (HL); *C Van der Lely NV v Ruston's Engineering Co Ltd* [1985] RPC 461; *Glaverbel SA v British Coal Corporation* [1995] RPC 255 at pp 268 – 270; and *Ancare New Zealand Ltd v Cyanamid of NZ Ltd* [2000] 3 NZLR 299 (CA) at p 315. Also of relevance are s 10 of the Patents Act and wider principles for the construction of legal documents in general. In summarising the result for the purposes of the present case I bear in mind that further issues arise in respect of claims 8 to 19 which will need to be addressed later. I will record all the principles traversed in the course of the hearing at this point in case it assists the parties to resolve the residual questions that will remain after issue of the present judgment. The relevant principles appear to be these:

(a) The interpretation of a patent specification is a question of law for the Court to determine but expert evidence can be received as to the meaning of technical terms and concepts found within it.

(b) The specification is to be construed objectively through the eyes of a skilled but unimaginative addressee. The test is what an addressee skilled in the particular art in question would understand from the document as a whole.

(c) The patent is to be given a purposive construction. Not appropriate is the kind of meticulous verbal analysis to which lawyers can sometimes be attracted.

(d) The Court is to have regard to the surrounding circumstances as they existed at the priority date, this including matters of common general knowledge at that time.

(e) It is to be assumed that redundancy was not intended. Consequently separate effect should be given to each word and phrase unless no sensible additional meaning can be ascertained from them.

(f) The specification is to be interpreted as a whole. Since it is the claims that define the scope of the monopoly, they will normally be the starting point but ambiguity in words or expressions can, in appropriate cases, be resolved by reference to the context of the document as a whole. Importantly, for this purpose the document includes the drawings.

(g) The complete specification is broadly divisible into the description or consistory clauses (s 10(1) and (3)(a)) of the Patents Act, the best method for performing the invention (s 10(3)(b)), and the claims (s 10(3)(c) and (4)).

(h) The description or consistory clauses must identify and describe the essence of the invention in terms which reveal the inventive step or steps. The question is what the skilled addressee would understand as the essential and novel features of the invention.

(i) The superlative "best" when referring to the best method (s 10(3)(b)) implies that more than one embodiment will be possible for any given invention. Passages in the specification introduced by the word "preferably", or "in a preferred form", or "in one embodiment of the invention", or words to similar effect, may tend to indicate that what is being described is merely optional and therefore not an essential part of the invention itself.

(j) It may also be necessary to distinguish between consistory clauses and embodiments for another reason. When referring to the body of the specification for the purpose of clarifying ambiguous expressions in a claim, consistory clauses may be exhaustive as to the intended scope of the expression. Embodiments, on the other hand, might help to show the broadness of a claim but presumably never its narrowness.

(k) Notwithstanding those technicalities, the overriding requirement will always be to view the specification purposively through the eyes of the technically skilled addressee and not those of a lawyer conducting a line-by-line analysis of a debenture or will.

[29] Those principles now need to be applied to the present case.

Complete specification in this case

[30] The Lucas specification extends over 29 pages of which the last nine are drawings. At the outset there is a statement of description and objects in the following terms:

> "This invention relates to a portable sawmill with improved lateral and longitudinal stability.
>
> A timber sawing device comprising a single circular sawblade, which pivots through 90° to act in both the horizontal and vertical planes, is known. As is known, this sawblade is mounted together with an engine on a laterally movable carriage which in turn is mounted on a longitudinally movable cross-bed which may travel along two rails between which the operator has access. Again, as is known, these rails have been mounted on end frames located in a predetermined position and the rails have been manually and independently raised and lowered at the two support points on each end frame.
>
> One object of the invention is to provide a portable sawmill having improved stability of the frame.
>
> Another object of the invention is to provide a portable sawmill with improved operation and stability of the saw means, ease of erection, assembly and operation, for example, by a single operator even in rough conditions.
>
> Broadly in one aspect of the invention there is provided a portable sawmill including:

(a) first and second substantially rectangular end frames, each end frame comprising two horizontal and two vertical members;
(b) rails extending longitudinally relative to the end frames and slidably connected by means of brackets to corresponding first and second vertical members;
(c) first and second winding means in combination with respective first and second upper horizontal members;
(d) idler wheels located at a lower end of each vertical member,

wherein each bracket is connected by use of flexible joining means, as defined herein, by way of the respective winding means and the respective idler wheel, to a lower part of the respective end frame in such a manner that positive up-and-down movement in unison of the rails at each end frame is achieved to adjust and retain in an adjusted position the rails at each end frame."

[31] There then follow a series of details relating to braces, brackets, rails-supporting means, the saw and the swingblade mechanism. Some are expressed in terms suggesting that they are essential to the invention while others are merely said to be "preferable" or "in . . . one embodiment". It may be necessary on a later occasion to consider the distinction but they have no bearing upon claim 7 which is the subject of this judgment. The specification continues:

"According to a second broad aspect there is provided a portable sawmill comprising first and second end frames with a pair of separate rails extending therebetween, a carriage for a prime mover and saw blade mounting movably engagable with said rails, each end frame having a pair of frame elements with a respective one of each of said rails being movably coupled via mounting means to the pair of frame elements, said rails being adjustably movable between upper and lower positions on the end frame by moving means whereby the rails can be moved in unison at each end frame to a position at or between said upper and lower positions."

[32] There then follows a lengthy textual description of one embodiment of the invention and associated drawings. Both the text and drawings make it clear that in that particular embodiment the means by which the rails are vertically moved in unison is a winch at the top of each end-frame connected to both rails by a shaft spanning the top of each end-frame, ropes or chains from the shaft to each rail, and a loop of rope or chain passing through an idler wheel at the bottom of each end-frame in order to provide a downward pull on the rail in addition to an upward pull from the top.

[33] The claim now in question is claim 7 which reads:

"A portable sawmill comprising first and second end frames with a pair of separate rails extending therebetween, a carriage for a prime mover and sawblade mounting movably engagable with said rails, each end frame having a pair of frame elements with a respective one of each of said rails being movably coupled via mounting means to the pair of frame elements, said rails being adjustably movable between upper and lower positions on the end frame by moving means whereby the rails can be moved in unison at each end frame to a position at or between said upper and lower positions."

[34] It is common ground that claim 7 broadly describes the basic Peterson standard layout, without the need for any upper horizontal on the end-frames,

and with the addition of moving means whereby the rails could be moved vertically in unison. The most succinct description of claim 7 is that of Mr Lucas: "A walk-through frame providing synchronised track raising." The present bracket of challenges to validity all relate to the wording and scope of that claim.

Ambiguity defence

[35] Pursuant to s 41(1)(i) of the Patents Act a patent is revocable if "the scope of any claim of the complete specification is not sufficiently and clearly defined . . .". In this case the defence argue that claim 7 is fatally ambiguous.

[36] Clarity of definition is, of course, a question of degree. The required level is captured in the following passage from *General Tire & Rubber Co v Firestone Tyre & Rubber Co Ltd* [1972] RPC 457 (CA) at p 515:

> "It is clear in our judgment that the question whether the patentee has sufficiently defined the scope of his claims is to be considered in relation to the facts of each case, that allowance is to be made for any difficulties to which the circumstances give rise, and that all that is required of the patentee is to give as clear a definition as the subject matter admits of. It is also clear in our judgment that, while the court is to have regard to all the relevant facts, the issue of definition is to be considered as a practical matter and little weight is to be given to puzzles set out at the edge of the claim which would not as a practical matter cause difficulty to a manufacturer wishing to satisfy himself that he is not infringing the patent."

[37] Three examples of ambiguity are pleaded. The first (sixth amended statement of defence and counterclaim, para 38) focuses upon the italicised words in the following extract from claim 7:

> ". . . each end-frame having a pair of frame elements with a respective one of each of said rails being movably coupled via mounting means *to the pair of frame elements* . . ."

The criticism pleaded is that with reference to the italicised words "the claim does not convey which of the two possible pairs of frame elements is referred to".

[38] I accept the defence argument that taken in isolation the italicised words are, at best, ambiguous. Indeed, given the earlier reference to the fact that each end-frame has a "pair of frame elements" a literal interpretation in isolation could support the interpretation that each rail was to be attached transversely across a particular end-frame rather than longitudinally from an element of one end-frame to an element of the other. Such an interpretation would, of course, be absurd, even without going outside the context of claim 7 as a whole. For example, at the outset of claim 7 we are told that the claim is to a "portable sawmill comprising first and second end-frames with a pair of separate rails extending there between". The reader immediately knows that there is a framework consisting of two end-frames joined by two rails. Nor could there be any structure upon which "a carriage for a prime mover" could be "moveably engagable with the said rails" unless the rails provided a parallel connection between the two end-frames. Even had claim 7 left any doubt on that score, it would be immediately removed by consideration of the specification as a whole. This criticism fails.

[39] The second allegation of ambiguity (para 39) is that "The claim does not specify that the rails are coupled to the other pair of frame elements". The point is literally correct but realistically pointless. The context makes it obvious that the rails must be attached in like manner to both frames. In the words of Lord Diplock in *Catnic Components* at p 243, it is a classic example of the failure to adopt "a purposive construction rather than a purely literal one derived from applying to it the kind of meticulous verbal analysis in which lawyers are too often tempted by their training to indulge". I do not overlook the irony that the argument originated with Mr Peterson. He must have been spending too much time with lawyers.

[40] The third example of alleged ambiguity (para 42) is that "prime mover" is not defined. There was no credible evidence at the hearing that the expression "prime mover" would cause the skilled addressee any difficulty. It signifies a means of extracting power from energy sources such as fuel or electricity. In the present context any kind of motor to drive the circular saw would qualify.

[41] The challenge to validity based on ambiguity fails.

Meaning of complete specification

[42] There was considerable evidence and argument directed to three expressions found in claim 7, "separate rails", "mounting means", and "moving means". None was pleaded in support of an ambiguity argument but their meaning needs to be resolved for the purposes of the fairly based, anticipation, and obviousness, arguments to come. They also affect the scope of the claim for infringement purposes.

[43] As to "separate rails", conflicting views were expressed by the lay and expert witnesses. It was not suggested that there was any established usage as to the meaning of the expression in the timber mill industry. Dictionaries contained such a wide selection of possible meanings for "separate" that no real assistance could be derived from them. In those circumstances I consider the answer to lie in the construction of the complete specification as a whole, assuming for this purpose that "separate" was intended to add something meaningful to the claim.

[44] I can not accept the view of Dr Van Wyk that in claim 7 the word "separate" means "to keep apart by being between". It is unclear why that particular definition was chosen from among the many offered in the *Collins English Dictionary* (6th ed). And given that the word "separate" is used in claim 7 as an adjective, not a verb, it is almost impossible to apply the definition sensibly in this context. It must be borne in mind that it is the use of the word "separate" in the Lucas specification that matters, not the meaning which might be selected from a list in a dictionary or from other factual or documentary contexts.

[45] Nor can I accept Mr Peterson's definition of "separate" as "spaced rails which have the possibility of being bridged". Putting to one side the fact that this definition is not adjectival either, the difficulty is that it would not invest the word "separate" with any real meaning at all. All parallel rails along which a carriage runs must by their very nature have a space between them which is capable of being bridged.

[46] Claim 7 makes it clear that the sawmill is to have a pair of rails. It would have been redundant to add the word "separate" if its purpose were solely to establish that the rails represented two separate entities. The broader context makes it clear that the rails and end-frames would together form a rectangle in plan view, the rails being sufficiently separated to permit a carriage for a prime

mover and saw to be movably engaged with the said rails. A pair of rails that literally touched each other would for all practical purposes be one rail that provided no lateral stability to the carriage they supported. That is why rails are always separated to some degree. Up to this point, I think that the opening words of claim 7 could equally have read "A portable sawmill comprising first and second end-frames with a pair of rails extending there between . . .".

[47] In accordance with the interpretation principles discussed earlier, it is to be assumed that the word "separate" was introduced to add meaning that would not otherwise have been present. To avoid redundancy I think it necessary to go beyond claim 7 to the broader context of the specification as a whole. In the introductory passages reference is made to what was already known in this field. There is a description of a basic Peterson standard layout concluding with the sentence "Again, as is known, these rails have been mounted on end-frames located in a predetermined position and the rails have been manually and *independently raised and lowered* at the two support points on each end-frame" (emphasis added). The specification moves on to describe various ways in which that known type of mill is to be improved by the invention, this relevantly including the objects of improving stability and operation, particular emphasis being placed upon the example of a single operator.

[48] There is no suggestion, there or elsewhere, that the known art of rails which were independently raised and lowered would be modified other than through the winding mechanism. Indeed, in the detailed embodiment and drawings that follow, it is made clear that the assumption is a set of rails which, but for the winding mechanism, would need to be raised and lowered independently. If, quite independently of the winding mechanism, the rails were so connected that raising one would automatically raise the other, it could not be said that they were "separate" for present purposes. The same must apply to any other moving means for raising and lowering the rails. It seems to me that that context explains the meaning of the word "separate" in claim 7. The rails must be so unconnected that they would need to be raised and lowered independently but for the moving means that allows them to be moved in unison.

[49] The next expression in claim 7 that attracted some discussion was "mounting means". The plaintiffs' expert, Mr Stevens, accepted that the *Collins English Dictionary* definition of "mounting" as "a backing, setting, or support on to which something is fixed" is appropriate for engineering purposes. Examples he gave were the mounting by which a telescopic sight is attached to a rifle or the mountings on which a car engine sits. There was no difficulty over "means". It is a "medium, method, or instrument used to obtain a result or achieve an end" (*Collins English Dictionary* definition). In the present context the "mounting means" is therefore any support on to which a rail is fixed.

[50] The final phrase attracting discussion was "moving means". The plaintiffs contended that the means that effected the moving was limited to some form of mechanical device. The defence contended that it embraced human operators. On the latter basis it would be sufficient if the rails were adjustably movable between upper and lower positions on the end-frame by the act of humans in grasping and lifting or lowering the rails or the brackets or collars on which they rested.

[51] On a point like this it is important to remember that the specification is to be read through the eyes of a non-legal addressee skilled in the art of making portable sawmills. It is also important to avoid redundancy for the phrase

"moving means". If the inventor had had nothing more in mind than operators manually raising and lowering the rails by grasping the rails themselves, or brackets or collars on which they were resting, there would have been no point in including the last three lines of claim 7 "by moving means whereby the rails can be moved in unison at each end-frame to a position at or between said upper and lower positions." It would have been sufficient to end the claim with the words "said rails being adjustably movable between upper and lower positions on the end-frame."

[52] In my view the phrase "moving means" in that context, particularly in association with the further element "in unison", implied some form of mechanical device interposed between the activities of the human operator on the one hand and the movement of the rails on the other, and having that movement as its primary function. I cannot imagine any skilled addressee inferring that a mere bracket or collar on which the rail was sitting is a "moving means" for this purpose. An object of that kind, while capable of being moved by human hand, is wholly or primarily part of the machine for the purpose of supporting the rails in a stationary position, not moving them. "Moving means" is concerned with movement, not static position. The relevant meaning appears to be a mechanical device whose sole or primary function is to produce or promote movement in the rails. Examples would include lifting devices such as winches, sprocket chains, threaded adjustment rods and hydraulic rams.

Insufficiency

[53] Section 41(1)(h) of the Patents Act provides as a ground for invalidity that the specification "does not sufficiently and fairly describe the alleged method and the method by which it is to be performed or does not disclose the best method of performing it . . .". Only one allegation of insufficiency is pleaded (sixth amended statement of defence and counterclaim, para 37). Another purported allegation (para 36) is in fact an allegation that the claim was not fairly based.

[54] The insufficiency pleading is particularised as the allegation that:

> "The complete specification, at page 10, describes that 'sliding members do not move down simply under gravity' when pulled on by rope 40. Just how gravity is overcome so that the 'sliding members' do not simply move under gravity when released for movement is not explained."

[55] The criticism is groundless. The fact that rope 40 runs around an idler wheel 42 located at the lower end of the frame is clearly stated in the preceding paragraph and illustrated in the associated drawings. This immediately explains how the sliding members are pulled in a downwards direction when the winch handle is rotated in an appropriate direction.

Claim not fairly based

[56] Section 41(1)(a) of the Patents Act provides as a ground of invalidity that "any claim of the complete specification is not fairly based on the matter disclosed in the specification". The only paragraph I can find in the sixth amended statement of defence and counterclaim relevantly alleging lack of fair basis in relation to claim 7 is the first sentence to para 44 which states "generally, claims 7 – 19 have essential integers which are broader than those disclosed in the description". The further sentence in that paragraph "Such claims are speculative and insufficient and there is not a full enabling disclosure to permit a skilled person to carry out the invention within the whole area claimed" is an allegation of insufficiency.

[57] The statement that claim 7 has "essential integers which are broader than those disclosed in the description" is no more than to reword the general allegation of insufficiency without particulars. Nothing discussed in argument during the hearing appeared to provide any basis for this defence. At one point I had concerns over the scope of the expression "moving means" in claim 7. But as Mr Miles QC pointed out, that is the very expression used in the body of the specification (p 5) and it cannot, therefore, be said that any wider expression is used in the claim. Indeed, claim 7 is substantially a word-for-word reproduction of the paragraph in the body of the specification commencing "According to a second broad aspect . . ." (p 5). There is no basis for this challenge to validity.

Anticipation

[58] Section 41(1)(e) of the Patents Act provides as a ground of invalidity "that the invention, so far as is claimed in any claim of the complete specification, is not new having regard to what was known or used before the priority date of the claim in New Zealand". The application to the present case requires a comparison between claim 7 of the Lucas specification and a series of prior mills particularised by the defendants.

[59] The first example of anticipation is said to be the Peterson standard frame mill. It is common ground that claim 7 would be no more than a description of that mill were it not for the concluding words "by moving means whereby the rails can be moved in unison at each end-frame to a position at or between said upper and lower positions." The plaintiffs say that there was no anticipation because the Peterson standard frame mill critically lacked any moving means for adjusting the vertical height of the rails, let alone a moving means which effected the adjustment in unison. The point is resolved by the meaning of "moving means" that I adopted earlier. The Peterson standard frame mill had no "moving means" in that sense. Still less was there a moving means for raising and lowering the rails "in unison". I cannot accept Mr Peterson's argument that having two operators each handling the rails or their brackets or collars simultaneously amounted to "moving means whereby the rails can be moved in unison".

[60] Next, the defence relied upon Mr Peterson's "Log Dog" design patented under AU-A-27314/88 published on 7 February 1990. The same comment applies. There was no moving means whereby the rails could be moved in unison.

[61] Next, the defence relied upon the Lewis mill having patent number US 5,046,391 published on 18 March 1992. I consider the Lewis mill to be distinguishable on two grounds. First, the Lewis rails are joined by cross members to form a single unit. Consequently they do not amount to "separate rails" in the sense adopted earlier. The problem faced by Mr Lucas in needing to devise a method of raising and lowering rails that were independent of each other was a different problem from that faced by Mr Lewis. In the Lucas model it is the winding means itself that provides the link between the rails. The indirect connection provided by common attachment to the same end-frames is not material for present purposes. As the plaintiff's expert Mr Stevens put it, other systems have:

> "A pair of parallel beams which are not separate but coupled by cross members to form part of a single frame unit. While it is true that each of these disclose that these frame units can be broken down into separate components this is primarily to achieve the object of portability."

[62] The second distinguishing feature in the Lewis mill is that the rails are not movably coupled via mounting means to the pair of frame elements. In the Lewis mill the winding means is attached to a cross-frame which slides up and down the end-frame. On the cross-frame there is another element known as a beam carrier attached to the cross-frame and moving transversely across it. The beam carrier has projecting horizontal bars parallel to the end-frames. On the bars are vertical pins. On the pins are the rotating ends of the beams. On the beams are the rails. In those circumstances it could well be said that the rail horizontal projecting bars and pins were "mounting means". It could further be said that the rails are movably coupled via those mounting means to the cross-frame. However, it could not be said that the rails are movably coupled via the mounting means to the pair of frame elements. In my view, the combination of cross-frame, beam carrier, horizontal projecting bars, and vertical pins involves too many distinct members, and too many moving parts, to be collectively described as a "mounting". I do not consider that an engineer skilled in the art of making sawmills would consider that it fell within the wording of claim 7 in that respect.

[63] The next design relied upon by the defence was the Hutchinson mill, patent number NZ 217710 published on 30 September 1987. In my view this mill did not have "separate rails" in the sense adopted. The rails were attached to each other by fixed cross members at each end. The rails were raised and lowered by moving means, but not in unison.

[64] The final design relied upon by the defence was the Elgin mill, patent number US 5,213,022 published on 30 July 1993. This similarly lacks "separate rails" in the sense that I have described. Additionally, as Mr Stevens explained, "the need for lifting gear so as to apply an even lifting force at each upright of the support frame is evident in Lewis, Miles, Stubbe, Kaster and Elgan. In each of these specifications a single structure is slidably supported across a pair of uprights on which sleeves, fastened to the structure, can slide". Further, it does not seem that the Elgin mill has a framework formed by two end-frames joined by rails along which the saw carriage moves. Nor do the rails move vertically on frame elements.

[65] I conclude that claim 7 of the Lucas patent is not open to challenge on the basis that it lacked novelty in terms of s 41(1)(e).

Obviousness

[66] Section 41(1)(f) provides as a ground of invalidity that a claim "is obvious and does not involve any inventive step having regard to what was known or used before the priority date of the claim in New Zealand". In support, the defendants rely upon all of the Lucas competitors just discussed along with some additional patents (Lynn, Elsey, Kwikform) and publications referring to other mills and techniques prior to March 1994.

[67] In essence, claim 7 describes the basic Peterson standard layout with the addition of a moving means for raising and lowering the rails and a coupling in the moving means to achieve this in unison. The question is whether the addition of those two features (moving means and unison) was obvious in the light of what was already known or used. By this point I have held that there was no mill design that did bring together that combination. The defence argues nevertheless that all the features described in claim 7 were well known among existing mill designs and that to combine the three (basic Peterson standard layout, rail-raising device, and in unison) was obvious.

[68] The starting point for determining obviousness is usually taken to be the four-stage analysis propounded in *Windsurfing International Inc v Tabur Marine (Great Britain) Ltd* [1985] RPC 59 (CA) at pp 73 – 74 and adopted by Tompkins J in *Smale v North Sails Ltd* [1991] 3 NZLR 19 at p 42:

> "There are, we think, four steps which require to be taken in answering the jury question. The first is to identify the inventive concept embodied in the patent in suit. Thereafter, the court has to assume the mantle of the normally skilled but unimaginative addressee in the art at the priority date and to impute to him what was, at that date, common general knowledge in the art in question. The third step is to identify what, if any, differences exist between the matter cited as being 'known or used' and the alleged invention. Finally, the court has to ask itself whether, viewed without any knowledge of the alleged invention, those differences constitute steps which would have been obvious to the skilled man or whether they require any degree of invention."

[69] A series of supplementary principles then assist. I would summarise them for the purpose of this case as follows:

(a) Where the invention is the combination of features all of which were individually known, the Court must avoid the danger of concentrating on the integers rather than the whole concept: *Wood v Gowshall Ltd* (1937) 54 RPC 37; *Smale* at p 43; *Sabaf SpA v Meneghetti SpA* [2003] RPC 264 at p 278, para 40.

(b) The Court must also avoid the danger of falling into ex post facto analysis. It must put out of its mind developments since the invention and view the question of obviousness from the perspective of persons skilled in the art immediately before the priority date: *Non-drip Measure Co Ltd v Stranger's Ltd* (1943) 60 RPC 135 at p 142; *Technograph Printed Circuits Ltd v Mills & Rockley (Electronics) Ltd* [1972] RPC 346 at p 362. The warning against being wise after the event is of special importance in a field, such as the present one, where it is easy to imagine that one is skilled in the art after a relatively brief period looking at a few drawings: *Fichera v Flogates Ltd* [1983] FSR 198.

(c) There is no inventive step if a known article is applied to a new and analogous purpose: *Morgan and Co v Windover and Co* (1890) 7 RPC 131 (HL) at p 134; *Smale v North Sails* at p 43.

(d) Similarly, there is no inventive step if known features are brought together into a single whole in which the component parts continue to "do their own thing": *International Paint Co Ltd's Application* [1982] RPC 247 at p 275. Thus there is no invention if "howsoever juxtaposed to the other ingredients of the mixture or parts of the article, each part performs its own function and would do so even in the absence of the other parts". The converse is true if the collocation of features produces a new or improved function by virtue of the novel relationship established between the known features.

(e) Obviousness relates to the technical subject-matter claimed to be inventive, and not to its commercial worth: *Windsurfing* at p 72.

(f) The mere fact that the claim is merely to an improvement to a product already on the market does not preclude an inventive step: *Hickman v Andrews* [1983] RPC 147 at p 189.

(g) In the end, it is impossible to avoid the conclusion that the distinction between novelty and obviousness is a question of degree rather than classification, at least in a case of the present kind.

[70] The primary source for determining whether a new design involves an inventive step is normally the evidence of experts. In this case the plaintiffs called a registered professional engineer, Mr Stevens, and the defendants another registered professional engineer, Dr Van Wyk. Both were well experienced in the design and use of portable sawmills and familiar with what was known and available in New Zealand in 1994. Whether the addition of provision for lifting in unison in claim 7 was obvious turns not on any additional facts provided by either but the weight to be attached to the ultimate opinions they expressed in relation to the known facts. It will therefore be useful to traverse the facts before returning to the experts' opinions. The same applies to the evidence of Mr Hutchinson, another inventor working in the same field.

[71] The facts were that, when the Lucas mill was introduced in March 1994, there was no sawmill that was ultra-light and portable, allowed open access to the operator through the end-frames and provided quick and accurate vertical adjustment for each new level of planks in the log. Mr Peterson had largely abandoned his standard frame design due to its slowness in operation. Among other drawbacks the rails had to be adjusted by undoing four clamps and realigning manually for each new cutting level. His production frame design was slow to set up and difficult to align, and realign, to the log. The Lewis mill failed to provide ready access to the log and did not permit alteration of the distance between the frames. The latter meant that the operator had to walk repetitively the full length of the mill even where the log covered a shorter distance.

[72] The Lucas design for the first time brought together into one mill a series of advantages which, for the purposes of claim 7, combined lightness, ease of assembly, open access through the end-frames and speed of operation. Mr Stevens described the last aspect in this way:

> "The ability to wind down the rails in unison simplifies and makes it quicker to vertically gauge during a milling operation. I believe that it will also lead to reduced possibility of inaccuracies creeping in. This is because one only has to gauge at one upright of each frame. With the standard frame gauging needs to occur at each upright of each end-frame."

[73] Mr Elliott submitted that claim 7 was no more than a restatement of the self-evident benefits of raising rails in unison by moving means. Simply to recognise and record a problem was not to invent something. Claim 7 was no more than the rephrasing of a problem as the solution.

[74] To say that prior to March 1994 there was a "problem" is another way of saying that the mills then known were capable of improvement. With hindsight, the Lucas mill shows that the designs at that time were capable of improvement. But it is not the case, as Mr Elliott was rather inclined to suggest, that those involved with mills at the time were going around saying to each other "I wish there were an answer to the problem that light portable sawmills with open end-frame access for the operator lack any moving means for raising the rails in unison". Even to recognise the fact that the mills were susceptible to improvement in that way was well on the way to taking an inventive step. But, in any event, Mr Lucas went beyond simply re-expressing a problem as a

solution. The solution, in combination with a stated method which showed that the solution was achievable, was far from obvious and well capable of amounting to an inventive step.

[75] No one has denied the utility of the new combination formed by claim 7, nor the fact that that particular combination, on the definitions I have attributed to claim 7, had not been combined in any mill design prior to the Lucas one. Arguably, the two leading portable sawmill designers in Australasia at that time were Mr Peterson and Mr Hutchinson. Neither they, nor any other designer, had come up with the solution offered by Mr Lucas. Mr Peterson's answer to the slowness of the four-point rail adjustment in his standard frame design was to move on to his new production frame design. He considered the evolution to the production frame design more fruitful than attempts to mechanise the standard frame design. He returned to the standard frame design only when the means of doing so had been demonstrated by the Lucas design. He then recognised the advantages of the Lucas model and returned to his standard frame, embellishing it with lifting means in unison, in the form of the Islander.

[76] Mr Peterson expressed this evolution in thinking in the following terms:

> ". . . several years prior, I had gone from the standard frame with four point upright connections to the production frame which allowed one operator to raise and lower the machine from one position and I felt that was significantly better for a single operator than mechanising the standard frame which would in effect be one step backwards so when I saw the Lucas mill I was immediately struck by the possibility that maybe I had missed a very real market opportunity which was basically around price and horse power . . .".

[77] It is not disputed that Mr Peterson was inspired to design the Islander as a result of seeing the Lucas mill. Although he sought to explain this on the strength of "price and horse power" it had been clear for two or three years that the standard frame was not competing with others in the market, notwithstanding the range of different motors which had always been available to Mr Peterson. The Lucas brothers had recommended to Mr Peterson that he increase the horse power on the production frame mill. This must have been equally relevant had he thought to apply it to the standard frame mill. He had always had a discretion over price.

[78] I do not believe Mr Peterson's evidence that the Islander was inspired by new insights into price and horsepower. The breakthrough was the new combination introduced by Mr Lucas. In his subsequent 1994 newsletters to customers Mr Peterson described the new developments, albeit described in relation to the Islander, as of a kind that would be patentable. In subsequent correspondence with the patent attorney for Mr Lucas, Mr Peterson recognised the novelty of the Lucas mill. There is much to be said for the view that if anyone had been able to recognise the desirability and feasibility of the ideas in claim 7 before March 1994 it would have been Mr Peterson.

[79] Similar comments apply to Mr Hutchinson. He was an Australian who designed, patented, manufactured, and marketed portable sawmills from 1984 to 1996. They were sold in Australia, New Zealand and North America. His evidence was that when he saw the new Lucas mill he saw it as an innovative package which indicated that his own sawmill had reached the end of its product life. Among other things he said:

> "I appreciated the Lucas innovations but was well aware that products have a market life and new inventions supersede the old. In the same way that my innovation of having the support frame within the bandsaw meant that previous bandsaw mills effectively became obsolete, the Lucas mill represented the next advancement in the portable sawmill technology. This has consequently resulted in the great commercial success of the Lucas mill."

[80] Mr Hutchinson agreed that, with hindsight, the raising mechanism in the Lucas mill was a simple one but denied that it was obvious at the time. When asked "Let's say you had the Peterson standard frame and the Lewis saw would it have been an option to put a winch on the ends of the standard frame?" he replied "It would be an option. I would have liked to have thought of it."

[81] The test for obviousness is an objective one which does not turn on the insights gained or lacked by any particular individuals. However, if the combination of ideas represented by claim 7 was not obvious to men as skilled, experienced and directly involved, as Mr Peterson and Mr Hutchison, it is difficult to believe that it would have been obvious to the ordinary hypothetical skilled operator in that field at the time.

[82] A further point is that in those mills which did involve mechanised lifting mechanisms, the purpose was not, as in the Lucas mill, the twin advantages of speed of operation (two points lifted at once) and accuracy (relative vertical gauging of both rails kept constant). In other existing mills the lifting mechanisms were necessary to cope with either the weight involved or the need to avoid the binding of a single unit of substantial width required to slide vertically on to separated uprights. Mr Stevens put the matter in this way:

> "When a single structure is movably coupled to a pair of spaced apart supports then winding gear becomes necessary. This is to ensure that an even movement of the structure at each support is achieved. If the structure is not lifted or lowered evenly the mounting arrangements, eg sleeves, which couple the structure to the support will bind up. This is similar to say applying an uneven force to a pair of handles on a drawer. This usually results in the drawer not being pulled or pushed evenly in the cavity in which the drawer slides. Consequently, one side of the drawer will move by a different amount to the other side, thus causing the drawer to skew in the cavity and thus jam.
>
> The need for lifting gear so as to apply an even lifting force at each upright of the support frame, is evident in Lewis, Miles, Stubbe, Kaster and Elgan. In each of these specifications a single structure is slidably supported across a pair of uprights on which sleeves, fastened to the structure, can slide.
>
> The need for winding gear can also arise as a result of the weight of the structure to be lifted or lowered. When the weight is such that it cannot be easily managed by the mill operator winding gear can provide the necessary mechanical advantage to make it easier to physically move the structure.
>
> Neither of these situations arises with the Lucas mill. Being lightweight and because the rails are separate and can be manipulated separately, weight is not a problem. Also because the rails are quite separate they can be moved separately at each end frame. Therefore, the binding which

arises with a single structure is not an issue. This is why Elsey uses a separate threaded shaft at each end of each rail."

[83] Mr Peterson sought to explain the Islander's addition of winches to his existing standard frame design as an inevitable consequence of his decision to introduce a heavier motor. Mr Lucas denied that the motors used on the Lucas and Peterson mills required the introduction of winches but in any event made the further point that if the reason Mr Peterson had added a winch was the extra weight of a heavier motor, this would not have explained the need for lifting in unison. In the Elsey and Hutchinson mills, for example, the lifting mechanisms all operate independently of each other. What was novel about the Lucas claim 7 is that the moving means in unison applied notwithstanding the absence of any requirement to avoid binding and regardless of the weight to be lifted. As signalled in the body of the specification, it went directly to improved operation in that the saw could be moved vertically to a new level with speed and accuracy.

[84] That is the background against which the experts expressed their views as to obviousness. Dr Van Wyk's view was captured in the following passage:

> "This [claim 7] would have been a routine matter for a sawmill engineer wanting to avoid the need to move the rails manually, for example because of the exertion required, particularly if multiple adjustments are needed. Basically, there would be two choices – to do it manually or to use a component that offers some mechanical assistance. If the object was weighty, choice of something mechanical is inevitable – the only possible issue being as to just what particular known device or solution. Winch and crank mechanisms which move sawmill rails up and down were well known in New Zealand prior to 1994."

[85] The evidence is, however, that the design captured by claim 7 was not driven by the exertion required to move the rails. The winch and crank mechanisms that were well known at the time had no obvious application to the basic Peterson standard layout. Nor does Dr Van Wyk's comment explain the further insight that there would be speed and efficiency advantages in raising and lowering in unison even where that feature was not dictated by the need to avoid binding. It has now been demonstrated that there are clear benefits in adding rail-lifting means in unison to a light portable mill with independent rails. Dr Van Wyk's evidence contains no real answer to the point that no one, Messrs Peterson and Hutchinson included, had previously come up with that answer.

[86] I prefer the opinion of Mr Stevens and Mr Hutchinson that however simple the solution may now appear, it was not obvious at the time. In the words of Mr Stevens:

> "The sawmills to which Dr Van Wyk refers all show a mind set of the industry to the use of a lifting and lowering mechanism for each structural unit. Therefore, if a skilled person was using the simple engineering techniques which Dr Van Wyk claims to have been well known in the industry the skilled person would have used a winch or equivalent mechanism to raise and lower each of the rails. What Mr Lucas did was radically depart from this mind set and use a single mechanism to move a pair of independent structures namely the two separate rails into an adjusted position."

[87] I conclude that the obviousness challenge fails. In arriving at that conclusion I have purposely refrained from relying upon the Lucas mill's commercial success. At least in the present case, there are too many other possible explanations including better marketing, cheaper price and motor size.

[88] All challenges to the validity of claim 7 fail.

Infringement

[89] The defence did not seriously challenge the plaintiff's case that if claim 7 of the Lucas specification were held to be valid the various forms of Islander mill were infringements. Indeed, at one point in his submissions Mr Peterson expressly so stated. Both the Lucas design and the Islander amount to the basic Peterson standard layout with the addition of rail-lifting mechanisms operating in unison. Claim 7 does not require a horizontal member or connecting shaft across the top of the end-frames. Consequently, in the Islander Mark II and III, removal of the top horizontal member, and use of the bottom horizontal member to house the winding mechanism shaft, could not avoid infringement.

[90] At one point the defendants argued that Islanders exported to Australia or elsewhere in kitset form may have avoided infringement by avoiding assembly until after they had left New Zealand. Mr Miles' response that a manufacturer infringes in this situation when the kitsets are manufactured and sold (*Windsurfing International Inc v Petit* (1983) 3 IPR 449 at p 459) was not challenged by the defendants. I accept the argument of Mr Miles on this point.

[91] My conclusion is that the three versions of the Islander identified at the hearing, Marks I, II and III, constituted infringements when manufactured in New Zealand. That is so whether or not exported in kitset form.

Joint liability

[92] The first defendant company manufactured, marketed, and sold the infringing Islander sawmills. It was the primary infringer. The second defendant, Mr Peterson, was the managing director, employee and sole or principal designer of the first defendant. He participated in a common design or concerted action with the primary infringer. As such he is liable as a joint tortfeasor: see *Unilever PLC v Gillette UK Ltd* [1989] RPC 583 (CA) at pp 608 and 609; *MCA Records Inc v Charly Records Ltd* [2002] EMLR 1 at para 59.

[93] I therefore find against both defendants that claim 7 is valid and that both defendants are liable for its infringement by all three models of the Islander. Against the first defendant there was no challenge to the validity of claims 8 to 19 inclusive. Consequently the proper finding against the first defendant is that it also infringed in respect of claims 8 to 19 of the Lucas specification.

Unjustified threats

[94] Section 74 of the Patents Act entitles the plaintiff to a declaration, injunction, and/or damages, where a defendant has unjustifiably threatened any person with proceedings for infringement of a patent. Although each side pleaded that the other was guilty of unjustified threats I received no substantial submissions on the subject. The situation may well be that no case of unjustified threats has been made out against the plaintiffs and that the defendants' customer circular of November 1999 included an unjustified threat. However the matter will need to await further submissions. It may not be keenly fought given that the plaintiffs seek only an injunction on this account.

Result

[95] There will be judgment for the plaintiffs against both defendants recording their liability for infringement of claim 7 in respect of Marks I, II and III of the Islander portable sawmill. Both defendants' counterclaim for a declaration of invalidity in respect of claim 7 is dismissed. In respect of the first defendant the counterclaim for a declaration of invalidity in respect of claims 8 to 19 inclusive is also dismissed.

[96] As I was asked to make findings on liability only, it seems inappropriate to grant injunctions, or give directions as to an inquiry into damages or profits, without allowing the parties a further opportunity to be heard. Until a further hearing the existing interim injunction will continue in all respects.

[97] A further hearing will now be necessary to address the following questions:

(a) Resolution of the reciprocal claims for remedies in respect of unjustified threats, this to be by way of submission upon evidence already given.

(b) Resolution of issues as to validity of claims 8 to 19 as between plaintiffs and second defendant, similarly to be by way of submission on evidence already given.

(c) Directions as to remedies for infringement, similarly by way of submission only in the first instance.

(d) Resolution of all questions of costs down to and including the next hearing.

[98] The Registrar is asked to arrange a telephone conference before me for the purpose of structuring a hearing on the above matters and all procedural steps leading thereto.

Judgment for plaintiffs.

Solicitors for the plaintiffs: *Simpson Grierson* (Auckland).
Solicitors for the first defendant: *Gaze Burt* (Auckland).

Reported by: Andrew Borrowdale, *Barrister*

APPENDIX

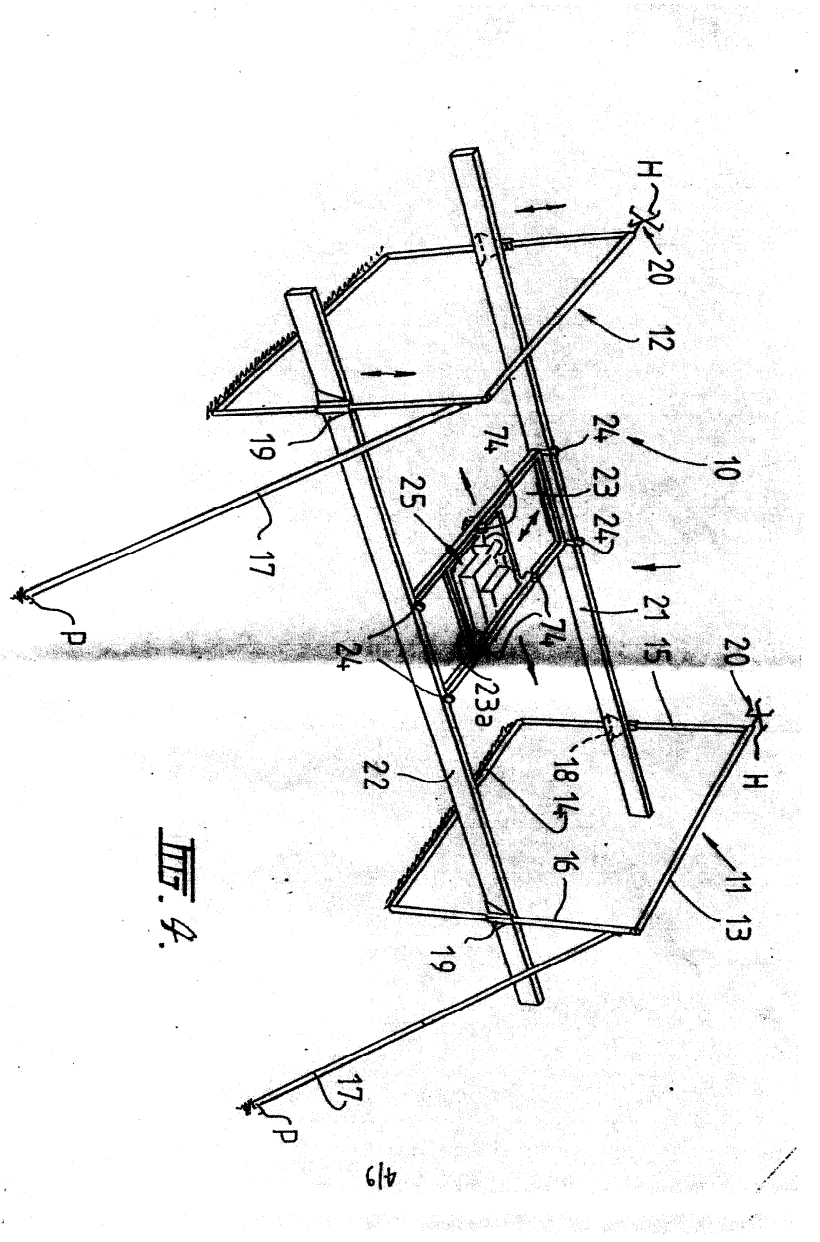

FIG. 4.