# HIGH COURT OF AUSTRALIA

GLEESON CJ,
McHUGH, GUMMOW, HAYNE AND CALLINAN JJ

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FIREBELT PTY LTD APPELLANT

AND

BRAMBLES AUSTRALIA LIMITED RESPONDENTS
(trading as Cleanaway) & ORS

*Firebelt Pty Ltd v Brambles Australia Ltd*
[2002] HCA 21
*23 May 2002*
B52/2001

**ORDER**

*Appeal dismissed with costs.*

On appeal from the Federal Court of Australia

**Representation:**

J J J Garnsey QC with C J Carrigan and D H Katter for the appellant (instructed by Xavier Kelly & Co)

D F Jackson QC with A B Crowe SC and R I M Lilley for the first respondent (instructed by Deacons Lawyers)

No appearance for the second and third respondents

## CATCHWORDS

### Firebelt Pty Ltd v Brambles Australia Ltd

Patents – Petty Patent – Revocation – Inventive step or obviousness – Combination patents – Proper construction of ss 7(2) and 7(3) of the *Patents Act* 1990 (Cth) – Whether evidence supported conclusion that it had been shown to be obvious to place known integers in the interactive combination claimed in the Petty Patent – Whether trial judge and Full Court, in focusing upon the incorporation of particular integers, gave inadequate weight to whether the selection in combination of the integers was obvious at the priority date – Relevance of commercial success of Petty Patent to question of obviousness.

*Patents Act* 1990 (Cth), ss 7(2), 7(3).

GLEESON CJ, McHUGH, GUMMOW, HAYNE AND CALLINAN JJ.

The parties

1 The appellant ("Firebelt") was incorporated in 1992. It holds the intellectual property utilised by companies which are controlled by two branches of the Richards family and which carry on refuse collection and related businesses in New South Wales and Queensland. The Richards family had established a refuse collection business in 1932 in the Tweed District of northern New South Wales.

2 Firebelt was the grantee of Petty Patent No 657082 which was granted under the *Patents Act* 1990 (Cth) ("the Act") on 23 February 1995 for an initial term of 12 months from that date and in respect of an invention entitled "A Side-Loading Refuse Vehicle" ("the Petty Patent"). The inventor is identified as Mr Idwall Richards.

3 At all material times, the first respondent ("Cleanaway") carried on business under that name using a side-loading refuse and recycling collection vehicle. Cleanaway did so in the region of the second respondent, the Cooloola Shire Council ("the Council"), which is a body incorporated pursuant to the *Local Government Act* 1973 (Q). In particular, in August 1994, the Council awarded to Cleanaway a contract for the collection, removal and conveyance of refuse.

The litigation

4 After the issue of the Petty Patent, Firebelt instituted a proceeding in the Federal Court alleging infringement of the Petty Patent by Cleanaway and the Council. The relief sought included damages and, in the alternative, an account of profits. Cleanaway and the Council denied infringement and also set up a defence under the Crown use provisions of Ch 17 Pt 2 (ss 163-170) of the Act. The contention was that any exploitation of the Petty Patent had been for the services of the third respondent, the State of Queensland, and under an authority in writing by the State, within the meaning of s 163 of the Act.

5 By its cross-claim under s 138 of the Act, Cleanaway sought an order for revocation of the Petty Patent. Reliance was placed upon various grounds of alleged invalidity. There was a trial of the cross-claim before Dowsett J, in

advance of a determination of the issues in the infringement action[1]. His Honour ordered that the Petty Patent be revoked and, as a consequence, dismissed the infringement action.

6 Dowsett J rejected a number of the grounds on which validity was attacked. In particular, his Honour decided that the invention claimed was a manner of manufacture within the meaning of s 6 of the Statute of Monopolies (par (a) of s 18(1) of the Act), and that the invention was useful (par (c)) and novel (par (b)(i)).

7 With respect to the reliance by Cleanaway upon various branches of s 40 of the Act, the trial judge determined that there was no substance in the allegation that the claims were not clear and succinct or fairly based on matter described in the specification[2] (s 40(3)). However, his Honour held that the best method of performing the invention had not been disclosed as required by par (a) of s 40(2).

8 In addition to the adverse finding as to best method, Dowsett J held that, as compared with the prior art base as it existed before the priority date of the claims in the Petty Patent, the invention claimed did not involve an inventive step within the meaning of par (b)(ii) of s 18(1). There had been a dispute as to the correct priority date under s 43 of the Act; the priority date was an important reference point for the assessment of the allegation of obviousness and lack of novelty. Dowsett J held that the priority date was 10 February 1992 and the parties now accept this.

9 On appeal by Firebelt, the Full Court of the Federal Court (Spender, Drummond and Mansfield JJ)[3] held that Dowsett J had erred in his finding respecting the failure to disclose the best method of performing the invention. However, their Honours affirmed the finding as to lack of inventive step or obviousness, with the result that the appeal by Firebelt failed.

10 The Full Court identified the contentions by Firebelt as being that (i) the trial judge had failed to appreciate the essence of a combination patent and, as a

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**1** *Firebelt Pty Ltd v Brambles Australia Ltd* (1998) 43 IPR 83.

**2** (1998) 43 IPR 83 at 90-92.

**3** *Firebelt Pty Ltd v Brambles Australia Ltd* (2000) 51 IPR 531.

result, had failed to apply the proper test in the determination of obviousness[4] and (ii) there was insufficient evidence to enable the trial judge to conclude what was within common general knowledge in respect of the skilled or notional addressee of the specification for the Petty Patent[5]. In this Court, Firebelt, in substance, renewed those criticisms of the judgment of the trial judge and, in addition, submitted that in dismissing the appeal the Full Court had repeated those alleged errors. The Full Court had concluded[6]:

> "When one looks at what the primary judge did and what test he applied, it is clear that his Honour approached the issue of inventiveness correctly, and his conclusion on want of inventiveness was open to him on the evidence."

11 The rival submissions in this Court were presented on behalf of Firebelt and Cleanaway. The Council and the State were joined as respondents but did not participate in the hearing of the appeal.

12 The Full Court dismissed Firebelt's appeal without entering upon the question of lack of novelty. If Firebelt were to succeed in this Court in upholding the Petty Patent against the attack based on obviousness, there would remain for consideration the question whether the trial judge erred in dismissing the attack based on lack of novelty. There is an issue between Firebelt and Cleanaway as to what grounds in a notice of contention by Cleanaway would be open for consideration by the Full Court if Firebelt's appeal to this Court, on the question of obviousness, were to succeed and the determination of outstanding issues respecting validity was returned by this Court to the Full Court. Further, if Firebelt succeeds in upholding the validity of the Petty Patent, the infringement action would remain for trial.

The petty patent system

13 Before turning to consider the submissions upon the question of obviousness, it is convenient to say a little respecting the petty patent system. Section 39 of the Act provides for divisional applications. Where, as occurred in the present case, an application has been made for a standard patent and the

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**4** (2000) 51 IPR 531 at 538.

**5** (2000) 51 IPR 531 at 536.

**6** (2000) 51 IPR 531 at 539.

specification has been accepted, an application may be made for a petty patent the claims of which fall within the scope of the claims of the accepted specification (s 39(1)(b)).

14 If the Commissioner of Patents accepts a "patent request" (ie an application under s 29 of the Act) and complete specification filed in respect of an application for a petty patent, then the Commissioner "must grant a petty patent by sealing a petty patent in the approved form" (s 62(1)). Whilst the term of a standard patent is 20 years from its date (s 67), the maximum term of a petty patent is for a period ending at the end of six years after its date (s 68). The attainment of that maximum term is contingent upon the grant under s 69 of an extension beyond the initial period of 12 months beginning on the date of sealing of the petty patent. There is no finding on the point but the litigation has proceeded on the assumption that the term of the Petty Patent was for six years from 23 February 1995.

15 A complete specification upon an application for a petty patent must end with a claim defining the invention; there must be a single independent claim and not more than two dependent claims (s 40(2)(c)). Further, the definition in Sched 1 of "prior art base", which is critical for the determination of issues respecting novelty and lack of inventive step, has a shorter geographical reach in respect to petty patents than it has with respect to standard patents; in particular, information in documents publicly available outside the "patent area" is not considered in deciding whether an invention disclosed in a petty patent does or does not involve an inventive step. The term "patent area" is defined so as to be limited to Australia, the Australian continental shelf and waters above it, and airspace above Australia and the Australian continental shelf.

16 The Act was amended by the *Patents Amendment (Innovation Patents) Act* 2000 (Cth) ("the 2000 Act"). This commenced on 24 May 2001, after the expiry of the six year term of the Petty Patent, but it provided that the Act as in force immediately before that date continued to apply to petty patents the term of which had expired[7]; further, pending legal proceedings in respect of rights under the repealed litigation were continued by s 8 of the *Acts Interpretation Act* 1901 (Cth).

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**7** Section 3 and Sched 2, Pt 1, Items 1 and 2(1)(b).

The background

17 The trial judge said that the dispute arose in the context of what were[8]:

> "relatively recent attempts to facilitate the recycling of waste by pre-sorting in the hands of those producing it, coupled with separate handling, transportation and disposition by waste collection services".

18 His Honour accepted evidence by the inventor, Mr Idwall Richards, about the development of the industry over many years. In the early 1980s, mobile garbage bins (known as "MGBs" or "wheelie bins") had come into use and were promoted by local government for the collection of domestic refuse. This had necessitated the development of purpose built loading mechanisms fitted to side-loading and rear-loading refuse collection vehicles. Later, side-loading vehicles had been developed to a stage where they were operated by one person. There was a transition from semi-automated collection to the use of equipment and adoption of practices whereby MGBs were picked up and unloaded by remote control from the cab. A demand for recycling of domestic refuse had led Mr Richards to the investigation of the prospects of success of separate bin storage and handling. The use of the single operator system dictated the use of a side-loading vehicle, presumably because of the need for the driver to observe the operation.

19 Dowsett J referred to the effect of the evidence and continued[9]:

> "This implies that the driver is able to pick up a bin from the kerbside, using some form of device on the truck, empty it and return it to the kerbside. It is now a commonplace that such bins are able to be divided by partitions so that refuse and recyclable material or different categories of refuse or of recyclable material may be accumulated separately prior to collection. It is now also obvious that the trucks which collect such pre-sorted waste may be equipped to permit separate handling, carriage and unloading of such material. *This case is concerned with the events which led to the current position.*" (emphasis added)

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**8** (1998) 43 IPR 83 at 84.

**9** (1998) 43 IPR 83 at 84.

The Petty Patent

20 It is convenient now to turn to the relevant terms of the Petty Patent. Under the heading "BACKGROUND ART", it is stated:

> "With the introduction of environmental awareness, the collection of domestic garbage has taken on a new complexion, it being realised that new, convenient and economical approaches to garbage collection and recycling must be introduced. It has been proposed to provide householders with a plurality of waste bins so that each householder can sort waste into various categories.
>
> For example, paper, metal cans and bottles and garbage could conceivably be stored and collected separately and this has been tried, the main problem with this scheme is the high expense insofar as separate collections are required for each category.
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> The alternative has been to provide local or regional sorting facilities where garbage is hand sorted or expensive automated facilities have been tried with minimal success due to the high expense involved.
>
> In summary therefore, sorting of recyclables from domestic garbage after collection is generally uneconomical."

It is then said that the present invention has, as its primary object, the provision of a useful alternative to that prior art.

21 There follows the consistory clause which indicates that the claimed invention is said to reside in a combination of elements or integers which in combination are not a mere collocation of separate parts but "interact to make up a new thing"[10]. Speaking of the patent there in suit, Aickin J said in *Minnesota Mining and Manufacturing Co v Beiersdorf (Australia) Ltd*[11]:

> "The patent thus claimed is a combination patent in the proper sense of that term, ie it combines a number of elements which interact with each other to produce a new result or product. *Such a combination may be one constituted by integers each of which is old, or by integers*

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**10** *Welch Perrin & Co Pty Ltd v Worrel* (1961) 106 CLR 588 at 611.

**11** (1980) 144 CLR 253 at 266.

*some of which are new, the interaction being the essential requirement.*" (emphasis added)

His Honour said in a later passage in that judgment[12]:

"In the case of a combination patent the invention will lie in the selection of integers, a process which will necessarily involve rejection of other possible integers. The prior existence of publications revealing those integers, as separate items, and other possible integers does not of itself make an alleged invention obvious. It is the selection of the integers out of, perhaps many possibilities, which must be shown to be obvious."

22 The consistory clause in the Petty Patent is in the following terms:

"In one aspect, the present invention resides in a side loading refuse vehicle having a cab, the combination of an elongate refuse storage tank divided into longitudinally extending tank sections, a loading mechanism adjacent a side of the refuse vehicle and a refuse transfer mechanism for delivering refuse or other material emptied into the vehicle by the loading mechanism to the respective tank sections, *the loading mechanism having a lid opening device and the loading mechanism being adapted to engage a bin of the type having a pivoting lid by remote control from the cab, raise the lid* and empty the bin into the vehicle, the bin holding recyclable waste separately from other waste in the bin and upon being emptied into the vehicle, the recyclable waste and the other waste are separately delivered by the transfer mechanism to respective ones of the said tank sections." (emphasis added)

23 There are three claims to the Petty Patent, claims 2 and 3 being dependent upon claim 1. This is consistent with the restriction upon claims imposed by par (c) of s 40(2) of the Act. The text of claim 1 reflects the consistory clause. Claim 2 specifies the combination in claim 1 but wherein the sections of the elongate refuse storage tank are located one above the other. Claim 3 is for the combination in claim 1 or claim 2 but where the transfer mechanism identified in the concluding passage of claim 1 "is an active transfer mechanism".

24 Several features of the loading mechanism are specified in claim 1. The loading mechanism must have a lid-opening device and must be adapted to perform three functions, namely to engage by remote control from the cab a bin

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**12** (1980) 144 CLR 253 at 293.

having a pivoting lid, to raise the lid and to empty the bin into the vehicle. The bin is one holding recyclable waste separately from other waste in the bin. Upon being emptied into the vehicle, the recyclable waste and the other waste are separately delivered to respective sections of the refuse storage tank in the refuse vehicle.

25 No particular lid-opening device is claimed. The claim extends to the use of a lid-opening device of any kind located on the loading mechanism. However, the embodiments described in the complete specification include, for example in figs 4 and 5, devices to ensure that minimal material ends up in the wrong section of the storage tank. There is a description of the use of a water jet to achieve that result and, it is said:

> "[a]s an alternative to the jet of water, other mechanically equivalent contrivances can be employed including air jets or directly acting mechanical lid openers."

26 The absence of a claim to a particular lid-opening device assumed a significance at the trial with respect to the grounds concerning absence of best method and lack of novelty by reason of certain disclosures in July and November 1991.

27 In reaching his decision concerning absence of best method (reversed by the Full Court), the trial judge said[13]:

> "There is no indication of which of the contemplated lid opening devices was considered to be the best at the relevant time, nor of the preferred timing. The specification indicates that different methods had been considered and that, at least in some embodiments, timing was thought to be of importance in determining the quality of outcome, that is the degree of maintenance of separation of waste. In view of the importance of this matter, it cannot be said, in the absence of such information, that the best method of performing the invention as a whole has been disclosed."

This emphasis by the trial judge upon the perceived importance of lid-opening devices recurred in his treatment of the issues of novelty and obviousness and, in the latter case, this may have contributed to inadequacies of which Firebelt complains.

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**13** (1998) 43 IPR 83 at 90.

The trial

28 Dowsett J recorded it as common ground that at the priority date, 10 February 1992, the various integers of the combination were known. In dealing with the alleged lack of novelty, his Honour said that that issue depended upon the extent of disclosures made in July and November 1991 on behalf of TWT Formark Pty Ltd ("TWT"). The July disclosure was made at the Holroyd Council auditorium in Sydney at a meeting attended by about 100 people, mostly from local government. The November disclosure was at the 18th National Environmental Health Conference held in Queensland, at the Gold Coast.

29 TWT was a company associated with Mr Colin Hickey who, in 1991, was working on behalf of TWT on what the trial judge said was a proposal very similar in effect to that of the invention claimed in the Petty Patent. Mr Hickey did not give evidence. There was some obscurity in the evidence given by those who attended one or other of the presentations as to the extent of the disclosures. Dowsett J considered the evidence and concluded that, whilst the location of the lid-opening device on the loading mechanism had been a possible solution to a problem implicitly identified by Mr Hickey, it had not been solved in either of the presentations. The result was that the use of a lid-opening device located on the loading mechanism had not been disclosed in either of the 1991 presentations. It followed that the attack based on lack of novelty failed.

30 The trial judge then turned to consider the question of obviousness. Dowsett J said that all of the matters respecting the extent of the two TWT disclosures and the "problem" respecting the use and location of a lid-opening device which he had considered when dealing with the case respecting novelty "fall to be considered again in the context of inventiveness"[14]. This perhaps tended to blur the evidentiary issues which arise respecting novelty and obviousness. However, his Honour also said[15]:

> "For present purposes, it is necessary to consider whether the subject matter of the disclosures at the 1991 presentations had become part of 'common general knowledge' prior to 10 February 1992 or whether the notional skilled person could, prior to that date, reasonably have been

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**14** (1998) 43 IPR 83 at 110.

**15** (1998) 43 IPR 83 at 111.

expected to have ascertained, understood and regarded that subject matter as relevant.

It is not disputed that each of the integers of the petty patent claims was known in the patent area before the priority date. The issue of absence of an inventive step requires an examination of the obviousness or otherwise of the combination."

Legislation and obviousness

31 In so stating the issues respecting obviousness, Dowsett J was recognising that they had to be determined on the basis of the provisions of s 7 of the Act. The central provision is in sub-s (2) thereof. This states:

"For the purposes of this Act, an invention is to be taken to involve an inventive step when compared with the prior art base unless the invention would have been obvious to a person skilled in the relevant art in the light of the common general knowledge as it existed in the patent area before the priority date of the relevant claim, whether that knowledge is considered separately or together with either of the kinds of information mentioned in subsection (3), each of which must be considered separately."

The opening words of s 7(2) indicate that the onus to establish the absence of an inventive step rests upon the party challenging validity. The reference to "the prior art base" is to par (a) of the definition of that term in Sched 1 to the Act. So far as it applies to petty patents, the definition reads:

"***prior art base*** means:

(a) in relation to deciding whether an invention does or does not involve an inventive step:

(i) information in a document, being a document publicly available anywhere in the patent area; and

(ii) information made publicly available through doing an act anywhere in the patent area".

The reference in s 7(2) to the kinds of information mentioned in s 7(3) is, in the terms of sub-s (3) to:

"the kinds of information [which] are:

(a) prior art information made publicly available in a single document or through doing a single act; and

(b) prior art information[16] made publicly available in 2 or more related documents, or through doing 2 or more related acts, if the relationship between the documents or acts is such that a person skilled in the relevant art in the patent area would treat them as a single source of that information;

being information that the skilled person mentioned in subsection (2) could, before the priority date of the relevant claim, *be reasonably expected to have ascertained, understood and regarded as relevant to work in the relevant art in the patent area*". (emphasis added)

The text of the concluding passage in s 7(3) is reflected in the passage set out above from the judgment of Dowsett J in which his Honour stated the issues.

32 At the time of the decision in *Minnesota Mining*[17], to which reference has been made, the ground of revocation for obviousness was tersely stated in par (e) of s 100(1) of the *Patents Act* 1952 (Cth) ("the 1952 Act"). Paragraph (e) read:

"that the invention, so far as claimed in any claim of the complete specification or in the claim of the petty patent specification, as the case may be, was obvious and did not involve an inventive step having regard to what was known or used in Australia on or before the priority date of that claim".

33 Neither s 100(1)(e) of the 1952 Act nor s 7 of the Act refers to combination patents. Neither Firebelt nor Cleanaway contests the applicability to questions of obviousness under both statutes of the general statements of principle respecting ingenious combinations in the decisions to which reference has already been made. However, it is apparent that there has been an expansion of the legislative text dealing with the ascertainment and content of the common

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**16** The expression "prior art information" is defined in Sched 1 of the Act to mean:

"for the purposes of subsection 7(3) – information that is part of the prior art base in relation to deciding whether an invention does or does not involve an inventive step".

**17** (1980) 144 CLR 253.

general knowledge relevant for the determination of the obviousness of a claim, whether it be to a combination or otherwise.

34 On the present appeal, each side suggested or implied that, whatever the legislative change was, it made no difference for the determination of the issue of obviousness in this case. However, the Court should not act upon a concession as to the effect of such a fundamental legislative provision. The provision helps explain the structure of Dowsett J's reasons. Without an understanding of the legislation, an adequate resolution of the ultimate issue as to obviousness remains difficult, if not impossible.

35 Reference to the legislative history of the Act is of assistance. *Minnesota Mining*[18] is well known authority for the proposition that, under the 1952 Act, a prior disclosure, in particular in a specification open for public inspection, did not provide a basis for a conclusion as to obviousness without evidence that the disclosure in question was part of the common general knowledge at the relevant priority date. There followed the report by the Industrial Property Advisory Committee, delivered to the Minister for Science and Technology on 29 August 1984, and entitled *Patents, Innovation and Competition in Australia*. The Committee said[19]:

> "For the purpose of determining inventiveness, any single prior disclosure or use should be capable of being considered against the background of all that is common general knowledge in the relevant field of art. On this basis the requirement of inventiveness will not be fulfilled if the knowledge imparted by the disclosure or use, combined with what is common general knowledge in the art, would render the claimed invention obvious to a person reasonably skilled in the art.
>
> However, it should not be possible for this purpose to combine two disclosures, two uses, or a disclosure and a use, where neither is within the common general knowledge of the art, except where one disclosure refers to another disclosure or use.
>
> On the other hand, we see as being treated as within the common general knowledge of the art, not merely information which is generally known and used in the art, but also information publicly available in recorded

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**18** (1980) 144 CLR 253 at 295.

**19** at 45.

> form *anywhere in the world* which a skilled person working in the art at the relevant time should reasonably have been expected to find, understand, and regard as relevant." (emphasis added)

The recommendation in the emphasised passage was accepted for standard but not for petty patents. The Bill for the Act was stated in the Explanatory Memorandum circulated to the Senate as implementing the response of the then government to the 1984 Report. In the notes to what was then cl 7 of the Bill, it was said:

> "An invention is to be taken to involve an inventive step unless the invention would have been obvious to a person skilled in the relevant art. In assessing whether an invention involves an inventive step, publicly available information from a prior document or prior use may be considered together with the common general knowledge, provided that the information would have been ascertainable, understandable and seen as relevant by a person skilled in the relevant art."

36 In *Tidy Tea Ltd v Unilever Australia Ltd*[20], Burchett J considered the provisions respecting inventiveness in the new s 7. His Honour observed that it was one thing to say that there had been a relaxation of the rule forbidding the use of prior disclosures not actually proved to be part of common general knowledge at the relevant time and another to say that, in all circumstances, such a disclosure might be used to some relevant effect. His Honour continued[21]:

> "The new provisions are limited by the words 'being information that the skilled person … could, before the priority date of the relevant claim, be reasonably expected to have ascertained, understood and regarded as relevant to work in the relevant art in the patent area'. And if a prior [disclosure] passes those tests, it must still be able to be said that, if that [disclosure] had been considered by the hypothetical skilled person together with the common general knowledge at the relevant time, 'the invention would have been obvious'."

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**20** (1995) 32 IPR 405 at 414.

**21** (1995) 32 IPR 405 at 414.

That construction of s 7 should be accepted[22].

Obviousness at the trial

37 The trial judge correctly construed s 7(2) as looking first to the light shed by the common general knowledge as it existed in the patent area before the priority date, considered separately, and, secondly, to that common general knowledge considered together with either of the kinds of information mentioned in s 7(3); each of those kinds of information is to be considered separately but in either case must be information which a person skilled in the relevant art in the light of the common general knowledge could, before the priority date, reasonably be expected to have ascertained, understood and regarded as relevant to work in the relevant art in the patent area.

38 Dowsett J expressed his conclusion[23]:

> "The evidence from the experts satisfies me that prior to 10 February 1992 the content of the disclosures at the [TWT] presentation had passed into common general knowledge *or, alternatively,* was prior art information that a skilled person in the industry could reasonably be expected to have ascertained, understood and regarded as relevant to his or her work in that area. The apparent extent of distribution of such

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**22** Section 7(2) has been amended and s 7(3) repealed by the *Patents Amendment Act* 2001 (Cth), s 3, Sched 1, Pt 1, Items 3 and 4 respectively. In particular, the substituted s 7(3) reads:

> "The information for the purposes of subsection (2) is:
>
> (a) any single piece of prior art information; or
>
> (b) a combination of any 2 or more pieces of prior art information;
>
> being information that the skilled person mentioned in subsection (2) could, before the priority date of the relevant claim, be reasonably expected to have ascertained, understood, regarded as relevant and, in the case of information mentioned in paragraph (b), combined as mentioned in that paragraph."

However, Item 13 of Pt 1 of Sched 1 indicates that these changes apply prospectively and do not concern the Petty Patent in issue in this litigation.

**23** (1998) 43 IPR 83 at 114.

information to the various witnesses and their opinions as to its relevance demonstrate this. The occasions on which the disclosures occurred must inevitably have led to their content being widely disseminated among persons having the relevant skills and interests." (emphasis added)

39 The claims being to a combination of known integers, the question then was whether the evidence supported a conclusion that it had been shown to be obvious to place those integers in the interactive combination claimed in the Petty Patent.

40 The most significant evidence given by those put forward by Cleanaway as experts was that of Mr A P Ahrens. Mr D G Browne's evidence was not accepted as establishing the state of the art before the priority date. Mr R J O'Dwyer was a fitter and turner employed by Cleanaway since 1982. Mr Ahrens is the general manager of an engineering company and he has had experience in the design and construction of vehicles used in the waste management industry. Dowsett J summarised the effect of Mr Ahrens' evidence as follows[24]:

> "He said that each of the integers was known to him prior to 10 February 1992. At that stage he was aware of the inclusion of the features in the [TWT] proposal as disclosed in late 1991. The number of companies manufacturing bodies for waste management trucks in this country is not large, there being about six such manufacturers. Such manufacturers are 'very conscious of patent developments in the industry, both in Australia and overseas, and very conscious of patent content'. The [TWT] system became known in the industry in 1991-92. In cross-examination Mr Ahrens said that he was aware in February 1992 that [TWT] had been promoting a system in late 1991 which included a side loading vehicle with an automated lifter and a horizontally divided tank section to lift an east-west divider bin. He heard of this by word of mouth in the industry. He also knew that the bin was to be divided horizontally. Although Mr Ahrens said that the first thing that occurred to him when he heard of the proposal was how to get the lid out of the way, he did not understand that to be a part of Mr Hickey's proposal. At some time in early 1992, he heard from an associate of Hickey that the latter was working on a lid opening device. He said, however, that in 1991 he 'went through the process of what Colin Hickey was doing and knew all the concepts and the problems involved with actually performing that task'."

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**24** (1998) 43 IPR 83 at 112.

41 Section 76(1) of the *Evidence Act* 1995 (Cth), which applied in the Federal Court by s 4 thereof, rendered inadmissible the evidence of an opinion to prove the existence of a fact about the existence of which the opinion was expressed; however, that exclusion did not apply to evidence falling within the exception in s 79. Section 79 states:

> "If a person has specialised knowledge based on the person's training, study or experience, the opinion rule does not apply to evidence of an opinion of that person that is wholly or substantially based on that knowledge."

Under the new legislative regime, evidence of an opinion is not inadmissible only because it concerns "an ultimate issue" (s 80(a)).

42 In his affidavit, Mr Ahrens expressed in par 42 the conclusion that the invention claimed in the Petty Patent was "a list of obvious features to a person skilled in the art of waste vehicle body planning and construction". The trial judge indicated that he disfavoured the expenditure of time in ruling upon objections to the affidavit evidence[25]. This was unfortunate because the statement in par 42 (and others to like or identical effect in other affidavits) was unsatisfactory. Whilst as an attempt to express a conclusion upon the ultimate legal question par 42 was not, for that reason, inadmissible (s 80(a)), par 42 was an unsuccessful attempt to do so. It spoke of "a list of obvious features" without dealing with the question whether it was obvious to make that list.

43 However, as the trial proceeded, the respondents' case improved. In the course of cross-examination of Mr Ahrens, the relevant legal conclusions came to be expressed in evidence in the following exchanges, to which the trial judge referred in his judgment[26]:

> "You didn't come up with the thought of putting all those features together as in the petty patent in 1991 or 1992, did you? – No, I was very busy on other projects at that time.
>
> Yes. And what you are saying now, I suggest, is the benefit of hindsight, and contrary to the facts, that the combination in the petty patent wasn't obvious in 1991/1992? – Yes, they were obvious.

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**25** Trial transcript, 16 November 1998 at 87.

**26** (1998) 43 IPR 83 at 112.

> And that is your statement and you are sticking to it? – Yes.
>
> If it was so obvious, why hadn't anyone come up with the same combination, or putting into practice the same combination, before Mr Richards? – At that time, I think the waste industry was in a great change, a very quick change, especially with the introduction of recycling and trying to find the most efficient means of collecting and sorting recyclables and they will perform the whole process …
>
> In the context of the industry at that time, you are saying you relied on impetus from the industry for your design initiatives rather than sitting down and thinking 'How can I work out this problem with this system'? – Well, I did put some thought into those areas, but my specific job was to actually design equipment to actually do the job required of it.
>
> And I suggest to you then that in the industry context that you have just outlined it was far from obvious for a manufacturer to sit down and work out the combination in the petty patent? – No. I think it was obvious if you looked at what Colin Hickey was doing with his split truck. As I said before, my first thought was well, it's just not specifically for separating two recyclable products, you know, which as I said was I think going down the wrong path. My belief at that time also was it should have been also used for … all recyclables."

44 Mr Ahrens stated that he considered himself to be an inventor. Firebelt contends that this diminishes the force of his evidence because he was not speaking as the uninventive notional addressee referred to in the authorities[27]. However, when a similar complaint was made to the trial judge, his Honour correctly observed[28]:

> "It is true that Mr Ahrens considers himself to be an inventor, but that of itself cannot disqualify him from giving evidence as to obviousness. To describe oneself as an inventor is merely to say something about one's capacity to identify and solve a problem. The line between a competent technician, able to solve problems on the basis of an established state of knowledge in his or her industry and an inventor will not always be easily

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**27** For example, *Wellcome Foundation Ltd v V R Laboratories (Aust) Pty Ltd* (1981) 148 CLR 262 at 270, 281.

**28** (1998) 43 IPR 83 at 113.

> discerned. Further, a person who is an inventor may well also perform non-inventive work."

45 Firebelt did not call any witnesses at arm's length from it and skilled in the art to counter the evidence led by Cleanaway respecting obviousness. Mr Idwall Richards, the inventor, did give evidence and asserted that the invention was not obvious. Whilst Mr Richards also gave what Dowsett J described as useful evidence as to the development of the industry, his Honour formed a generally unfavourable view of Mr Richards as a witness, saying that[29]:

> "he was so sure of the righteousness of [Firebelt's] claim that he may have convinced himself of the truth of matters likely to be of assistance in making out that claim".

46 In any event, whilst *Wellcome Foundation Ltd v V R Laboratories (Aust) Pty Ltd*[30] decides that evidence of research and experiments (if any) of a patentee leading up to the claimed invention is generally admissible, the Court entered the caveat that such evidence is "not always likely to be helpful". The same must be said of any conclusion by the inventor on the ultimate question of law respecting the obviousness or inventiveness of that which is claimed by that witness.

Commercial success

47 Firebelt also points to evidence which it says indicates that the Petty Patent was a commercial success as indicative of the presence of an inventive step in the claimed combination. The failure of the trial judge to give specific attention to this evidence was not the subject of a distinct ground of appeal to the Full Court. The nearest to which Firebelt could point is a general ground that Dowsett J made a decision "against the weight of the evidence" and "was wrong in holding that the evidence supports a lack of inventiveness". Nor was this matter agitated on the application to this Court for special leave. When the matter arose on argument on the appeal, Firebelt sought leave to supplement its grounds of appeal. That course was opposed by Cleanaway.

48 The application should be refused, not only by reason of the lateness of the application but because, in any event, the evidence relied upon is of little weight.

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**29** (1998) 43 IPR 83 at 109.

**30** (1981) 148 CLR 262 at 287.

49 Not all inventions are to be treated as fulfilling a "long-felt want"; indeed, in *Wellcome Foundation*[31], Aickin J observed that inventions revealing an "unfelt want" are as likely, and sometimes more likely, to involve an inventive step. Nevertheless, the presence of a known need for a particular product and the subsequent commercial success of an invention meeting that need may contribute to the conclusion that there was an inventive step. In *Minnesota Mining*, Aickin J said[32]:

> "These are well recognized indications of inventiveness though they are not in themselves decisive."

50 The subject has been further considered in the English Patents Court, by Laddie J in *Haberman v Jackel International Ltd*[33] and *Pfizer Ltd's Patent*[34]. In *Haberman*, his Lordship observed[35]:

> "If skilled workers in the art had looked at the priority date both at the prior art relied on and had turned their minds to solving a known problem their reactions would come closer to showing what would have been the approach of the hypothetical skilled man. Unfortunately evidence in that form rarely exists. However some insight into the thinking of those in the art at the priority date can be provided by evidence of commercial success. To this end patentees sometimes prove schedules of sales to support their claims to inventiveness. In most cases this type of evidence is of little or no value because it does no more than show that a particular item or process which employs the patented development has sold well. The mere existence of large sales says nothing about what problems were being tackled by those in the art nor, without more, does it demonstrate that success in the market place has anything to do with the patented development nor whether it was or was not the obvious thing to

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**31** (1981) 148 CLR 262 at 287.

**32** (1980) 144 CLR 253 at 298. See also *Henry Berry & Co Pty Ltd v Potter* (1924) 35 CLR 132 at 138.

**33** [1999] FSR 683.

**34** [2001] FSR 201 at 244.

**35** [1999] FSR 683 at 699.

do. After all, it is sometimes possible to make large profits by selling an obvious product well. But in some circumstances commercial success can throw light on the approach and thought processes which pervade the industry as a whole."

51 In the present case, the evidence relied upon is exiguous. It is found in two paragraphs in the affidavit of Mr Rhys Richards. He deposes that one of the companies of the Richards family currently holds 10 domestic contracts, of which nine use divided MGBs or "wheelie bins" and "Divided Collection Vehicles" as claimed in the Petty Patent. Mr Richards added that he knew that more than 480,000 households per week were serviced by the use of divided "wheelie bins" and "Divided Collection Vehicles".

Other obviousness arguments

52 The trial judge said that, "in the end", Firebelt had taken two approaches on the question of inventiveness. The first he described as being the suggestion that "the inventive element" might lie in a combined pick-up system; at the priority date it not having been suggested that refuse could be collected jointly with recyclable material[36]. The second basis for resisting the attack for obviousness was said to be the assertion by Firebelt that it had gone beyond the Hickey proposal in the TWT disclosures, by identifying the need to open the lid and solving that "problem" by claiming the use of a lid-opening device located on the loading mechanism[37].

53 In the course of rejecting what had been identified as these two submissions, the trial judge used expressions such as "inventive element" and "inventive step". In this Court, as it did in the Full Court, Firebelt complains that the trial judge erred in considering the question of obviousness by reference to an alleged inventive step involving the addition of particular integers, rather than a consideration of the ingenuity involved in the entire combination.

54 There is something to be said for the submission that both at trial and in the Full Court there are passages which, in focusing upon the incorporation of particular integers, give inadequate weight to the need for Cleanaway to establish that the selection in combination of the integers, the interaction between which is

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**36** (1998) 43 IPR 83 at 114.

**37** (1998) 43 IPR 83 at 115.

the essential requirement, was obvious at the priority date. To the extent that these shortcomings in the judicial reasoning reflected the form in which particular submissions were understood to have been made by Firebelt, then Firebelt may have brought this result upon its own head.

55 In this Court, Firebelt maintained that both at trial and in the Full Court it had always placed at the centre of its case the need to apply the evidence to the established principles respecting combination patents. An examination of the written and oral submissions at both levels in the Federal Court shows that reliance was placed upon established principles. That is unsurprising.

56 However, it is far from clear that, in meeting the exigencies of argument as the litigation progressed, submissions were not made in a form which the trial judge may have understood as representing what "in the end" were the two approaches by Firebelt on the question of inventiveness which his Honour described in the judgment. Thus, in the course of final oral submissions on the obviousness issue, the trial judge put to senior counsel for Firebelt that its difficulty was with the width of its claim and that the method of performing the invention with a lid-opening device described in the passages of the body of the complete specification accompanying figs 4 and 5 might be the only method that was not obvious. Counsel responded that, on the evidence, that conclusion was not made out and continued[38]:

> "Because a lid-opening device on the transfer mechanism operating during the loading cycle, no one has suggested that there is any – that that was known, with respect, before the 10th February '92. And what they say is, oh, there is no inventive step to recognise you could do that. *That is what the case comes down to.* And the objective evidence is against that because no one did it, no one thought of it, and the industry trends were away from the divided bin collection to separate collections." (emphasis added)

Conclusions

57 However that may be, and however unsatisfactory the judgments at trial and in the Full Court may be in some respects, the determinative consideration points to the dismissal of Firebelt's appeal. Both Dowsett J and the Full Court did state the appropriate principles and evidence was properly accepted which,

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**38** Trial transcript, 24 November 1998 at 643.

consistently with those principles, supported the revocation of the Petty Patent for want of inventiveness. We refer in particular to the evidence of Mr Ahrens in cross-examination, and to the trial judge's acceptance of his evidence.

58 The appeal should be dismissed with costs. The result is that the order for revocation of the Petty Patent stands. There is no occasion for this Court or for the Federal Court to consider any further grounds impeaching validity and the infringement action was properly dismissed at trial.