# Chapter 4  Claim Construction

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1. INTRODUCTION: “WHAT DOES THE CLAIM MEAN?”</td>
</tr>
<tr>
<td>4.2. HISTORY OF CLAIMING</td>
</tr>
<tr>
<td>4.3. HISTORY OF CLAIM CONSTRUCTION</td>
</tr>
<tr>
<td>4.3.1. The Two Part Test: Literal and Substantive Infringement</td>
</tr>
<tr>
<td>4.3.1.1. Literal Infringement</td>
</tr>
<tr>
<td>4.3.1.2. Substantive Infringement</td>
</tr>
<tr>
<td>4.3.2. Catnic</td>
</tr>
<tr>
<td>4.3.3. Improver</td>
</tr>
<tr>
<td>4.4. THE FIRST DUTY OF THE COURT</td>
</tr>
<tr>
<td>4.4.1. Claim Construction is the Job of the Court/Standard of Review</td>
</tr>
<tr>
<td>4.4.1.1. Claim Construction as a “question of law”</td>
</tr>
<tr>
<td>4.4.1.2. Factual Findings during Claim Construction</td>
</tr>
<tr>
<td>4.4.1.3. Deference suggested</td>
</tr>
<tr>
<td>4.4.2. Onus on construction</td>
</tr>
<tr>
<td>4.4.2.1. Patent as a “Regulation”</td>
</tr>
<tr>
<td>4.4.2.2. Markman Hearings</td>
</tr>
<tr>
<td>4.4.3. Use of Expert Witnesses</td>
</tr>
<tr>
<td>4.5. THE PRINCIPLES OF CLAIM CONSTRUCTION IN FREE WORLD AND WHIRLPOOL</td>
</tr>
<tr>
<td>4.6. “PURPOSIVE” CONSTRUCTION</td>
</tr>
<tr>
<td>4.6.1. Rejection of “Form and Substance” Approach</td>
</tr>
<tr>
<td>4.7. STEP 1: WHAT DO THE WORDS AND PHRASES IN THE CLAIM MEAN?</td>
</tr>
<tr>
<td>4.7.1. Pre-Construction Set-Up</td>
</tr>
<tr>
<td>4.7.1.1. The Relevant Date</td>
</tr>
</tbody>
</table>
4.7.1.2. The Skilled Reader: The person of Ordinary Skill in the Art (“POSITA”) ........................................... 42
4.7.1.3. Objective Attitude or Biased for Really Useful Inventions................................................................. 44
4.7.1.4. With an Eye on the Defendant’s Product .................................. 46
4.7.2. Use of the Patent Specification ............................................................................................................. 48
  4.7.2.1. The Patent Should be Read as a Whole ................................................................. 48
  4.7.2.2. Use of the Abstract ............................................................................................. 49
  4.7.2.3. Use of the Preamble to the Claim ........................................................................ 49
  4.7.2.4. Use of the Disclosure and Drawings ................................................................. 50
  4.7.2.5. Patentee as Lexicographer ............................................................................... 56
  4.7.2.6. Use of the Variance Clause ............................................................................... 56
  4.7.2.7. Dependant Claims, Claim Differentiation and Claim Consistency ......................... 57
  4.7.2.8. Other Independent Claims ................................................................................ 62
  4.7.2.9. “Comprising” or “Consisting of” ........................................................................ 63
  4.7.2.10. Dependent Claims: “… any of Claims …” ......................................................... 66
  4.7.2.11. Method Claims: Order of Steps ....................................................................... 67
4.7.3. Use of External Material ...................................................................................................................... 67
  4.7.3.1. Dictionaries ........................................................................................................ 68
  4.7.3.2. File Wrapper Estoppel ....................................................................................... 69
  4.7.3.3. Prior Art ........................................................................................................... 72
  4.7.3.4. Testimony of the Inventor ................................................................................ 72
  4.7.3.5. Other Patents of the same Owner ..................................................................... 73
  4.7.3.6. Other Canadian Decisions Construing the Same Patent ..................................... 74
  4.7.3.7. Foreign Decisions and Issue Estoppel ............................................................... 75
4.7.4. Use of Language: Synecdoche or Metonymy ...................................................................................... 77
  4.7.4.1. Examples of Synecdoche and Metonymy .......................................................... 79
4.8. STEP 2: IS A CLAIM ELEMENT “ESSENTIAL”? ...................................................... 82
  4.8.1. A Purposive Construction of Free World ........................................................................ 84
  4.8.2. Q. #1: The Obviously Superfluous Claim Element ................................................ 85
    4.8.2.1. The Presence of a Variant ................................................................................ 86
    4.8.2.2. Does the Variant Affect the Way the Invention Works? ................................ 87
      a) The Way the Invention Works .............................................................................. 88
b) The Way (the Invention + the Variant) Works .................... 88

4.8.2.3. Obvious Substitutability … At the Time the Patent was Published ............................................. 89

a) At the Time the Patent Application is Published ............... 91

4.8.3. Q. #2: Is the Element Essential, According to the Intent of the Inventor as Expressed or Inferred from the Claims? .............................................. 92

4.8.3.1. Adherence to the Language of the Claims .................. 94

4.8.3.2. The Inferred Intent of the Inventor .............................. 97

4.8.3.3. Most Claims Contain Only Essential Elements ............. 98

4.8.3.4. Words of Precision and the Precision of Words .......... 101

4.8.3.5. Numbers .................................................................. 102

4.8.3.6. “About” .................................................................... 103

4.8.3.7. “Substantially” .......................................................... 104

4.8.4. “Irrespective of its Practical Effect” ................................ 104

4.8.5. An Inconsistency in Free World .................................... 105

4.9. DEVELOPMENTS IN CLAIM CONSTRUCTION SINCE FREE WORLD AND WHIRLPOOL .................................................. 111

4.9.1. Subsequent Case Law ..................................................... 111

4.9.1.1. Back to Improver ....................................................... 112

4.9.2. The 2004 Kirin-Amgen Decision .................................... 115

4.9.3. The 2017 Actavis Decision ............................................. 119

4.10. “SWISS” TYPE CLAIMS ................................................... 124

4.11. CONCLUSIONS ............................................................. 125

4.12. APPENDIX A ............................................................... 126
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EXECUTIVE SUMMARY:

The question to be asked in construing a claim of a patent is:

“What would the claim have meant to a skilled reader as of the relevant date?” (Chapter 4.1).

Claim construction consists of the following:

1) The claim language must be read in an informed and purposive way. The words chosen by the inventor should be read in the sense the inventor is presumed to have intended, and in a way that is sympathetic to accomplishment of the inventor’s purpose expressed or implicit in the text of the claims (Chapter 4.6).

2) Read the patent as a whole, and construe the claims in the context of the patent (Chapter 4.7.2.1).

3) Read the patent as if you were the person or persons to whom it was addressed. (Chapter 4.7.1.2). If the disclosure expressly defines certain terms to have certain meanings, use those definitions when interpreting the claims (Chapter 4.7.2.5). Otherwise, a word or phrase should be given the ordinary meaning it would have had to such person or persons as of the relevant date, as used within the context of the patent. (Chapter 4.7).

4) The relevant date for construing the patent claims is either:

   a) the date of issuance of the patent, for patents applied for before October 1, 1989; or

   b) the date of publication of the patent application, for patents applied for on or after October 1, 1989 (Chapter 4.7.1.1).

5) To determine whether a claim element is essential or not, ask (Chapter 4.8.1):

   1) Was it obvious to the skilled reader at the relevant date that a variant of a particular element would not make a difference to the way in which the invention works? If modifying or omitting the element changes the way the invention works, and that was obvious at the relevant date, then the element is essential; (Chapter 4.8.2) or

   2) According to the intent of the inventor, expressed or inferred from the claims, was a particular element essential irrespective of its practical effect? If the element appears to have been intended to be essential, then the element is essential (Chapter 4.8.3).

If the claim element was not found to be essential under either Q1 or Q2, then the element is non-essential (Chapter 4.8.5). Both Catnic questions should be asked in order to determine non-essential features (Chapter 4.9.1.1).
Claim differentiation “claim differentiation” presumes that patent claims are drafted so as not to be redundant\(^1\) and that different claims have different scopes. If it is at all possible, each claim must be construed independently of the others and be given an effective and distinct meaning.\(^2\) Where a dependent claim differs from its parent claim by only a single feature, it is difficult to argue that the different feature has not been made essential to that claim.\(^3\) (Chapter 4.7.2.7)


\(^3\) Hayhurst; “The Art of Claiming and Reading a Claim” in *Patent Law of Canada* (1994), edited by G.F. Henderson, Q.C., at 198 quoted with approval in *Whirlpool Corp. v. Camco Inc.* (2000), 9 C.P.R. (4th) 129 (S.C.C.) per Binnie, J. at 163, para. 79, reconsideration / rehearing refused 2001 CarswellNat 283 (S.C.C.). See *Glaston Services Ltd. Oy v. Horizon Glass & Mirrors Ltd.*, 2010 FC 1191 (F.C.) per Mandamin J. where dependent claim 3 added the limitation of “said pneumatic spring is a pneumatic cylinder for carrying the roller between the rest position and the working position” (at para. 48), the Court held at para 65 that it was an essential element of that claim that the pneumatic spring is provided by a pneumatic cylinder “… since it is specifically claimed …”
4. **Claim Construction**

4.1. **INTRODUCTION: “WHAT DOES THE CLAIM MEAN?”**

Patents, and the lawsuits that result from them, have been described by embittered litigants as “… a world where men substitute words for realities and then talk about the words”⁴ and by judges as a forum where lawyers engage in “… the kind of meticulous verbal analysis in which lawyers are too often tempted by their training to indulge.”⁵

Whatever the case, the meaning given to a patent claim can be critical to the outcome of a patent lawsuit. When a patent claim’s validity is at issue, the patent owner may want the claim to be construed narrowly, so it does not include a certain piece of prior art that would render the claim invalid as claiming something that is not “new”. When infringement of the claim is at stake, the patent owner may want the claim to be construed broadly so as to encompass the defence t’s product or method.⁶

Claim construction is the term used to describe the process of construing the claims of a patent to give them meaning, which meaning is then compared to an allegedly infringing device or method to determine infringement or to prior art to determine validity. As will be seen in Chapter 5, there is no infringement if an essential element is missing or modified in an allegedly infringing product or method. There may still be infringement if non-essential elements are substituted or omitted.⁷

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⁴ “It is a long time since I have attended a gathering of the scientific world—a world in which I am at home — one in which men deal with realities and where truth is, in fact, the goal. For the past ten years I have been in exile from this world and an explorer in another — a world where men substitute words for realities and then talk about the words. Truth in that world seems merely to be the avowed object. Now I undertook to reconcile the objects of these two worlds and for a time I believed that could be accomplished. Perhaps I still believe it—or perhaps it is all a dream.”


Mr. Armstrong committed suicide by jumping out of his 13th floor apartment building in New York City on February 1, 1954. By 1967, Marion Armstrong, Edwin Armstrong’s widow, had won the last of all of Armstrong’s FM patent lawsuits.


⁶ In patent academic circles this has sometimes been referred to as the ‘Angora Cat’ (*Pfizer Canada Inc. v. Pharmascience Inc.*, 2013 FC 120, 111 C.P.R. (4th) 88 (F.C.) at para. 74 (per Hughes J.).)

Professor Mario Franzosi likens a patentee to an Angora cat. When validity is challenged, the patentee says his patent is very small: the cat with its fur smoothed down, cuddly and sleepy. But when the patentee goes on the attack, the fur bristles, the cat is twice the size with teeth bared and eyes ablaze.

The task of claim construction is to answer the question: “What does the claim mean?”. Purposive construction is essentially a contextual exercise with a primary focus on the language of the claims as viewed objectively by the notional person of skill.\(^8\)

Purposive construction of a claim is similar to construction of a statute. In *Re Rizzo & Rizzo Shoes Ltd.*, Justice Iacobucci, discussed statutory interpretation as contextual:

... Elmer Driedger in *Construction of Statutes* (2nd ed. 1983) best encapsulates the approach upon which I prefer to rely. He recognizes that statutory interpretation cannot be founded on the wording of the legislation alone. At p. 87 he states: "Today there is only one principle or approach, namely, the words of an Act are to be read in their entire context and in their grammatical and ordinary sense harmoniously with the scheme of the Act, the object of the Act, and the intention of Parliament."\(^9\)

The Supreme Court of Canada has phrased the question of claim construction as inventor-centric: What was the inventor intending to cover by the claims?

The words chosen by the inventor will be read in the sense the inventor is presumed to have intended.\(^10\)

Others, it is suggested more properly, center the question around the notional reader of the patent and ask: “What would a skilled reader have understood the inventor to have meant?”\(^11\)

The question can therefore be more fully phased as:

What would the claim have meant to a skilled reader as of the relevant date?

### 4.2. HISTORY OF CLAIMING

A patent’s claims define the monopoly in words and numbers. The ambit of the invention must be circumscribed by definite claims.\(^12\)

Section 27(4) of the Patent Act\(^13\) requires the patentee to end the patent with the claims:

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The specification must end with a claim or claims defining distinctly and in explicit terms the subject-matter of the invention for which an exclusive privilege or property is claimed.

The earliest patents, granted by Royal Prerogative, were given in name only and did not include any description. Patent specifications which described the article or method patented did not appear until the early eighteenth century and took “the form of statements enrolled with the Chancery Courts.” By the mid to late eighteenth century, the patentee had to make a sufficient statement of his conception as consideration for the monopoly.

Early patent specifications often ended with phrases such as “A device substantially as described herein” or with a listing of the features of the invention that the patentee considered new and inventive. For example, the first Canadian patent granted under the 1869 Patent Act, for a machine for measuring liquids, states at the end “What I claim as my invention is a fluid meter which operates and is so constructed as described.”

Claims, as a distinct part of the specification defining the monopoly, were not required at English common law. In 1877 in *Plimpton v. Spiller*, Lord James of the English Court of Appeal considered that the purpose of a claim was to disclaim that which was old:

> It is important to bear in mind that there is nothing in the Act or in the patent law which says anything about claims. A patentee gets a patent for his invention, and he is obliged to specify that invention in such a way as to shew to the public not only the mode of giving practical effect to that invention, but what the limits of the invention are for which his patent is taken out; and the real object of what is called a claim, which is now much more commonly put in than it used to be formerly, is not to claim anything which is not mentioned in the specification, but to disclaim something. A man who has invented something gives in detail the whole of the machine...

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in his specification. In doing that he is of necessity very frequently obliged to give details of the things which are perfectly known and in common use — he describes new combinations of old things to produce a new result, or something of that kind. Therefore, having described his invention, and the mode of carrying that invention into effect, by way of security, he says: “But take notice I do not claim the whole of that machine, I do not claim the whole of that modus operandi, but that which is new, and that which I claim is that which I am now about to state.” That really is the legitimate object of a claim, and you must always construe a claim with reference to the whole context of the specification.  

Similarly, Lord Blackburn from the House of Lords commented:

You may have a perfectly good specification without the word “claim” or the thing claim in it at all, but nevertheless a claiming clause is commonly inserted at the end of a patent, and that is of immense importance in enabling us to construe the specification and to see, looking at the whole specification, whether a thing is included in it or not.

In the U.S., the modern version of patent claims arose earlier than in England. In 1822, the U.S. Supreme Court in *Evans v. Eaton* stipulated that a patentee was required to describe in the specification explicitly “what the party claims as his own invention”.

The 1836 U.S. Patent Act adopted this rule by requiring that the inventor “shall particularly specify and point out the part, improvement, or combination, which he claims as his own invention or discovery.” The U.S. Patent Act of 1870 formally required that claims be a distinct section of the specification by stating in Section 26 that the inventor “... shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery...”

In the Canadian *Patent Act* passed in 1869, which was modeled after earlier US patent statutes, section 14 required the specification to “… state clearly and distinctly the contrivances and things which he claims as new, and for the use of which he claims an exclusive property and privilege.” The current language of section 27(4) was introduced in 1923:

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19 *Plimpton v. Spiller* (1877), 6 Ch. D. 412 (Eng. C.A.) at 426–427
20 *Dudgeon v. Thomson & Donaldson* (1877), 3 App. Cas. 34 (H.L.) at 54.
22 Donald S. Chisum; *Chisum on Patents*, vol. 3; New York: Matthew Binder & Co., Inc., 2000; at 8-6.
14(1) … It shall end with a claim or claims stating distinctly the things or combinations which the applicant regards as new and in which he claims an exclusive property and privilege.\textsuperscript{28}

Britain followed the U.S. and Canada in creating a statutory requirement for the patent specification to end with claims in 1883.\textsuperscript{29}

The enactment of s. 14(1) of the Patent Act in 1933 resulted in the claims being the focus of the analysis of the monopoly:

It follows that the nature of the invention protected by a patent and the extent of the monopoly thereby granted must be ascertained from the claims. The claims should be construed with reference to the specification and to the drawings, but, as pointed out by Lindley, M.R., in The Pneumatic Tyre Company Limited v. The Tubeless Pneumatic Tyre and Capon Headon Limited (1); whether the patentee has discovered a new thing or whether he has not, his monopoly is confined to what he has claimed as his invention.\textsuperscript{30}

The Canadian Patent Act was further amended to provide for the requirement of claims which must particularly, distinctly and in explicit terms set out the monopoly.

It did so in section 36(1)(e) and again in section 36(2). These provisions became sections 34(1)(e) and 34(2) in later versions:

34. Specification—(1). An applicant shall in the specification of his invention

(a) correctly and fully describe the invention and its operation or use as contemplated by the inventor;

(b) set out clearly the various steps in a process, or the method of constructing, making, compounding or using a machine, manufacture or composition of matter in such full, clear, concise and exact terms as to enable any person skilled in the art or science to which is appertains, or with which it is most closely connected, to make, construct, compound or use it;

The specification shall…end with a claim or claims stating distinctly the things or combinations which the applicant regards as new and in which he claims an exclusive property and privilege.

\textsuperscript{28} Merck & Co. v. Pharmascience Inc., 2010 FC 510 (F.C.) per Hughes J. at para. 51.

\textsuperscript{29} Merck & Co. v. Pharmascience Inc., 2010 FC 510 (F.C.) per Hughes J. at para. 51.

(c) in the case of a machine, explain the principle thereof and the best mode in which he has contemplated the application of that principle;

(d) in the case of a process, explain the necessary sequence, if any, of the various steps, so as to distinguish the invention from other inventions; and

(e) particularly indicate and distinctly claim the part, improvement or combination that he claims as his invention.

(2) Claims to be stated distinctly—The specifications referred to in subsection (1) shall end with a claim or claims stating distinctly and in explicit terms the things or combinations that the applicant regards as new and in which he claims an exclusive property or privilege. 31

The art of a claim drafter is to write a claim using as few claim elements as possible to define the invention with the least (or most efficient use of) words. To adopt de Saint-Exupery’s explanation of perfection in design:

“It seems that perfection is attained, not when you have nothing more to add, but when you have nothing more to take away.” 32

4.3. HISTORY OF CLAIM CONSTRUCTION

4.3.1. The Two Part Test: Literal and Substantive Infringement

It has been often stated in the case law that it is the duty of the court to interpret the claims, not to rewrite them. 33 Prior to the Supreme Court of Canada decisions in Whirlpool 34 and Free World 35 in 2000 however, there were essentially two lines of case law:


32 Il semble que la perfection soit atteinte non quand il n’y a plus rien à ajouter, mais quand il n’y a plus rien à retrancher. (Terre des Hommes, 1939). Or on a more pedestrian level as John Cleese (“Creativity in Management”, Pro-Arts, 1991) described the sculptor who when asked how he had sculpted a very fine elephant, explained that he’d taken a big block of marble and then knocked away all the bits that didn’t look like an elephant.


One way of dealing with the problem of variants is to employ broad descriptions of the elements so as to encompass possible variants … In my view, this approach does not respect the language of patent (sic) as it amounts to a recharacterization of the elements of the claim using language the inventor did not use when drafting his claims.

The Court of Appeal did not disturb this finding: Halford v. Seed Hawk Inc., 2006 FCA 275 (F.C.A.), (Sexton J.A., Sharlow & Malone JJ.A.)

1. one line of case law which required “all elements” of the claim to be considered relevant; and

2. another line of case law which did not require “all elements” of the claim to be needed, which analyzed the patent to determine the “pith and marrow” or “pith and substance” of the invention, effectively allowed a claim to be re-written so as to vary or ignore a claim element.

The earlier case law applied these two approaches in the context of determining patent infringement, describing them as two different forms of infringement:

1. Literal or textual infringement, where each and every one of the claim elements were found in the defendant’s device; and

2. Substantive infringement, or taking the “pith and substance” of the invention, where one or more of the claim elements were either missing from the defendants device or had been substituted by equivalent features which achieved the same purpose as what had been claimed.

Literal infringement was determined first, failing which, substantive infringement was examined.

Even as early as 1936, the Supreme Court of Canada in Smith Incubator Co. v. Seiling, recognized these two different approaches:

According to one of these [approaches] it is proper to consider what is “the pith and substance” or the “spirit” of the invention and to give effect to the patent accordingly. The other is to regard the claims as definitely determining the scope of the monopoly which the patent purports to grant and to give or refuse them effect according to the expressions they contain when these expressions are properly construed and their meaning determined. 36

Courts have acknowledged that the concept of “pith and substance” is illogical in view of the current-day concept of requiring inventors to clearly and decisively claim their invention and provide clear boundaries to patents:

Copying an invention by taking its “pith and marrow” without textual infringement of the patent is an old and familiar abuse which the law has never been powerless to prevent. It may be that in doing so, there is some illogicality, but our law has always preferred good sense to strict logic. The illogicality arises in this way. On the one hand the patentee is tied strictly to the invention which he claims and the mode of effecting an improvement which he says is his invention. Logically, it would seem to follow that if another person is ingenuous enough to effect that

improvement by a slightly different method, he will not infringe. But it has long been recognized that there “may be an essence or substance of the invention underlying the mere accident of form; and that invention, like every other invention, may be pirated by a theft in a disguised or mutilated form, and it will be in every case a question of fact whether the alleged piracy is the same in substance and effect, or is a substantially new or different combination”. (Per James L.G. in Clark-vs-Adie, [1873] L.R. 10 Ch. 667). It was in Clark-vs-Adie that Lord Cairns used the expression “pith and marrow of the invention”: [1877] 2 App.Cas.315, at 320.

In Whirlpool and Free World, rather than choosing between these mutually contradictory approaches, the Supreme Court of Canada endorsed a scheme for claim construction that incorporated both approaches. As discussed below, Whirlpool, Free World and the U.K. House of Lords decision that inspired them, Catnic, have merely replaced the old two part infringement test with a very similar form of two part claim construction test without resolving the inherent contradiction between the two.

4.3.1.1. **Literal Infringement**

In the older cases, if the words of the claim, upon a plain reading of them, aptly described the defendant’s device or process, then there was said to be “literal” or “textual” infringement.

Under literal infringement, in effect, all claim elements were considered to be essential to the invention and thus, the absence of any claimed element resulted in a finding of no literal infringement. It was therefore an “all elements” test.

All the claim elements were considered important because it was the claim that determined the scope of the monopoly:

In our view, the rule is that the claims must be regarded as definitely determining the scope of the monopoly, having regard to the due and proper construction of the expressions they contain.
The Court has analogized patent claims to “fences” and “boundaries”, “… giving the “fields” of the monopoly a comfortable pretence of bright line demarcation”.\(^\text{45}\)

By his claims the inventor puts fences around the fields of his monopoly and warns the public against trespassing on his property. His fences must be clearly placed in order to give the necessary warning and he must not fence in any property that is not his own. The terms of a claim must be free from avoidable ambiguity or obscurity and must not be flexible; they must be clear and precise so that the public will be able to know not only where it must not trespass but also where it may safely go.\(^\text{46}\)

One of the earliest and most often cited case on claim construction relating to literal infringement is \textit{Electrical & Musical Industries Ltd. v. Lissen Ltd.}\(^\text{47}\) where Lord Russell of Killowen held at page 39:

The function of the claims is to define clearly and with precision the monopoly claimed, so that others may know the exact boundaries of the area within which they will be trespassers. Their primary object is to limit and not to extend the monopoly. What is not claimed is disclaimed. The claims must undoubtedly be read as part of the entire document, and not as a separate document; but the forbidden field must be found in the language of the claims and not elsewhere. It is not permissible, in my opinion, by reference to some language used in the earlier part of the specification to change a claim which by its own language is a claim for one subject-matter into a claim for another and a different subject-matter, which is what you do when you alter the boundaries of the forbidden territory. A patentee who describes an invention in the body of a specification obtains no monopoly unless it is claimed in the claims. As Lord Cairns said, there is no such thing as infringement of the equity of a patent (\textit{Dudgeon v. Thomson}, L.R. 3 App. Cas. 34). [emphasis added]

A more recent example of a strict construction approach is \textit{Eli Lilly & Co. v. O’Hara Manufacturing Ltd.}\(^\text{48}\) where the patent licensee, Thomas Engineering, manufactured a


\(^{47}\) \textit{Electrical & Musical Industries Ltd. v. Lissen Ltd.} (1938), 56 R.P.C. 23 (U.K. H.L.). See also \textit{Canamould Extrusions Ltd. v. Driangle Inc.}, 2003 FCT 244 (Fed. T.D.) at para. 32, affirmed 2004 FCA 63 (F.C.A.) per Layden-Stevenson J.: “An inventor is not obliged to claim a monopoly on everything new, ingenious and useful disclosed in the specification. The usual rule is that what is not claimed is disclaimed.”

\(^{48}\) \textit{Eli Lilly & Co. v. O’Hara Manufacturing Ltd.} (1989), 26 C.P.R. (3d) 1 (Fed. C.A.) per Pratte J.A.
tablet coating machine that comprised a drum and a vacuum plenum claimed to be “flexibly biased against the drum”. Thomas Engineering later discovered that their device worked just as well with the plenum fixed in place and with the plenum close to but not touching the drum. O’Hara copied the model with the drum fixed in place and was sued for infringement. The issue was whether “flexibly biased against the drum” was an essential element of the claim at issue. The Federal Court of Appeal effectively asked, “How can a claim element not be considered essential when the patentee put it in the claim?”:

... the patentee is tied strictly to the invention which he claims and the mode of effecting an improvement which he says is his invention. 49

The Federal Court of Appeal held that, because the O’Hara device lacked the feature of “flexibly biasing the plenum against the drum”, there was no infringement. More importantly, the Court said that it could not rewrite the patent claim to omit the feature that was later discovered to be unnecessary.

A court must interpret the claims; it cannot redraft them. When an inventor has clearly stated in the claims that he considered a requirement as essential to his invention, a court cannot decide otherwise for the sole reason that he was mistaken. 50

4.3.1.2. Substantive Infringement

In contrast to literal infringement, substantive infringement was, in effect, infringing the equity of the patent by “unfairly” making a minor variation to the invention as “literally” claimed.

Non-essential elements could not only be varied and there still be infringement, but they could also be omitted altogether from the defendant’s product or method, and there still be infringement:

The principle is, indeed, no more than a particular application of the more general principle that a person who takes what in the familiar, though oddly mixed metaphor is called the pith and marrow of the invention is an infringer. If he takes the pith and marrow of the invention he commits an infringement even though he omits an unessential part. So, too, he commits an infringement if, instead of omitting an unessential part, he substitutes for that part a mechanical equivalent. 51

Infringing the pith and substance of the invention presupposed that a patent claim, as drafted, was narrower (by including more limitations) than the “pith and substance” of

the invention. The court, considering it unfair to permit a minor modification to avoid infringement, exercised its equitable jurisdiction to “stretch” the scope of the claim by allowing the claim to encompass articles or processes lacking the feature or having a modified feature (a variant). The “pith and substance” of the invention was, in effect, the invention as described by a hypothetical claim that was broader than what was written because one or more elements have been omitted or replaced with an equivalent.

The substantive infringement test was thus a “not all elements” test.

In Free World, Justice Binnie recognized the long history of “substantive infringement” under Canadian patent law but also recognized the harm it caused to predictability:

“It has been established, at least since Grip Printing and Publishing Co. of Toronto v. Butterfield (1885), 11 S.C.R. 291, that a patent owner has a remedy against an alleged infringer who does not take the letter of the invention but nevertheless appropriates its substance (or “pith and marrow”).

…”

“It is obviously an important public policy to control the scope of “substantive infringement”. A purely literal application of the text of the claims would allow a person skilled in the art to make minor and inconsequential variations in the device and thereby to appropriate the substance of the invention with a copycat device while staying just outside the monopoly. A broader interpretation, on the other hand, risks conferring on the patentee the benefit of inventions that he had not in fact made but which could be deemed with hindsight to be “equivalent” to what in fact was invented. This would be unfair to the public and unfair to competitors. It is important that the patent system be fair as well as predictable in its operation.”

One of the leading cases in Canada for infringement of the “pith and substance” of a patent is McPhar Engineering Co. v. Sharpe Instruments Ltd. In the McPhar case, the claims called for “... means to suspend said transmitting coil to hang freely in a vertical plane but orientable in azimuth...” and “... a transmitting coil suspended to hang vertically and orientable in azimuth”. Figure 1 from the patent is shown in Figure 1 below.

52 Free World Trust c. Électro Santé Inc. (2000), 9 C.P.R. (4th) 168 (S.C.C.) per Binnie, J. at 183, paras. 28 and 29. It should be noted that the Grip Printing case that Justice Binnie cited as authority for the proposition of “substantive infringement” predated the Canadian statutory requirement for a patent to end with claims.

In contrast, the defendant mounted its coil on top of a tripod, allowing free rotation about the azimuth (vertical axis).

The Court held that there was infringement under the “pith and substance” doctrine:

“Thus it is established law that if a person takes the substance of an invention he is guilty of infringement and it does not matter whether he omits a feature that is not essential to it or substitutes an equivalent for it.”

One of the most liberal examples of claim re-writing that occurred under the “pith and substance” approach occurred in Baxter Travenol Laboratories of Canada Ltd. v. Cutter (Canada) Ltd. The claims of the Baxter patent described the use of a “cannula” (which is a tube similar to a hypodermic needle) to puncture a membrane in a tube connecting two bags used for blood collection and allow fluid passage between the two bags. Figures 1 and 2 from the patent are shown in Figure 2 below.

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Instead of a cannula, the Cutter device used a vaned spike (like a tent peg) which punctured the membrane allowing the blood to flow around it.

The Court of Appeal held that there was infringement by the taking of the pith and substance of the patent:

It seems to me to be plain that the Cutter spike is, as found by the learned trial judge, the functional equivalent of the cannula referred to in claims 1, 2 and 4. Both are operated by the technician in the same way. Both rupture the membrane and establish a channel or channels through which blood or its components or anticoagulants can flow. Both do it in the same way. The evidence shows that the cannula ruptures the membrane by causing a transverse slit which permits the blood to flow around the outside wall of the cannula as well as through its lumen.

Moreover, both devices are in the tube and are unattached.

Further, in my view, the precise structure or configuration of the device to be used to rupture the membrane and establish a flow channel is not an essential element of the invention. As I see it, it would not matter whether a cannula or a vaned spike or a device of some other sort, such as, for example, a device of the like proportions with a semicircular cross section, were used or whether it would cut out in whole or in part or merely rupture the membrane. The substance of the invention, its “pith and marrow”, would be taken so long as the rupturing device had the essential elements of being in the tube and being unattached. I think therefore that the substance of the invention has been taken and that all the claims of the patent were infringed by the Cutter device.56

Obviously, a spike is not a tube. Had Baxter wanted to protect a spike, it could have — and should have — claimed something broader than a cannula that would have

encompassed a cannula, the vaned spike and “a device of like proportions with a semicircular cross-section” (e.g. a “membrane piercing means”).

4.3.2. **Catnic**

From the 1980’s until *Free World*[^57], Canadian patent claim construction has been strongly influenced by the *Catnic*[^58] case, a decision of the U.K. House of Lords, which, while purporting to “clarify” the old pith and substance infringement test, in fact, restated it in more tortured language as a claim construction method. This test has been difficult for later courts to apply.

In the *Catnic* case, Catnic’s patent claimed a lintel (the bar that spans the top of a window to support the weight of the bricks laid above it) having a rear wall member “extending vertically”. A cross-sectional view of the *Catnic* lintel from the *Catnic* patent drawings is shown in Figure 3 below. The rear wall is highlighted.

![Figure 3 Catnic Patent Drawing](image)

Hill’s lintel differed from what was illustrated in the *Catnic* patent in that the rear wall was inclined 6 or 8 degrees off vertical, as shown and highlighted in Figure 4 above. The sloping of the rear wall made the Hill lintels 0.6 to 1.2% weaker in their load bearing capacities than the *Catnic* lintels. Functionally, it was a negligible difference.

The trial judge, Whitford J., held that there was no literal infringement but there was infringement under the “pith and marrow” doctrine. The Court of Appeal held that the limitation that the rear member should “extend vertically” was an essential feature and, being changed or absent, there could be no infringement of the “pith and marrow”.

The House of Lords overturned and found there to be infringement. Lord Diplock attempted to put an end to the “pith and substance” infringement test and replace it with a supposedly more simple test of claim construction: “purposive construction”.


... both parties to this appeal have tended to treat ‘textual infringement’ and infringement of the ‘pith and marrow’ of an invention as if they were separate causes of action, the existence of the former to be determined as a matter of construction only and of the latter upon some broader principle of colourable invasion. There is, in my view, no such dichotomy; there is but a single cause of action and to treat it otherwise, particularly in cases like that which is the subject of the instant appeal, is liable to lead to confusion.59

Lord Diplock created a test to be used when considering whether a variant from what was (presumably) literally claimed,60 nevertheless should be considered to be within the claims:

My Lords, a patent specification is a unilateral statement by the patentee, in words of his own choosing, addressed to those likely to have a practical interest in the subject matter of his invention (i.e. “skilled in the art”), by which he informs them what he claims to be the essential features of the new product or process for which the letters patent grant him a monopoly. It is called “pith and marrow” of the claim. A patent specification should be given 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. The question in each case is: whether persons with practical knowledge and experience of the kind of work in which the invention was intended to be used, would understand that strict compliance with a particular descriptive word or phrase appearing in a claim was intended by the patentee to be an essential requirement of the invention so that any variant would fall outside the monopoly claimed, even though it could have no material effect upon the way the invention worked.


60 Ironically, at 244 of the Catnic decision, Lord Diplock appears to have concluded that Hill’s structure was included within the meaning of the term “extending vertically” as it would have been understood by a bricklayer, in the context of the Catnic patent:

It may be that when used by a geometry addressing himself to fellow geometers, such expressions descriptive of relative position as “horizontal”, “parallel”, “vertical” and “vertically” are to be understood as words of precision only; but when used in a description of a manufactured product intended to perform the practical function of a weight-bearing box girder in supporting courses of brickwork over window and door spaces in buildings, it seems to me that the expression “extending vertically” as descriptive of the position of what in use will be the upright member of a trapezoid-shaped box girder, is perfectly capable of meaning positioned near enough to the exact geometrical vertical to enable it in actual use to perform satisfactorily all the functions that it could perform if it were precisely vertical; and having regard to those considerations to which I have just referred that is the sense in which in my opinion “extending vertically” would be understood by a builder familiar with ordinary building operation. [emphasis added]

Therefore, arguably, the Hill device was within the claim language as it would have been read by a skilled bricklayer and was not a variant at all.
The question, of course, does not arise where the variant would in fact have a material effect upon the way the invention worked. Nor does it arise unless at the date of publication of the specification it would be obvious to the informed reader that this was so. Where it is not obvious, in the light of then-existing knowledge, the reader is entitled to assume that the patentee thought at the time of the specification that he had good reason for limiting his monopoly so strictly and had intended to do so, even though subsequent work by him or others in the field of the invention might show the limitation to have been unnecessary. It is to be answered in the negative only when it would be apparent to any reader skilled in the art that a particular descriptive word or phrase used in a claim cannot have been intended by the patentee, who was also skilled in the art, to exclude minor variants which, to the knowledge of both him and the readers to whom the patent was addressed, could have no material effect upon the way in which the invention worked.61

The Catnic test can be summarized as two questions that determine whether a claim element is essential:

1. Does the variant materially affect the way the invention works62 and was that obvious at the date of publication? If “Yes”, then the element is essential. If “No”, then ask question #2;

2. Would it be apparent to a skilled reader that the particular descriptive word or phrase cannot have been intended by the patentee to exclude the minor variants? (Or, phrasing the double negative as a positive: Did the patentee intend to include the variant?) If “Yes”, then the element is non-essential. If “No”, then it is essential.

As to the first question, since form follows function, any change to a claim element will, in most cases, in some way, change how the invention works – unless the element is irrelevant to the operation of the invention. What then is “material”? A more proper question to ask, therefore, is whether the change to the way the invention works was, for all practical purposes, negligible, as was the case in Catnic (0.6 to 1.2% weaker).

The second question of the Catnic test proved difficult to apply: its double-negative requires the Court to find no intention to exclude (or to not include) a variant. In reality, the patentee would have drafted the claim from the viewpoint of what was intended to be included rather than what was to be excluded. Non-included matters might not have


62 Which begs the question: What invention? The one as literally described by the claim? The preferred embodiment disclosed in the patent? Or a hypothetical embodiment that is described by the claim?
been considered at all.\textsuperscript{63} Matters that were not even considered by the patentee would be included because they could never have been intended to be excluded.

The \textit{Catnic} test (particularly with its double negative) became an inelegant rephrasing of the “pith and substance” test and presupposed that there was always a variant from what was claimed — that every article or method under consideration was different from what was claimed by virtue of a “variant”, making it difficult to apply as a general rule when no variants were present. \textsuperscript{64}

Although the \textit{Catnic} test was first recognized in \textit{Procter \& Gamble Co. v. Calgon Interamerican Corp.}\textsuperscript{65} and used subsequently in a few more cases, \textsuperscript{66} it was not until the O’Hara\textsuperscript{67} decision, that the Court fully adopted the \textit{Catnic} test into Canadian jurisprudence.

\textbf{4.3.3. \textit{Improver}}

In the \textit{Improver}\textsuperscript{68} case, decided shortly after the \textit{Catnic} case, Justice Hoffman rewrote the \textit{Catnic} test making it one that interpreted the language of the claim, permitting variants from the primary or acontextual meaning of terms rather than one permitting the omission or variation of terms:

\begin{quote}
If the issue was \textbf{whether a feature} embodied in an alleged infringement which fell outside the primary, literal or acontextual meaning of a descriptive word or phrase in the claim {[}“a variant”{]} was nevertheless within its language as properly interpreted, the court should ask itself the following three questions:

1. Does the variant have a material effect upon the way the invention works? If yes, then the variant is outside the claim. If no?

2. Would this (i.e. that the variant had no material effect) have been obvious at the date of publication of the patent to a reader of the patent skilled in the art? If no, the variant is outside the claim. If yes?
\end{quote}

\textsuperscript{64} As discussed below in Chapter 4.9.2, according the House of Lords in \textit{Kirin-Amgen} some 20 years later, the \textit{Catnic} questions should never have been applied generally, but only in special circumstances.
3. Would the reader skilled in the art nevertheless have understood from the language of the claim that the patentee intended that strict compliance with the primary meaning was an essential requirement of the invention? If yes, then the variant is outside the claim.

On the other hand, a negative answer to the last question would lead to the conclusion that the patentee was intending the word or phrase to have not a literal but a figurative meaning (the figure being a form of synecdoche or metonymy) denoting a class of things which include the variant and the literal meaning, the latter being the most perfect, best-known or striking example of the class. [emphasis added]

Hoffman, J.'s latter point appears to be a genus–species point whereby sometimes a general term is used to describe something specific, or vice versa, as discussed further in Chapter 4.7.4, below. A synecdoche is a figure of speech in which a part is made to represent the whole or vice versa, as in "Toronto won by six runs", meaning "Toronto's baseball team"), "wheels" refers to a car and "grey hair" refers to an older person. A metonymy is a word that is related to the thing being described, but is not necessarily part of it, as in "crown" refers to a monarch and "The pen is mightier than the sword" refers to written words and military force respectively. Using literary devices such as these is not recommended for claim drafting, however it should be noted that in Whirlpool, the term “vanes” in a prior art patent (a broad term) was construed to refer to mean "rigid vanes" (a narrow term), making the use of “vanes” in that context, a synecdoche.

It is curious that in Improver, when purportedly doing a purposive construction, Hoffman J. suggested first looking at the “primary, literal or acontextual meaning” of words in the claim and determining whether the variant fell outside that “literal” meaning. This appears to echo the older “literal infringement” test Catnic had tried to abandon and, as discussed below in Chapter 4.7, appears to be contrary to the Canadian principle of claim construction that words are to be given the ordinary meaning they would have to skilled readers of the patent.

4.4. THE FIRST DUTY OF THE COURT

The first duty of the Court in a patent trial is to construe the claims in issue in order to give them meaning and to determine their scope. [emphasis added]
It has always been a fundamental rule of claim construction that the claims receive one and the same interpretation for all purposes.\textsuperscript{72}

General rules of claim construction have been clearly established:

- Claims are to be construed before issues of infringement\textsuperscript{73} or validity\textsuperscript{74} are determined so that a consistent reading of the patent is applied to both; and
- Consideration of an allegedly infringing variant will only take place once the essential scope of the patent has been determined,\textsuperscript{75}

The latter rule may necessarily be breached under the current “essential element” test because, as discussed below in Chapter 4.7.1.4, the test requires, at least, a determination of what is the variant at issue (as found in the defendant’s device or process).

4.4.1. Claim Construction is the Job of the Court/Standard of Review

4.4.1.1. Claim Construction as a “question of law”

Although judges have repeatedly stated that claim construction is a “question of law”,\textsuperscript{76} they say so only in the sense that it is a matter for the judge to decide rather than the
trier of fact, such as a jury. This characterization doesn’t matter at a Canadian trial (as there are no jury trials in the Federal Court) but has significant implications on appeal, as an appellate court has different standards of review for findings of fact and findings on questions of law.

Because the construction of a claim is a “question of law”, the standard of review is whether the claim construction by the lower court was “correct”, as the Court of Appeal is equally able to determine questions of law.77

However, little or no “law” per se, is involved in claim construction. It is not anything any judge learned how to do in law school. Rather, the Court must decide, as discussed below, what a person skilled in the art of the patent would have understood the claim to mean at the relevant date.

Because claim construction is treated as a question of law, direct evidence as to the meaning of the claims is inadmissible.78 Experts are not permitted to usurp the functions of the trier of fact.79 The closer the expert’s opinion approaches an opinion on the ultimate issue, the stricter is the application of these principles.80 However, some judges allow evidence to be given on an ultimate issue but give that evidence whatever weight they consider appropriate.81

4.4.1.2. Factual Findings during Claim Construction

In construing a patent, the Court puts itself in the position of a hypothetical person in a hypothetical factual scenario rather than determining a “legal question” requiring statutory interpretation or analysis of jurisprudence. This task usually constitutes about 98% of the exercise of the court’s effort in claim construction: “What would the POSITA understand the terms of the claim to mean?” It is suggested that, if any “legal expertise” is involved in claim construction, it is for the judge to determine whether the interpretation of the terms of the claim by the POSITA needs to be modified by the judge because of the way the terms are used in the context of the patent.

Factual findings are subject to a different standard of review on appeal: in order for the Court of Appeal to intervene, there must have been a “palpable and overriding error”.


81 Xerox of Canada Ltd. v. IBM Canada Ltd. (1977), 33 C.P.R. (2d) 24 (Fed. T.D.) per Collier, J. at 36–37; referred to recently by Justice Hughes in Pason Systems Corp. v. Canada (Commissioner of Patents), 2006 FC 753 (F.C.) at para. 27 as a “Jenny Craig” order in that it put it all in, “subject to weight”.

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Palpable and overriding error is a highly deferential standard of review.\textsuperscript{82} “Palpable” means an error that is obvious. “Overriding” means an error that goes to the very core of the outcome of the case.\textsuperscript{83}

“When arguing palpable and overriding error, it is not enough to pull at leaves and branches and leave the tree standing. The entire tree must fall.”\textsuperscript{84}

Appellate review is only concerned with legal errors that bear on the outcome of the case. If the error would not have affected the Federal Court’s judgment, the appeal must be dismissed. An inconsequential legal error will not result in the appeal being allowed.\textsuperscript{85}

Construction, therefore, turns heavily on the evidence of a person skilled in the art “POSITA”).\textsuperscript{86}

The judge’s assessment of the expert evidence as well as his or her factual conclusions as to the state of the art are factual findings that will not be reversed on appeal absent palpable and overriding error.\textsuperscript{87} The Federal Court is entitled to deference in its


appreciation of the evidence, particularly the expert evidence, that affects that construction. Where the expert evidence affects the Federal Court’s construction and particularly where the Federal Court has preferred the testimony of one expert over that of others, in order to prevail on appeal an appellant must show that the Federal Court has committed “palpable and overriding error”.

4.4.1.3. Deference suggested

Interestingly, in January, 2015 in *Teva v. Sandoz* the US Supreme Court decided that subsidiary factual conclusions that underpin claim construction rulings should be reviewed on the basis of whether there had been made a “clear error”, echoing the previous Canadian principle.

Canadian courts took notice and have suggested a similar approach.

In *Cobalt* and *ABB Inc.*, Justice Stratus commented that the time may have come to reconsider the view that appellate courts are to review patent construction on the basis of correctness and offered observations for the Supreme Court of Canada to consider in a future case. The rationales supporting an appeal court adopting a deferential approach to the construction of patents where expert evidence has played a significant role seemed overwhelming to the court. The correctness review is not required for consistency and certainty. The court asked how the appeal court was supposed to


91 Such deference need not be given where there are not factual findings that underlie the claim construction: *Shire Development, LLC et al v. Watson Pharmaceuticals et al*, 2013-1409 C.A.F.C. per Hughes C.J.


“cleave off those aspects of claim construction that flow from the trial judge’s appreciation of expert evidence from the words of the claim per se?”.

In Apotex Inc. v. Astrazeneca Canada Inc., Justice Gauthier held that the Federal Court is entitled to deference in respect of its appreciation of the expert evidence as to how a person of ordinary skill in the art would understand specific wording.

If Canadian courts decide to consider some aspects of claim construction as findings of facts, it is respectfully suggested that the judge:

1. Make factual findings as to what the terms in the claims would have meant to the POSITA at the relevant time, based on expert testimony; and then
2. Make a legal conclusion as to whether the terms as used in the context of the patent require the court to change the expert’s interpretation so as to give the claim terms a proper legal construction.

On appeal, the former (factual) conclusions would be subject to deference and to a “palpable or overriding error” standard on appeal; the latter (legal) conclusion would not be subject to deference and would be subject to a correctness standard as being a “question of law”.

4.4.2. Onus on construction

Onus does not come into play at the construction stage of a patent proceeding.

In Patent Medicine Notice of Compliance (“PM(NOC)”) proceedings, the second party (the generic) must set forth in the Notice of Allegation “the legal and factual basis” for the para. 5(1)(b) allegation and do so in a sufficiently complete manner as to enable the patentee to assess its course of action in response to the allegation. That sometimes includes a pleaded construction for the claims of the patent.

The onus is on the party bringing the application to prove infringement and in one case, apparently, the parties agreed that the Applicant had the burden of proving infringement

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101 In Merck & Co. v. Pharmascience Inc., 2010 FC 510 (F.C.) per Hughes J. at paras. 97 and 99, reference is made to Pharmascience characterizing a Swiss-type claim in issue to be directed not to the manufacture of a tablet but rather to a particular dosage.
and construction of the patent on a balance of probabilities on the one hand\(^{102}\), but, on the other hand, held that the Applicant had the onus of proving that the claim construction pleaded in the opposing party’s Notice of Allegation was not justified.\(^{103}\) The more precise statement is probably that the onus is on the Applicant to show that the allegation of non-infringement is not justified and thus the Applicant must prove infringement, but that claim construction is up to the Court.

At a Canadian patent trial where there are no juries, the judge hears all the evidence at trial and determines claim construction after hearing final argument and renders the construction for the first time in the Reasons for Judgment, usually issued several weeks or months after trial.

**4.4.2.1. Patent as a “Regulation”**

It has been said that the Court should construe a patent just as it would construe any other document such as a written contract,\(^{104}\) However, Justice Binnie considered a patent to be a regulation:

“In fact, a patent is more than just “other writing”. The words of the claims are initially proposed by the applicant, but they are thereafter negotiated with the Patent Office, and in the end are accepted by the Commissioner of Patents as a correct statement of a monopoly that can properly be derived from the invention disclosed in the specification. When the patent issues, it is an enactment within the definition of “regulation” in s. 2(1) of the Interpretation Act, R.S.C., 1985, c.I-21…

A patent must therefore be given such interpretation according to s. 12 of the Interpretation Act “as best ensures the attainment of its objects”.\(^{105}\) Justice Locke has noted however that ss. 3(1) of the Interpretation Act which provides that its provisions apply “unless a contrary intention appears.”\(^{106}\)

In a formal sense, although a patent is a “law” under the Interpretation Act,\(^{107}\) the Federal Court of Appeal has drawn a distinction between “letters patent” (which is the

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\(^{102}\) In *Merck & Co. v. Pharmascience Inc.*, 2010 FC 510 (F.C.) per Hughes J. at paras. 97 and 99, reference is made to Pharmascience characterizing a Swiss-type claim in issue to be directed not to the manufacture of a tablet but rather to a particular dosage.


\(^{106}\) *Shire Canada Inc. v. Apotex Inc. et al*, 2016 FC 382 (F.C. per Locke J.) at paras. 76 and 101.

certificate bearing the seal of the Canadian Intellectual Property Office issued to an inventor upon issuance of the patent) and the specification (which is not to be considered “letters patent”). Thus, the Federal Court of Appeal concludes, the specification may then be reviewed on the basis of palpable and overriding error when they are heavily dependent on expert testimony, as they usually are. With respect, this view probably goes too far the other way, ignoring the fact that, sometimes, a legal interpretation of the definition of terms provided by the expert is required in the context of the patent and the claims (see above section 4.4.1.1). In any case, the specification remains a legal document, but even legal documents may be subject to review on a deferential basis.

4.4.2.2. Markman Hearings

In U.S. patent cases, since the mid-1990’s, claim construction has been done in a pretrial proceeding called a “Markman hearing”. It was not until Markman v. Westview Instruments Inc., that the United States Supreme Court ruled that claim construction is a matter of law that should be decided by a judge alone. This conclusion paved the way for “Markman hearings” where the judge construes the claims of a patent without any consideration of infringement or validity issues. The interpretation however, is not necessarily determined once and for all: the judge may vary the interpretation given to the claims as further evidence comes forward as the case approaches trial.

Although a Markman hearing should resolve claim construction issues early in an action, the lack of finality of the decision and therefore, the lack of rights of appeal from Markman hearing decisions until after a full trial on the merits and a high rate of erroneous Markman decisions make the process less efficient than it could be.

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111 Markman v. Westview Instruments Inc., 517 U.S. 370 (U.S. Pa. S.C., 1996). Under U.S. law, questions of law can be considered by a judge alone as they are not caught by the Seventh Amendment to the United States Constitution which codifies the right to a trial by jury for certain civil actions.

112 U.S. Const. amend. VII.
In May 2003, the Federal Court Trial Division’s decision in *Realsearch Inc. v. Valon Kone Brunette Ltd.*\(^{113}\) entertained a motion akin to the American *Markman* hearing. The motion was based on Rule 107(1) of the Federal Court Rules, 1998, which states that “the court may, at any time, order the trial of an issue or that issues in a proceeding be determined separately.”\(^{114}\)

Although the trial level judge held that the preliminary determination of the meaning of certain phrases in the patent claim would expedite litigation and lead to a greater number of settlements,\(^{115}\) the Federal Court of Appeal held that there was insufficient evidence to suggest that a *Markman*-type preliminary determination would save time or money in that case\(^{116}\) and allowed the appeal, declaring that they would not be adopting a *Markman*-type proceeding into Canadian law.\(^{117}\) The court cautioned against the use of pre-trial determinations by quoting from a House of Lords decision: “preliminary points of law are too often treacherous short cuts. Their price can be delay and expense.”\(^{118}\) The Federal Court of Appeal expressed concern that the appellant may be at a disadvantage by not having the whole action tried at the same time in front of the same judge, while somewhat contradictorily, acknowledged that claim construction must be done without an eye to the infringing article.\(^{119}\) Additionally, the appeal judges raised the concern that a delay in the trial on the merits may result in a loss of important evidence due to memory loss or death.\(^{120}\)

It is important to note that the court did not completely close the door to the possibility of such a proceeding under different facts:

> It is not to suggest that a Markman-type order would not be available in any circumstances under the rule which, admittedly, is broadly phrased.\(^{121}\)

### 4.4.3. Use of Expert Witnesses

The task of the Court is to construe the claims of the patent with the aid of expert witnesses.\(^{122}\) Patents are to be read through the eyes of the skilled reader.\(^{123}\) The

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\(^{114}\) S.O.R./1998-106, s. 107(1).


skilled reader approaches the patent with an appreciation of the common general knowledge in the art to which the patent relates. This is not usually within the purview of the judge, so almost always, the parties adduce evidence to explain how the skilled reader would read and understand the patent.

The role of an expert is to assist in putting the Court in the position of a person skilled in the art as of the relevant time.

It is a matter of accepted law that the task of construing a patent’s claim lies within the exclusive domain of the trial judge. In strict legal theory it is the role of expert witnesses, that is those skilled in the art, to provide the judge with the technical knowledge necessary to construe a patent as though he or she were so skilled. Where the experts disagree, it is incumbent on the trial judge to make a binding determination.

To the extent that the claim is now to be “construed”, that is the function of the Court alone. Experts may assist in two ways; first, they may inform the Court as to the knowledge that a person skilled in the art would have had at the relevant time, so as to bring that knowledge to bear reading both the description and the claims; second, an expert may assist in explaining any technical terms not within the experience expected of a Court. Thus, while construction is for a Court alone, the Court may have to make certain factual findings as to the knowledge of a person skilled in the art. The

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126 Haltford v. Seed Hawk Inc., 2006 FCA 275, 54 C.P.R. (4th) 130 (F.C.A.) at para. 11. See also Eurocopter c. Bell Helicopter Textron Canada Ltée, 2010 FC 1328 (F.C.) per Martineau J. at para. 16: “...the expert must be able to give evidence about what an appropriately skilled person would have known and understood at the time in question.”

findings of the Court in this respect may best be considered as findings of mixed fact and law.\(^{128}\)

The decisions from the Supreme Court of Canada regarding expert testimony on the ultimate issue of claim construction are somewhat contradictory:

(a) \textit{R. v. Mohan},\(^{129}\) stated that although there was once a general rule that excluded expert evidence in respect of the ultimate issue, the general rule is no longer of general application;\(^{130}\) however

(b) In \textit{Whirlpool}, the Supreme Court held that it is not the function of the expert to construe the claims but rather to put the trial judge in the position of being able to do so in a knowledgeable way.\(^{131}\)

In \textit{Mohan},\(^{132}\) the Supreme Court of Canada established that the admissibility of expert evidence depends on four criteria:

(a) relevance — Does it relate to a fact in issue so as to establish it? Is its value worth what it costs in terms of its impact on the trial process? Is its probative value outweighed by its prejudicial effect? Will it assist the fact finder or confuse and confound? Will it be objectively assessed or overwhelm with “mystic infallibility”?\(^{133}\)

(b) necessity in assisting the trier of fact — Can the expert furnish the Court with scientific information outside the judge’s experience and knowledge? Will it help the judge appreciate the technical matters in issue? Would the judge be unlikely to form a correct judgment without the assistance?\(^{134}\)

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\(^{128}\) \textit{Merck & Co. v. Pharmascience Inc.}, 2010 FC 510 (F.C.) per Hughes J. at para. 70.


\(^{133}\) \textit{R. v. Mohan}, [1994] 2 S.C.R. 9 (S.C.C.) per Sopinka J. at 20–23. In \textit{Eurocopter c. Bell Helicopter Textron Canada Ltée}, 2010 FC 1328 (F.C.) per Martineau J. at paras. 9–10, the court considered evidence from a retired Patent Office Examiner to be irrelevant when it dealt with the evaluation that the patent-in-issue would have undergone during the examination process and how a patent examiner would respond to the Defendant’s invalidity argument.

\(^{134}\) \textit{R. v. Mohan}, [1994] 2 S.C.R. 9 (S.C.C.) per Sopinka J. at 23–25. In \textit{Eurocopter c. Bell Helicopter Textron Canada Ltée}, 2010 FC 1328 (F.C.) per Martineau J. at paras. 9–10, the court found that evidence relating to the patent examination process and the file wrapper was unnecessary.
the absence of any exclusionary rule separate and apart from the opinion rule itself;\(^\text{135}\) and

(a properly qualified expert — someone who has acquired special or peculiar knowledge through study or experience in respect of the matters on which he or she undertakes to testify.\(^\text{136}\)

Judges should not blindly adopt an expert’s conclusion.\(^\text{137}\) Adopting in whole the construction of a patent proposed by one party’s experts cannot be said to be a reviewable error.\(^\text{138}\) It is open to a trial judge to prefer certain evidence and that weighting can only be set aside on the basis of palpable and overriding error.\(^\text{139}\)

Sometimes judges can give the patent a construction different from that put forward by the parties\(^\text{140}\) or without relying on the experts.\(^\text{141}\) A judge is not bound by the expert’s opinion.\(^\text{142}\) The Federal Court is not obligated to accept evidence provided that its


\(^\text{136}\) \textit{R. v. Mohan}, [1994] 2 S.C.R. 9 (S.C.C.) per Sopinka J. at 25. \textit{Eli Lilly & Co. v. Apotex Inc.}, 2009 FC 991 (F.C.) per Gauthier J. at para. 94, affirmed 2010 CarswellNat 5866 (F.C.A.), leave to appeal refused 2011 CarswellNat 1368 (S.C.C.), additional reasons 2011 CarswellNat 4151 (F.C.): They should establish in their affidavit the basis on which they are qualified to provide evidence on how a person skilled in the art at the relevant time would construe the patents and what common general knowledge these person would possess.


rationale is explicit or evident from its reasons viewed in light of the record and is acceptable.143

Where judges have allowed experts to give opinions on virtually every issue, including infringement or validity, they then give that evidence whatever weight they consider appropriate.144

Although experts have been prevented from giving opinion evidence on construing the claims of the patent,145 on the issues related to claim construction, experts have been permitted to give evidence on the following issues:

• prior art and the knowledge in the industry:
  ○ the state of the prior art146 and the state of knowledge in the craft, art or science to which the specification is directed.147 The evidence need not come from a person who was skilled in the art at the time so long as the witness is now in a position to give evidence about what the appropriately skilled person would have known and understood at the relevant time;148


144 Xerox of Canada Ltd. v. IBM Canada Ltd. (1977), 33 C.P.R. (2d) 24 (Fed. T.D.) per Collier, J. at 36–37; referred to recently by Justice Hughes in Pason Systems Corp. v. Canada (Commissioner of Patents), 2006 FC 753 (F.C.) at para. 27 as a “Jenny Craig” order in that it put it all in, “subject to weight”.

145 Baxter Travenol Laboratories of Canada Ltd. v. Cutter (Canada) Ltd. (1983), 68 C.P.R. (2d) 179 (Fed. C.A.) per Thurlow C.J. at 193, leave to appeal refused 1983 CarswellNat 825 (S.C.C.); Amfac Foods Inc. v. Irving Pulp & Paper Ltd. (1984), 80 C.P.R. (2d) 59 (Fed. T.D.) at pp. 82-83, affirmed (1986), 12 C.P.R. (3d) 193 (Fed. C.A.) per Strayer J.; Halford v. Seed Hawk Inc. (2001), 16 C.P.R. (4th) 189 (Fed. T.D.) per Pelletier J. at 195, para. 23. However, see Jay-Lor International Inc. v. Penta Farm Systems Ltd., 2007 FC 358, 59 C.P.R. (4th) 228 (F.C.) per Snider J. at para. 58 where the Court accepted the evidence of an expert witness as to what elements were essential to the invention, which evidence was not disputed by the other party’s expert.


147 Xerox of Canada Ltd. v. IBM Canada Ltd. (1977), 33 C.P.R. (2d) 24 (Fed. T.D.) per Collier J. at 32; Calgon Carbon Corp. v. North Bay (City), 2006 FC 1373, 56 C.P.R. (4th) 281 (F.C.) per Mosley J. at para. 84, affirmed 2008 CarswellNat 535 (F.C.A.); Merck & Co. v. Pharmascience Inc., 2010 FC 510 (F.C.) per Hughes J. at para. 70:

Experts may assist in two ways; first, they may inform the Court as to the knowledge that a person skilled in the art would have had at the relevant time, so as to bring that knowledge to bear reading both the description and the claims; second, an expert may assist in explaining any technical terms not within the experience expected of a Court.

Eurocopter c. Bell Helicopter Textron Canada Ltée, 2010 FC 1328 (F.C.) per Martineau J. at para. 16:

...the expert must be able to give evidence about what an appropriately skilled person would have known and understood at the time in question.

what the prior art references (including prior patents) meant or revealed to them;\textsuperscript{149}

the main innovations of the invention.

... a statement as to the innovative element of a device or patent ...falls into the same category as expert opinion on anticipation or obviousness. It is a comment about the state of the prior art.\textsuperscript{150}

What words or phrases in the patent mean to the expert and those in the industry (if they cannot be understood by reading the specification\textsuperscript{151}):

the explanation of technical terms, words and phrases;\textsuperscript{152}

The judge is entitled to the assistance of experts in understanding the terms used in the patent as well as the underlying science. But that is where it ends. The judge must construe the patent and until he does, there is no basis upon which an expert can offer an opinion as to infringement since the expert cannot substitute his view of the proper construction of the patent for the judge’s.\textsuperscript{153}

what the patent specification meant to the expert?\textsuperscript{154} (In other words, what would the words in the claims or specification have meant to the expert at the date when the claims are to have been construed?)\textsuperscript{155}

Expert evidence as to the state of the art at a particular point in time need not come from a person who has the requisite skills. It is sufficient if the witness is in a position to give evidence about what the appropriately skilled person would have known and understood at the relevant time.


Xerox of Canada Ltd. v. IBM Canada Ltd. (1977), 33 C.P.R. (2d) 24 (Fed. T.D.) per Collier J. at 36.


Xerox of Canada Ltd. v. IBM Canada Ltd. (1977), 33 C.P.R. (2d) 24 (Fed. T.D.) per Collier J. at 32.


Xerox of Canada Ltd. v. IBM Canada Ltd. (1977), 33 C.P.R. (2d) 24 (Fed. T.D.) per Collier J. at 36.

• **What the patent teaches:**
  ○ the understanding which the expert has of the teaching of the patent.\(^\text{156}\)
  ○ What a person skilled in the art would have understood from reading the patent at the relevant time.\(^\text{157}\) An expert need not be alive or grown up at the time of the relevant event or time period in order to express an opinion on the past.\(^\text{158}\)

• **The effect of the variant on the way the invention works:**
  ○ Comparing how the invention works compared to the defendant's device—an assessment of mechanical equivalency (which is not relevant to the question of infringement);\(^\text{159}\)
  ○ 1. Does the variant have a material effect on the way the invention works?; and 2. Would an affirmative answer to Q. 1 have been obvious to a person skilled in the art at the date of publication? As the first question in *Catnic* and the first two questions of the trial level test in *Improver*, these are questions of fact which do not primarily involve questions of construction and are used to provide the factual background against which the specification must be construed;\(^\text{160}\)
  ○ Evidence about the technical inter-relationship between rival claim meanings and the teaching of the specification, to explain the effect of rival claim constructions and whether under a particular


construction, the patent would achieve the patent’s technical objective.\textsuperscript{161}

Relevant to the question of infringement:

- juxtaposing in two columns, without comment, the claims of the patent and the features of the defendant’s device which may have some relationship to the element described in the claim;\textsuperscript{162}

- making reference to the “essence of the invention” making a list to enumerate the essential features of the claims so as to decide the issue of infringement.\textsuperscript{163}

Because the role of the expert is to assist the trial judge to interpret the patent claims in a knowledgeable way, it is dubious that the direction on the law of claim construction provided to an expert by a lawyer will result in an opinion that is to be preferred to the opinion of an equally qualified expert who was not been given such a direction.\textsuperscript{164}

4.5. THE PRINCIPLES OF CLAIM CONSTRUCTION IN FREE WORLD AND WHIRLPOOL

In 2000, Mr. Justice Binnie of the Supreme Court of Canada restated the test for claim construction under Canadian patent law in two cases: \textit{Free World}\textsuperscript{165} and \textit{Whirlpool}.\textsuperscript{166}

The \textit{Free World} test was based upon the tests in \textit{Catnic}\textsuperscript{167} and \textit{Improver}\textsuperscript{168} whose principles were cited with approval in \textit{Free World}.\textsuperscript{169} Justice Binnie repeated the

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{161} \textit{Shire Biochem Inc. v. Canada (Minister of Health)}, 2008 FC 538, 67 C.P.R. (4th) 94 (F.C.) per Hughes J. at para. 10.
\item \textsuperscript{162} \textit{Halford v. Seed Hawk Inc.} (2001), 16 C.P.R. (4th) 189 (Fed. T.D.) per Pelletier J. at 196, para. 27.
\item \textsuperscript{163} \textit{Halford v. Seed Hawk Inc.} (2001), 16 C.P.R. (4th) 189 (Fed. T.D.) per Pelletier J. at 196–197, paras. 27 and 29.
\item \textsuperscript{164} \textit{Janssen-Ortho Inc. v. Canada (Minister of Health)}, 2010 FC 42 (F.C.) per Zinn J. at para. 109, additional reasons 2010 CarswellNat 2356 (F.C.).
\item \textsuperscript{165} \textit{Free World Trust c. Électro Santé Inc.} (2000), 9 C.P.R. (4th) 168 (S.C.C.) per Binnie, J.

\begin{quote}
My Lords, a patent specification is a unilateral statement by the patentee, in words of his own choosing, addressed to those likely to have a practical interest in the subject matter of his invention (i.e. “skilled in the art”), by which he informs them what he claims to be the essential features of the new product or process for which the letters patent grant him a monopoly. It is called “pith and marrow” of the claim. A patent specification should be given 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. The question in each case is: whether persons with practical knowledge and experience of the kind of work in which the invention was intended to be used, would understand that strict compliance with a particular descriptive word or phrase appearing in a claim was intended by the patentee to be an essential requirement of the invention so that any
\end{quote}

\end{itemize}
\end{footnotesize}
language of Lord Diplock in *Catnic* that there are not two tests for infringement, literal and "pith and substance", but merely one based upon a "purposive construction":

There appears to be a continuing controversy in some quarters as to whether there are two approaches to infringement (literal and substantive) or only one approach, namely infringement of the claims as written but "purposively" construed.

In the two-step approach, the court construes the claims and determines whether the device accused of infringement has literally taken the invention. If not, the court proceeds to the second step of asking itself whether "in substance" the invention was wrongfully appropriated. On occasion, treatment of the second step in specific cases has attracted criticism as being subjective and unduly discretionary. Once the inquiry is no longer anchored in the language of the claims, the court may be heading into unknown waters without a chart. The one-step approach has to build flexibility and common sense into the initial claims construction because there is no second step. \(^{170}\)

In *Free World* Justice Binnie put forward several principles of claim construction that he used to reject the appellant’s arguments.\(^ {171}\) These principles can therefore be considered as the Supreme Court of Canada’s latest statement of the test for claim construction and infringement:

(a) The *Patent Act* promotes adherence to the language of the claims.

(b) Adherence to the language of the claims in turn promotes both fairness and predictability.


\(^{169}\) *Free World Trust c. Électro Santé Inc.* (2000), 9 C.P.R. (4th) 168 (S.C.C.) per Binnie, J. at 184, para. 31


(c) The claim language must, however, be read in an informed and purposive way.

(d) The language of the claims thus construed defines the monopoly. There is no recourse to such vague notions as the “spirit of the invention” to expand it further.

(e) The claims language will, on a purposive construction, show that some elements of the claimed invention are essential while others are non-essential. The identification of elements as essential or non-essential is made:

(i) on the basis of the common knowledge of the worker skilled in the art to which the patent relates;

(ii) as of the date the patent is published;

(iii) having regard to whether or not it was obvious to the skilled reader at the time the patent was published that a variant of a particular element would not make a difference to the way in which the invention works; or

(iv) according to the intent of the inventor, expressed or inferred from the claims, that a particular element is essential irrespective of its practical effect;

(v) without, however, resorting to extrinsic evidence of the inventor’s intention.

(f) There is no infringement if an essential element is different or omitted. There may still be infringement, however, if non-essential elements are substituted or omitted.\(^{172}\)

These “principles” fall clearly into two sets:

• those which stress the importance of the language of the claims ((a) to (d)); and

• those which deal with essential and non-essential elements ((e)(iii) and (iv)).

In this respect, the Free World principles are a concatenation of the “literal” and “pith and substance” approaches. Justice Binnie clearly intended to adopt an approach which included both previous approaches:

In *Catnic*, as in the earlier case law, the scope of the monopoly remains a function of the written claims but, as before, flexibility and fairness is achieved by differentiating the essential features (“the pith and marrow”) from the unessential, based on a knowledgeable reading of the whole specification through the eyes of the skilled addressee rather than on the basis of “the kind of meticulous verbal analysis in which lawyers are too often tempted by their training to indulge” (*Catnic*, supra, p. 243).

### 4.6. “PURPOSIVE” CONSTRUCTION

The overarching direction from *Free World* is that the claims are to be given a “purposive construction”: The claim language must be read in an informed and purposive way.

Purposive construction is not unique to patent law and has had a long history in contract law and statutory construction. Purposive construction tries to interpret a contract or statute in a manner consistent with the intention of its drafters as inferred from the contract or statute itself and its contextual setting. Words in the contract or statute are to be given their natural and ordinary meaning — one that is consistent with common sense.

Mr. Justice Binnie succinctly described the act of claim construction in *Free World*:

> The words chosen by the inventor will be read in the sense the inventor is presumed to have intended, and in a way that is sympathetic to

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177 With respect to statutes: Elmer Driedger, *Construction of Statutes*, 2nd ed. (Toronto: Butterworths, 1983) at 87:

> Today there is only one principle or approach, namely, the words of an act are to be read in their entire context and in their grammatical and ordinary sense harmoniously with the scheme of the act, the object of the act, and the intention of parliament.

As for a contract, the question is how it would be interpreted by a reasonable person: *Investors Compensation Scheme Ltd. v. West Bromwich Building Society* (1997), [1998] 1 W.L.R. 896 (U.K. H.L.) at 913:

> The meaning which a document (or any other utterance) would convey to a reasonable man is not the same thing as the meaning of its words. The meaning of words is a matter of dictionaries and grammars; the meaning of the document is what the parties using those words against the relevant background would reasonably have understood to mean.

accomplishment of the inventor’s purpose expressed or implicit in the text of the claims.\textsuperscript{179}

Purposive construction does not ask “What did the patentee say?” which might be a literal interpretation, but rather, “What was the inventor trying to say?” or, better yet, “What would a skilled reader have understood the patent to mean?”\textsuperscript{180}

Perhaps the best example of the application of purposive construction is where the claim contains an easily recognizable drafting error. Although information provided in a patent should be presumed to be correct, accurate and sufficient\textsuperscript{181} a purposive construction would recognize the error and give the claim its “intended meaning”. For example:

As a preliminary matter, it is noted that claim 23 erroneously refers to an “antimicrobial” infection. Both parties accept that the intended reference in claim 23 is to a “microbial” infection. It is agreed that the error is of no consequence to the within application.\textsuperscript{182}

The error in that case was purely drafting in nature, and in the context of the patent as a whole, it was clear what the patentee was intending to claim. Purposive construction gave the Court the flexibility to be able to render justice.

Similarly, where a claim referred to “… a microorganism of the genus Aspergillus terreus” but the genus is Aspergillus and the specie is terreus, the Court concluded that the patentee must have been referring to the species Apergillus terreus and not the genus Aspergillus. To say it meant the latter would ignore the plain meaning of the term terreus, as used in the claim.\textsuperscript{183}

In \textit{Bombardier Recreational Products Inc. v. Arctic Cat Inc.},\textsuperscript{184} the court noted that there were obvious errors in the figures of the patents in issue but held that “such obvious errors would not take asty the POSITA who would have readily and easily noticed the

\begin{thebibliography}{9}
\bibitem{180} \textit{Merck & Co. v. Pharmascience Inc.}, 2010 FC 510 (F.C.) per Hughes J. at para. 69.
\bibitem{181} \textit{Eli Lilly Canada Inc. v. Novopharm}, 2009 FC 301 at para. 94; \textit{Shire Canada Inc. v. Apotex Inc. et al}, 2016 FC 382 (F.C. per Locke J.) at para. 121.
\bibitem{183} \textit{Apotex Inc. v. Merck & Co.}, 2010 FC 1265 (F.C.) per Snider J. at paras. 88–92, 95 and 99, affirmed 2011 CarswellNat 6152 (F.C.A.), leave to appeal refused 2012 CarswellNat 2442 (S.C.C.).
\bibitem{184} 2017 FC 207 (F.C. per Roy J.).
\end{thebibliography}
numerous and obvious errors” and “would locate without much difficulty a substitute for the obviously mistaken dimensions of the figures found in the Patents.”

Notwithstanding the above, purposive construction should not allow a patentee to broaden or expand the scope of a claim, and therefore, does not ask “What should the patentee have said?” If a patentee failed to claim as broadly as he or she could have, purposive construction should be of no assistance.

Purposive construction will also not allow a patentee to correct an error, other than a drafting error, as discussed above. Where a patentee included a limitation in a claim that he later discovered was unnecessary, the Court of Appeal stated:

A court must interpret the claims; it cannot redraft them. When an inventor has clearly stated in the claims that he considered a requirement as essential to his invention, a court cannot decide otherwise for the sole reason that he was mistaken.

The Supreme Court has further written as follows:

… if the inventor has misspoken or otherwise created an unnecessary or troublesome limitation in the claims, it is a self-inflicted wound. The public is entitled to rely on the words used provided the words used are interpreted fairly and knowledgeably. (emphasis in the original)

4.6.1. Rejection of “Form and Substance” Approach

A purposive construction also seemingly rejects analyzing the “substance of the claim” and ignoring the form of the claim to investigate “what really has been invented” or “what has been discovered”.

In many U.K. decisions involving software-related patents, the courts had looked beyond the form of the claim (usually for an article which is patentable subject matter) to enquire into the true nature of the invention as a mathematical algorithm (and hence, non-patentable subject matter). The Amazon.com case, the Federal Court rejected

185 Bombardier Recreational Products Inc. v. Arctic Cat Inc., 2017 FC 207 (F.C. per Roy J.) at para. 320.
186 Bombardier Recreational Products Inc. v. Arctic Cat Inc., 2017 FC 207 (F.C. per Roy J.) at para. 322.
the Commissioner of Patent’s approach in looking at “the substance of the invention”. it is not wrong to speak of “what has been invented” so long as this is determined with reference to the essential elements as disclosed through purposive construction.  

It is the “subject matter defined by the claims” not “the invention” or “what the inventor claims to have invented” that is the subject of patentable subject matter, novelty, utility and obviousness under ss. 27(3), (4) and (8) of the Patent Act.

4.7. **STEP 1: WHAT DO THE WORDS AND PHRASES IN THE CLAIM MEAN?**

Logically, the Court cannot determine whether a claim element is essential or non-essential until it understands the meaning of a particular word or phrase in the claim containing the particular claim element. Therefore, the Court must first give meaning to the words and phrases in the claims.

The question to be asked is what would a skilled person understand the claim to mean in the context of the rest of the patent.

The claims are to be interpreted by applying the common vocabulary of the art. Caution must be exercised where there is no common nomenclature in the art.

The terms of the specification, including the claims, must be given meaning and purpose by the skilled addressee applying his or her knowledge in the field to which the patent relates. It is not the meaning the words may have had to lay or unskilled reader. For example: if a claim used the word “bolt”, what would that term mean in the context of that patent? Depending upon the art to which the patent is directed, it


could mean a threaded screw to be used in conjunction with a nut as a fastener, an 8 foot length of a tree trunk or a length of cloth wrapped around a cardboard spindle.

Unless a term has been defined in a dictionary sense in the disclosure, or by reference to a publicly available document, a word or phrase should be given its ordinary meaning. The words should be given a natural and not a strained meaning.

4.7.1. Pre-Construction Set-Up

The judge must put himself or herself in the proper mindset to read the patent, taking into consideration who is to be considered to be reading the patent, with the appropriate skills, at the appropriate time and with the appropriate attitude.

Although the interpretation of the claims is a matter for the Court, the Judge may (and in most technologies, probably should) be assisted by the evidence of an expert who is knowledgeable in the field to which the claim is directed.

As discussed above in Chapter 4.4.2, the role of the expert is not to interpret the patent claims but to put the trial judge in the position of being able to do so in a knowledgeable way. Such evidence may relate to the state of the art at the date of the patent, the meaning of technical terms and the working of the invention.

Of course, the Court is not bound by expert opinion as to the meaning of words in the claims, and the Court’s construction of a claim must prevail over that of an expert’s, unless clearly unacceptable. Further, a Court may come to its own conclusion and

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may decide not to follow the expert evidence of both the plaintiff and the defendant. However, where a Judge construes a technical term in a contrary manner to that construed by both the parties and their respective expert witnesses, the finding of the Trial Judge must be seen as being made without regard to the evidence.

### 4.7.1.1. The Relevant Date

A pre-1989 Patent Act patent is to be construed as at the date it issued. The time between filing and issuance of “Old Act” patents can be significant. Words and phrases may have changed in meaning during the interim. Where an old-Act patent had a claim corrected shortly after grant, the corrected claim was construed as of the date of the correction.

Patents issuing from patent applications filed on or after October 1, 1989 are to be construed as at their date of publication.

On that date, the invention is disclosed to the public, those interested have some ability to oppose the grant of the patent applied for, and the applicant for the patent is eventually allowed to claim reasonable compensation (s. 55(2)), provided the patent is ultimately granted, from and after the “laid open” date. The public, the patentee, its competitors and potential infringers all have an interest and/or concern from that date forward. The notional skilled addressee has a text available for interpretation. In summary, public disclosure and the triggering of legal consequences on the “laid open” date are important considerations in the construction of claims.

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date, as well as the policy considerations that underpinned the earlier case law, favour that date over the other possibilities as the critical date for the purpose of claims construction.\(^\text{213}\)

Likewise, the substitutability of non-essential elements is to be determined as at “… the time they are revealed to the target audience of persons skilled in the relevant art”,\(^\text{214}\) namely the “laid open” date for patents filed after October 1, 1989.\(^\text{215}\)

For NOC proceedings, the claims are to be considered in the form in which they are as of the date of the hearing.\(^\text{216}\)

4.7.1.2. The Skilled Reader: The person of Ordinary Skill in the Art (“POSITA”)

The patent is to be considered as read by and understood from the viewpoint of the addressee of the patent: a skilled worker in the field of the invention of the patent,\(^\text{217}\) who is not necessarily an ordinary member of the public.\(^\text{218}\)

The words and phrases used in the claim at issue are to be interpreted as understood by a person who is possessed of all the technical knowledge required to fully understand the terms used and the principles involved;\(^\text{219}\) the person of ordinary skill in the art, or “POSITA”.

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\(^{213}\) Whirlpool Corp. v. Camco Inc. (2000), 9 C.P.R. (4th) 129 (S.C.C.) per Binnie, J. at 155, para. 56, reconsideration / rehearing refused 2001 CarswellNat 283 (S.C.C.) and Free World Trust c. Électro Santé Inc. (2000), 9 C.P.R. (4th) 168 (S.C.C.) per Binnie, J. at 193, para. 54. Pursuant to s.10, the publication date is no earlier than 18 months after the earlier of the filing date or the priority date unless earlier publication was requested on behalf of the applicant.


\(^{216}\) Sanofi-Aventis Canada Inc. v. Hospira Healthcare Corp., 2009 FC 1077 (F.C.) per Zinn J. at paras. 104 and 121–122, as that is the relevant date for assessing the justification for an NOA: Merck Frosst Canada Inc. v. Canada (Minister of National Health & Welfare), [1998] 2 S.C.R. 193 (S.C.C.) (per Iacobucci J.)


The patent is not addressed to an ordinary member of the public, but to a worker skilled in the art described by Dr. Fox as:

a hypothetical person possessing the ordinary skill and knowledge of the particular art to which the invention relates, and a mind willing to understand a specification that is addressed to him. This hypothetical person has sometimes been equated with the “reasonable man” used as a standard in negligence cases. He is assumed to be a man who is going to try to achieve success and not one who is looking for difficulties or seeking failure.\(^{220}\)

Only those familiar with the field of the invention can be expected to make anything of the claims.\(^{221}\) The introductory language of the patent can give guidance as to the person(s) to whom the patent is directed.\(^{222}\)

The knowledge that the skilled reader is expected to possess is to be taken into account.\(^{223}\) For example, where a patent is for an electrocardiograph cream, it must be obvious that a cream for use with skin contact electrodes is not to be made up with ingredients that are toxic or irritating or are apt to stain or discolour the skin. The man skilled in the art will just as well appreciate this necessity if the cream to be made is described as “compatible with normal skin” as if it is described as containing only ingredients compatible with normal skin.\(^{224}\)

It is the “common knowledge” shared by competent “ordinary workers” that is brought to bear on the interpretation.\(^{225}\)


\(^{222}\) *Merck & Co. v. Pharmascience Inc.*, 2010 FC 510 (F.C.) per Hughes J. at para. 41.


\(^{224}\) *Burton Parsons Chemicals Inc. v. Hewlett-Packard (Canada) Ltd.* (1974), 17 C.P.R. (2d) 97 (S.C.C.) per Pigeon J. at 104. The Court distinguished this circumstance to one where the claims included inoperative embodiments:

> The situation here is completely unlike that in either the *Minerals Separation* case or in *Société des Usines Chimiques Rhône-Poulenc et al. v. Jules R Gilbert Ltd. et al.* (1968), 55 C.P.R. 207, 69 D.L.R. (2d) 353, [1968] S.C.R. 950. In those cases the object of the patent was some substances of a definite chemical composition: xanthates in the first, substituted diamines in the second. Unfortunately for the patentees, the claims covered at the same time some xanthates which would not yield the desirable result in one use, and, in the other, some isomers which would not be therapeutically valuable. This is what was held fatal to the validity of the patents.

The worker should be an “ordinary” worker in the field, not the least qualified or slowest witted, operating on the basis of common knowledge in the trade, and not someone with specialized knowledge that is not also within the knowledge of other workers in the field. An expert burdened with inside information of a company is not a satisfactory proxy for the “ordinary worker”.

In some cases, the addressee can be a team of people with different expertise:

... a composite of scientists researchers and technicians bringing to their combined expertise to bear on the problem at hand: “This is particularly true where the invention relates to a science or art that transcends several scientific disciplines.”

4.7.1.3. Objective Attitude or Biased for Really Useful Inventions

The patent should be read by a mind willing to understand, not a mind desirous of misunderstanding. A “mind willing to understand” necessarily pays close attention to the purpose and intent of the author.

The patent ought not to be construed malevolently, but need not be construed benevolently nor harshly. It must be fairly and reasonably construed, being fair to both the patentee and the public. It must be done dispassionately.

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Some cases have suggested the Court should have a pro-patent bias in cases involving “a genuine, great and important invention, which, as in some cases, one might almost say, produces a revolution in a given art or manufacture ...” or that a patent should be approached with a judicial anxiety to support a really useful invention. In such cases, where there are two different constructions, there ought to be a bias “… in favour of the real and genuine invention, to adopt that construction which supports an invention” rather than one that destroys it.

Other cases have said that, if there is more than one construction that can be reasonably reached, the Court must favour the construction which upholds the patent. In GlaxoSmithKline Inc. v. Apotex Inc., the Court appears to have avoided one construction solely to avoid a finding of invalidity: “GSK’s interpretation should be rejected as it would lead to an invalid patent due to lack of utility, a result that is inconsistent with the aims of the purposive approach.” Similarly, with respect to novelty, the court has said:

In my view, where two possible interpretations of a patent are available, but only one produces a novel invention, that interpretation is the one to be preferred. While it is not impossible that a patent may disclose something already covered by the prior art, one should prefer an interpretation that avoids that result if possible.

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241 Janssen-Ortho Inc. v. Canada (Minister of Health), 2010 FC 42 (F.C.) per Zinn J. at para. 147, additional reasons 2010 CarswellNat 2356 (F.C.).
A bias towards construing a claim so as to support the validity of a patent appears to contradict the case law saying that claims are to be construed before issues of validity are to be considered. The court has recognized this inconsistency: one can favour a construction that upholds the patent only if one has considered what is necessary to uphold the patent.

This bias may also be reflected in the comments that the patent should be read to afford protection to what has been invented and not defeat the patent based on technicalities and that one should not be too astute or technical in raising objections to the specifications.

### 4.7.1.4. With an Eye on the Defendant’s Product

Generally, a patent must not be construed with an eye on the allegedly infringing device in respect of infringement or with an eye to the prior art in respect of validity to avoid its effect. As one judge described it: the claims are to be construed, “as if the defendant had never been born”.

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Although judicial blindness is a laudable principle, in fact, there are usually only a few claim elements (words or phrases in the claims) that are at issue in the lawsuit. It therefore makes sense for the Court, when it construes a claim, to focus on that part of the claim that is at issue. The Court is not to construe a claim without knowing where the disputes between the parties lie. Arguments and evidence need to be directed to the point or points in dispute or “where the shoe pinches.”

Although the structure of the defendant’s allegedly infringing device is irrelevant to issues of construction, the Court must at least be aware of what elements of the claim are alleged by the defendant not to be present in the defendant’s device.

The same cannot be said for experts. It is preferable to have the expert interpret the claims before being told of the nature of the alleged infringement or prior art.

In *Teva Canada Innovation et al v. Apotex Inc. et al* the manner in which the experts were retained and instructed, provided the court with a reason to prefer the evidence of the Apotex experts over those of Teva. Because the Apotex experts did not know the alcohol that Apotex had used in its products when they construed the patent, their interpretation was undertaken in accordance with the direction from the Supreme Court of Canada. The Teva experts’ evidence was to be accorded less weight.

Teva’s counsel provided their experts with extracts from the ANDS and NOA at the outset to alert them to the issues that were relevant. Instead counsel could direct the experts’ attention to the issues by asking whether the terms “pentahydric or hexahydric...”

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248 *Shire Biochem Inc. v. Canada (Minister of Health)*, 2008 FC 538 (F.C. per Hughes J.), 67 C.P.R. (4th) 94 at para. 22 quoting Justice Floyd of the England and Wales High Court (Patent Court) in *Qualcomm Incorporated v. Nokia Corporation* [2008] EWHC 329 (Pat) at paragraphs 7 to 11, who in turn quoted the late Justice Pumfrey (as he then was) in *Nokia v Interdigital Technology Corporation* [2007] EWHC 3077 (Pat), “it is essential to see where the shoe pinches so that one can concentrate on the important points.”


alcohols” as used in the patent at issue would connote a molecule or a moiety without alerting the experts to the specifics of the allegedly infringing substance.\textsuperscript{254}

\textbf{4.7.2. \hspace{1em} Use of the Patent Specification}

\textbf{4.7.2.1. \hspace{1em} The Patent Should be Read as a Whole}

Mr. Justice Binnie endorsed a “purposive construction” to give the terms in the claim the meaning intended by the patentee based on a reading of the claims in the context of the patent as a whole.\textsuperscript{255} Regard may be had to the whole of the patent specification, including the drawings and the disclosure.\textsuperscript{256}

The concept of reading the patent as a whole is not new: even in 1886, the Court held that the patent should be construed (and read) as a whole\textsuperscript{257} to provide background to assist in the interpretation of the claim or to supply the vocabulary necessary for the interpretation of the claim.\textsuperscript{258}

In \textit{Consolboard}, Dickson J. considered that the whole of the specification (including the disclosure and the claims) should be looked at “to ascertain the nature of the invention”.\textsuperscript{259} Similarly, Taschereau J. stated in \textit{Metalliflex Ltd. v. Rodi & Wienenberger AG}:

The claims, of course, must be construed with reference to the entire specifications, and the latter may therefore be considered in order to assist in apprehending and construing a claim, but the patentee may not be allowed to expand his monopoly specifically expressed in the claims “by borrowing this or that gloss from other parts of the specifications”.\textsuperscript{260}

\begin{paracol}{2}
\begin{paracolleft}
\textsuperscript{254} Teva Canada Innovation et al v. Apotex Inc. et al, 2014 FC 1070 (F.C. per Gleason J.) at para. 96.
\end{paracol}
\end{paracol}
Reference may be made to the disclosure in order to understand what the claims say but such reference cannot be used to vary the scope or ambit of the claims.

4.7.2.2. Use of the Abstract

The Patent Act does not require that a patent contain an abstract, however the Patent Rules provide that an application shall contain one, but only for searching purposes. Thus, the abstract would appear to have no legal weight and is specifically excluded by Patent Rule 79(1) to be used to interpret the scope of the claims. Nevertheless, in Monsanto Canada Inc. v. Schmeiser the Supreme Court made incidental reference to the abstract as part of the specification it examined in doing a purposive construction of the patent claims.

4.7.2.3. Use of the Preamble to the Claim

The preamble of the claim can sometimes be used to limit the things encompassed by the claim to things that work and exclude things that do not.

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212 Minerals Separation North American Corp. v. Noranda Mines Ltd. (1949), 12 C.P.R. 99 (S.C.C.) per Rand, J. at 36, affirmed 1952 CarswellNat 2 (Canada P.C.) which quoted Lord Loreburn in Ingersoll Sargeant Drill Co. v. Consolidated Pneumatic Tool Co. (1907), 25 R.P.C. 61 (U.K. H.L.) at 84 as follows: “We are asked to construe the Claim with reference to the Specification, not in order to understand what the former says, but to make it say things which in fact it does not say at all.”; Procter & Gamble Co. v. Calgon Interamerican Corp. (1982), 61 C.P.R. (2d) 1 (Fed. C.A.) per Urie J.A. at 8–11, leave to appeal refused 1982 CarswellNat 761 (S.C.C.); British-Hartford-Fairmont Syndicate Ltd. v. Jackson Brothers (Knottingley) Ltd. (1932), 49 R.P.C. 495 (Eng. C.A.), per Romer J. at 556.

263 (Patent Rules, SOR/96-423, Rule 79(1): “An application shall contain an abstract that provides technical information and that cannot be taken into account for the purpose of interpreting the scope of protection sought or obtained.” The purpose of the abstract would therefore appear to be for use as a search tool, see Rule 79(5).

In _Burton Parsons_, the preamble of the claim said that it was compatible with normal skin.\textsuperscript{265} The Court held that it must be obvious that a cream for use with skin contact electrodes is not to be made up with ingredients that are toxic or irritating or are apt to stain or discolour the skin. The man skilled in the art will just as well appreciate this necessity if the cream to be made is described as “compatible with normal skin” as if it is described as containing only ingredients compatible with normal skin.\textsuperscript{266}

Where a claim claimed “A process of producing the compounds of structural formula [I, II, II and IV] which comprises …” using Aspergillus terreus. It was known that some strains of Aspergillus terreus were non-producing. The Court construed the claim such that the use of the word “producing” in the preamble told a skilled person that non-producing strains were excluded.\textsuperscript{267}

### 4.7.2.4. Use of the Disclosure and Drawings

In construing the patent claims, regard may be had to the whole of the specification, including the drawings and the disclosure.\textsuperscript{268}

Older cases provided that the claims were to be read in the context of the rest of the patent, “not as if the claim was an isolated sentence having no connection with or reference to what precedes it.”\textsuperscript{269}

Some pre-	extit{Free World} cases said that recourse to the disclosure was unnecessary where the words of the claim were plain and unambiguous.\textsuperscript{270} They said that the

\textsuperscript{265} “An electrocardiograph cream for use with skin contact electrodes and compatible with normal skin, comprising …”

\textsuperscript{266} _Burton Parsons Chemicals Inc. v. Hewlett-Packard (Canada) Ltd._ (1974), 17 C.P.R. (2d) 97 (S.C.C.) per Pigeon J. at 104. The Court distinguished this circumstance to one where the claims included inoperative embodiments:

> The situation here is completely unlike that in either the Minerals Separation case or in Société des Usines Chimiques Rhône-Poulenc et al. v. Jules R Gilbert Ltd. et al. (1968), 55 C.P.R. 207, 69 D.L.R. (2d) 353, [1968] S.C.R. 950. In those cases the object of the patent was some substances of a definite chemical composition: xanthates in the first, substituted diamines in the second. Unfortunately for the patentees, the claims covered at the same time some xanthates which would not yield the desirable result in one use, and, in the other, some isomers which would not be therapeutically valuable. This is what was held fatal to the validity of the patents.


specification is not the dictionary by which the scope and effect of the terms of the claim is to be ascertained, in particular where the claim is expressed in simple and direct language or in wide or general terms whose meaning is plain and unequivocal. Such case law was not thought to have survived Free World, which requires the words of the claims to be construed in the context of the rest of the patent but may live on again, having been repeated by the Federal Court of Appeal in Schmeiser and Mylan.

The disclosure is read to understand or confirm what is meant by a word or phrase in the claims but not to enlarge or contract the scope of the claim as written and thus understood. The specification can be reviewed to determine what meaning was reasonably intended by the inventors. One should not reach a firm conclusion as to the meaning of words in the claims being construed without having tested one’s initial


272 Dino P. Clarizio; “Whirlpool and Free World Trust: Claim Construction and the Test for Patent Infringement” (2001), 18 C.I.P.R. 139 at 142. See Pfizer Canada Inc. v. Canada (Minister of Health), 2007 FCA 209, 60 C.P.R. (4th) 81 (F.C.A.) per Nadon J.A., Linden and Sexton J.J.A. concurring at para. 88, leave to appeal refused 2007 CarswellNat 3850 (S.C.C.), where the Court described as incorrect the approach of an expert who based his opinion on the basis that “[I]f a term is used in a clear and unambiguous manner in the claim, then the term should be defined based solely on its usage in the claim itself” and that “if the definition of a term cannot be clearly and unambiguously determined from a claim, then a patent disclosure should be consulted to ascertain the definition of the term”.

273 Monsanto Canada Inc v Schmeiser, 2002 FCA 309 at para 37, var’d on other points 2004 SCC 34; Shire Canada Inc. v. Apotex Inc. et al, 2016 FC 382 (F.C. per Locke J.) at para. 74


interpretation against the words of the disclosure. It is unsafe in many instances to conclude that a term is plain and unambiguous in a claim without a careful review of the specification. When that is done, if the disclosure suggests another interpretation of the terms used in the claims, then resort to the meanings given in the disclosure is proper, subject to the proviso that the invention that is protected is what is expressed in the claims which cannot be added to by anything in the disclosure that has not found its way into the claims as drafted.

The claims take precedence over the disclosure. A patentee cannot use general language in the claim and subsequently restrict or expand it to qualify what is expressed in the claim by borrowing from other parts of the patent.

The ambit of the monopoly claimed cannot be diminished merely because in the disclosure, the patentee has described the invention in more restricted terms than in the claim itself. The claims should not be limited to the specific examples or embodiments described in the patent particularly where the patent describes a

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278 Janssen-Ortho Inc. v. Canada (Minister of Health), 2010 FC 42 (F.C.) per Zinn J. at para. 119, additional reasons 2010 CarswellNat 2356 (F.C.); Mediatube Corp. v. Bell Canada, 2017 FC 6, (F.C. per Locke J.) at para. 37.


280 Janssen-Ortho Inc. v. Canada (Minister of Health), 2010 FC 42 (F.C.) per Zinn J. at paras. 119–120, additional reasons 2010 CarswellNat 2356 (F.C.). Expressed in more flowery language: The purpose of claim construction, at the end of the exercise, is to ascertain what exactly is contained within the garden bounded by the fences set out by the inventor. To wander afield, outside the garden’s fences, picking sunflowers and petunias, and then say the garden is a flower garden, when all that one can see when standing within the garden’s fences are red zinnias, illustrates why one must first have some view of the scope of the garden from the inside before one tramps through the adjoining fields seeking clarification or confirmation of the nature of the garden. Without such an initial view, one may inappropriately borrow the flora outside to define that which grows inside the fence. In short, one should not take an unescorted and unchaperoned romp through the disclosure; one must have a guide or compass which one obtains from first examining all of the claims of the patent.

281 Biovail Pharmaceuticals Inc. v. Canada (Minister of National Health & Welfare) (2005), 37 C.P.R. (4th) 487 (F.C.) per Harrington J. “It cannot be emphasized too strenuously that the claims are the only definitive statement of the invention represented by the patent. The patentee is legally bound by and limited to the recitations contained in the claims of his patent”, Mills, J.G. et al., Patent Law Fundamentals, Thomson-West, page 14-5.


283 British-Hartford-Fairmont Syndicate Ltd. v. Jackson Brothers (Knottingley) Ltd. (1932), 49 R.P.C. 495 (Eng. C.A.), per Romer J. at 556.

drawing as representing a “preferred embodiment”, as it does not necessarily exhaust the invention. The figures can be only “exemplary”, disclosing one embodiment, but the claims can encompass more than the embodiment disclosed. The Court cannot limit the claims by simply saying that the inventor must have meant to only claim what he had described in the disclosure.

Most patents contain language emphasizing that the examples are merely illustrative and should not limit the scope of the invention and the Courts have referred to such language so as not to do so.

See however Biovail Pharmaceuticals Inc. v. Canada (Minister of National Health & Welfare) (2005), 37 C.P.R. (4th) 487 (F.C.) per Harrington J. at 505–506, paras. 57–60, where the Court held that a claim that claimed very generally (“a solid pharmaceutical carrier which affords a continuous release of active ingredient in a controlled manner”) was limited to the only form that was disclosed (an osmotic pressure system) because that “was what the inventors had in mind” as evidenced by the disclosure. In the alternative, the Court (more properly, it is suggested) held that the claim was invalid for covetous claiming (p. 506, para. 60).

The specifications and drawings should not be used to vary or enlarge the claims except in so far as the vocabulary, as supplied by the specification, reasonably and fairly provides for such a variation or enlargement. For example, in Nekoosa Packaging Corp. v. AMCA International Ltd., Justice Cullen construed a tree

2011 CarswellNat 2835 (Fed. C.A.), leave to appeal refused 2012 CarswellNat 846 (S.C.C.). See Pfizer Canada Inc. v. Pharmascience Inc., 2013 FC 120, 111 C.P.R. (4th) 88 (F.C.) per Hughes J. at para. 82, where the court interpreted the general term “Pain” I to include all of the pains listed in the disclosure and all of the pains listed in the claims. The term “...but not limited to” in the disclosure was “limited to those pains that, as of [the publication date], would be reasonably related to the named pains.”


If the claims are broader than the disclosure and go beyond the invention, the patent will be declared invalid: Canadian Celanese Ltd. v. B.V.D. Co., [1937] S.C.R. 221 (S.C.C.) (per Davis, J.) at 236–237, varied 1939 CarswellNat 80 (Canada P.C.); Amfac Foods Inc. v. Irving Pulp & Paper Ltd. (1986), 12 C.P.R. (3d) 193 (Fed. C.A.) per Urie J.


processor as “processing” into “wood chips” as that was what was so closely enunciated in the description:

The present invention is concerned with production of wood chips suitable for use as raw material for pulp and paper mills” … That is the “process means” and “processing”, namely converting a tree to chips. The description does not read, “production of chips and other products suitable, etc.” … Pulpwood has several different meanings and so does raw material for a pulp mill, but not in the context in which they are used in the patent and context is the guide.\(^{291}\)

Similarly, in Bridgeview Manufacturing Inc. v. 931409 Alberta Ltd.,\(^{292}\) the term “manipulator”, when used in the context of the patent at issue, was limited\(^{293}\) to the type described in the “Background of the Invention” section of the patent as a “typical machine” which had rollers as the invention of the patent was an improvement of that type of manipulator.\(^{294}\)

In an unusual case, the claims specifically mentioned a figure of the patent claiming a composition “… has a plasma concentration/time curve which is substantially the same as that of Figure 7,”\(^{295}\) the court held that construction required a subjective (graphical, qualitative) consideration of the key characteristics of Figure 7 in the context of the patent.\(^{296}\) The patent described Figures 7 & 8 as being similar to Figure 1 which hinted that the common characteristics of Figures 1 and 7 were important as were the differences between Figure 7 and 8 (as they were not described as being similar).\(^{297}\)

Where there were two way of measuring “optical purity” and the disclosure only referred to one way (in terms of enantiomeric excess) and the claims did not specify which way

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293 Although Justice Campbell said he gave the term an “expanded interpretation” 2009 FC 50 (F.C.) at para. 31, reversed in part on other grounds 2010 CarswellNat 4009 (F.C.A.), leave to appeal refused 2011 CarswellNat 1109 (S.C.C.)], he actually read it narrowly, as confirmed by the Federal Court of Appeal [2010 FCA 188 (F.C.A.) at para. 24, leave to appeal refused 2011 CarswellNat 1109 (S.C.C.).


296 Shire Canada Inc. v. Apotex Inc. et al, 2016 FC 382 (F.C. per Locke J.) at para. 129.

297 Shire Canada Inc. v. Apotex Inc. et al, 2016 FC 382 (F.C. per Locke J.) at paras. 127 & 145.
to measure optical purity, the Court held that a skilled reader would recognize that the units in the claim would be the same as those used in the disclosure.\textsuperscript{298}

Even if a disclosure says that a claimed drug can be used with other drugs, implicitly or explicitly, the Court should not import such a limitation into the claims. Unless the use claimed specifically employs such words, as “alone” or “not in conjunction with other compounds”, it would be improper to read such a limitation into the claim.\textsuperscript{299}

The invalidity of a claim cannot be avoided by attempting to narrow the scope of a claim based on language used in the disclosure. To do so would be like throwing scientific dust in the eyes of the Court.\textsuperscript{300} The reason for this is that patent drafters might make the claim very wide upon one interpretation, in order to prevent as many people as possible from competing with the patentee’s business, and then try to rely on carefully prepared sentences within the disclosure to limit the claim so as to be valid.\textsuperscript{301} If the disclosure states in the “Summary of the Invention” section that there are certain “objects” to the invention, one cannot read those objects into a claim so as to limit the claim.\textsuperscript{302}

\textit{Free World} also provides that:

\begin{quote}
… the ingenuity of the patent lies not in the identification of a desirable result but in teaching one particular means to achieve it. The claims cannot be stretched to monopolize anything that achieves the desirable result. It is not legitimate, for example, to obtain a patent for a particular method that grows hair on bald men and thereafter claim anything that grows hair on bald men infringes.\textsuperscript{303}
\end{quote}

This principle reflects that one cannot properly claim all solutions to a problem but should not be interpreted to mean that one cannot claim more generally than the specific embodiment described in the patent.

\textsuperscript{298} \textit{Atrazeneca Canada Inc. v. Apotex Inc.}, 2010 FC 714 (F.C.) per Hughes J. at para. 70, additional reasons 2011 CarswellNat 2772 (F.C.).

\textsuperscript{299} \textit{Abbott Laboratories Ltd. v. Canada (Minister of Health)}, 2006 FC 1411, 304 F.T.R. 104 (Eng.) (F.C.) at para. 26, affirmed 2007 FCA 251, 367 N.R. 120 (F.C.A.) per Von Finkelstein J. at para. 16; \textit{Pfizer Canada Inc. v. Ratiopharm Inc.}, 2010 FC 612 (F.C.) per Kelen J. at para. 75.

\textsuperscript{300} \textit{Electrical & Musical Industries Ltd. v. Lissen Ltd.} (1939), 56 R.P.C. 23 (U.K. H.L.) (per Lord Russell of Killowen) at 43.


\textsuperscript{303} \textit{Free World Trust c. Électro Santé Inc.} (2000), 9 C.P.R. (4th) 168 (S.C.C.) per Binnie, J. at 184, para. 32.
4.7.2.5. **Patentee as Lexicographer**

A patentee can be his or her own lexicographer, expressly defining in the disclosure certain terms to have certain meanings within the patent. Such definitions apply to the words used in the claims, thereby defining their scope.\(^{304}\) Considering the disclosure may help to determine if the inventor gave a particular meaning to an expression or word in the claim by adopting a special lexicon.\(^{305}\)

A definition of one term in a claim can be used to interpret another term in the claim. In *Pfizer Canada Inc. v. Novopharm Ltd.*\(^{306}\) the term “adverse food effect” was used in the claim and was defined with reference to “gastric residence time” which could only apply to a drug that had been ingested. The Court therefore concluded that “pharmaceutical dosage form” meant “oral pharmaceutical dosage form.”\(^{307}\)

Where the disclosure defined “...[h]alogen which may be represented as Hal in the formulae can be a chlorine, bromine, iodine, or fluorine, in which chlorine and bromine are most preferable”, fluorine was considered to be included in the halogen (Hal) described in claim 1, although it was evident that it was not the preferred halogen.\(^{308}\)

4.7.2.6. **Use of the Variance Clause**

Patent disclosures often end with a so-called variance clause, an example of which is provided below:

> From the above detailed description of the invention, the operation and construction of same should be apparent. While there are herein shown and described preferred embodiments of the invention, it is nevertheless understood that various changes may be made with respect thereto without departing from the principle and scope of the invention as measured by the claims appended hereto.


\(^{306}\) (2005), 42 C.P.R. (4th) 502 (F.C.) per Blanchard J.

\(^{307}\) *Pfizer Canada Inc. v. Novopharm Ltd.* (2005), 42 C.P.R. (4th) 502 (F.C.) per Blanchard J. at 526, para. 62. The Court also looked at other portions of the disclosure which made it clear that the invention was directed to an oral dose.

The wording of such clause is intended to permit minor variations but will not save from invalidity a claim missing an essential element.\textsuperscript{309}

### 4.7.2.7. Dependant Claims, Claim Differentiation and Claim Consistency

Justice Zinn has proposed that when one looks beyond the language of the claims at issue, one ought first look at the dependant claims as an aid to interpreting the independent claims, before one resorts to the disclosure.\textsuperscript{310}

The concept of “claim differentiation” presumes that patent claims are drafted so as not to be redundant\textsuperscript{311} and that different claims have different scopes. If it is at all possible, each claim must be construed independently of the others and be given an effective and distinct meaning.\textsuperscript{312} The starting assumption must be that claims are not redundant, and only if a purposive analysis shows that claims are in effect duplicated, can a redundant construction be adopted.\textsuperscript{313}

Patents usually have an independent claim and one or more dependant claims. Patent Rule 87(1) provides that claims do not have to be re-written; they can incorporate subject matter from an earlier claim by reference.\textsuperscript{314} Accordingly, any dependent claim shall be understood as including all the limitations contained in the claim to which it refers or, if the dependent claim refers to more than one other claim, all the limitations contained in the particular claim or claims in relation to which it is considered.\textsuperscript{315}

\textsuperscript{309} Amfac Foods Inc. v. Irving Pulp & Paper Ltd. (1986), 12 C.P.R. (3d) 193 (Fed. C.A.) at 205.

\textsuperscript{310} Janssen-Ortho Inc. v. Canada (Minister of Health), 2010 FC 42 (F.C.) per Zinn J. at para. 116, additional reasons 2010 CarswellNat 2356 (F.C.).


\textsuperscript{315} Patent Rule 87(1) provides: “Subject to subsection (2), any claim that includes all the features of one or more other claims (in this section referred to as a “dependent claim”) shall refer by number to the other claim or claims and shall state the additional features claimed.”
A dependent claim usually narrows the scope of the claim from which it depends.\textsuperscript{316} Thus a dependent claim, assuming claim differentiation, encompasses a subset of the independent claim. As discussed in Chapter 4.3.1.1 above, these subsets can also be analogized as nested fences.\textsuperscript{317}

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{nested-claims.png}
\caption{Nested, Dependent Claims}
\end{figure}

The independent “parent” claim in Figure 5 above is represented by circle (or fence) #1; the dependent claims are represented by inner circles #2 and #3. Claim #2 is dependent from claim #1; claim #3 is dependent from claim #2.\textsuperscript{318} As a result:

1. The apparatuses found in circle #2 have all the characteristics of those in circle #1. Likewise, the apparatuses found in circle #3 have all the characteristics of the apparatuses within circles #1 and #2.\textsuperscript{319} Any dependent claim includes all the limitations of its parent claim(s).\textsuperscript{320}


\textsuperscript{318} For example, with reference to Figure 5 illustrating “nested” claims, if a patent could be granted with a claim 1 claiming “all lawyers in a courtroom”, dependant claim 2 could be for “the lawyers of claim 1 wherein said lawyers are right-handed” and claim 3 could be for “the lawyers of claim 2 wherein said lawyers wear glasses.”

\textsuperscript{319} In the example given, Claim 3 would include lawyers in the courtroom who are right-handed and wear glasses. Claim 2 would include lawyers in the courtroom who wear glasses (those of Claim 3) as well as...
2. The apparatuses found in Circle #1 (representing the parent claim) include what is found in Circles #2 and #3.\(^\text{321}\) A parent claim must be read to include what is in its dependent claim.\(^\text{322}\) The parent claim cannot be read so as to exclude what is in its dependent claims. In other words, the parent claim cannot be given a construction which is inconsistent with its dependent claims.\(^\text{323}\)

3. Assuming Claims #1 and #2 are not redundant, Circle #1 (the parent claim) is not limited to the apparatuses found in Circle #2 (the dependent claim).\(^\text{324}\) Because the parent claim is understood to be broader than the dependent claim,\(^\text{325}\) a dependent claim cannot be used to narrow the scope of the parent claim.\(^\text{326}\) The limitation in the dependent claim should those that do not (those in the white region). Claim 1 would include right-handed lawyers (those of Claim 2) and those that are not (those in the red region).

\text{321} Halford v. Seed Hawk Inc., 2004 FC 88 (F.C.) per Pelletier J at paras. 91 and 95, reconsideration / rehearing refused 2004 CarswellNat 882 (F.C.), reversed in part 2006 CarswellNat 2397 (F.C.A.) and Bridgeview Manufacturing Inc. v. 931409 Alberta Ltd., 2010 FCA 188 (F.C.A.) per Sharlow J.A., Nadon & Trudel J.J.A. concurring at para. 27, leave to appeal refused 2011 CarswellNat 1109 (S.C.C.) citing Patent Rules SOR/96-423, s. 87(3) which provides:

\begin{quote}
Any dependent claim shall be understood as including all the limitations contained in the claim to which it refers or, if the dependent claim refers to more than one other claim, all the limitations contained in the particular claim or claims in relation to which it is considered.
\end{quote}


\text{324} Again with reference to the example, assuming there is no claim redundancy, claim 1 cannot be limited to right-handed lawyers, otherwise claim 2 would be redundant. The feature added in claim 2 of being right-handed, is not to be imposed on all the lawyers in the courtroom of claim 1. Likewise claim 2 must include the lawyers of claim 3 (right-handed lawyers who wear glasses) but is not limited to right-handed lawyers who wear glasses, so would include right-handed lawyers that do not wear glasses.

\text{325} See Bauer Hockey Corp. v. Easton Sports Canada Inc., 2010 FC 361 (F.C.) per Gauthier J. at para. 147, affirmed 2011 CarswellNat 4827 (F.C.A.) where Gauthier J. recognized that a feature in a dependent claim "does not inform" the construction of the parent claim 1, because "Claim 1 is wider than claim 4."

\text{326} See however Mediatube Corp. v. Bell Canada, 2017 FC 6, (F.C. per Locke J.) paras. 45-53, where the court had to determine whether the terms "audio/video signals", "demodulated input signal" and "output of the redistributor" in claim 1 excluded digital signals and was limited to analog signals. A dependent claim included limitations that referred only to analog signal characteristics. The disclosure referred to only analog audio/video signals after demodulation but referred to input signals "any of format" [meaning analog or digital]. The court concluded that the reader would have understood that the patentee contemplated only analog signals after demodulation. Claim 1 also referred to "conductors" and a "twisted pair of a telephone wire which carries a telephone signal". The court concluded that the former did not include the latter and that the claim did not encompass both audio/video signals travelling...
not be “read-in” to the parent claim so as to limit it, whether to avoid invalidity or to escape infringement.

4. Accordingly, there will be a red region in Circle #1 that contains apparatuses that have the characteristics of claim #1 but which do not have the characteristics of claim #2. In other words, the parent claim should be interpreted to include things that do not have the limitations added by the dependent claim #2, otherwise, the dependent claim would be redundant.

downstream over the twisted pair and control signals travelling upstream [paras. 54-63]. The disclosure suggested that a single twisted pair was unsuitable for the signals [para. 59]. Claim 1 also referred to a “server”. The court concluded that a server could be a distributed network of elements but did not include a packet-switching network because those send digital, not analog signals [para. 67]. With respect to an “unused twisted pair”, having it carry other signals would have a material effect on the way the invention works and the skilled reader would have understood that strict compliance with the primary meaning of “unused” was an essential requirement of the invention [para. 89]

The independent claim, without the limitation read into it, may be so broad so as to include prior art and hence, be invalid.


See:

• Pfizer Canada Inc. v. Canada (Minister of Health), 2007 FC 91, 56 C.P.R. (4th) 96 (F.C.) at paras. 51-53, reversed on other grounds 2008 CarswellNat 2714 (F.C.A.), where the patent explicitly did not limit the patent to the racemate and clearly stated that it included both enantiomers (a racemate being a mixture, in equal parts, of two enantiomers). Where a dependent claim covered only racemates, the independent claim was not limited to racemates, but covered both racemates and enantiomers;

• Abbott Laboratories v. Canada (Minister of Health), 2007 FCA 83, 58 C.P.R. (4th) 97 (F.C.A.) per Noël J.A., Nadon and Malone J.J.A. concurring at para. 31, where a dependent claim said that the composition was “essentially ethanol-free”, the independent claim was read to include ethanol, even though it was not in the listed ingredients of claim 1.

• Eli Lilly Canada Inc. v. Apotex Inc., 2008 FC 142, 63 C.P.R. (4th) 406 (F.C.) per Hughes J. at para. 53, affirmed 2009 CarswellNat 833 (F.C.A.), leave to appeal refused 2009 CarswellNat 3235 (S.C.C.): in a case where the independent claim referred to “osteoporosis” or “bone loss” in humans and the dependent claims limits the treatment to “aging post-menopausal females” and “the treatment of a patient without eliciting significant estrogenic responses in primary sex tissues”, the Court held that the independent claims were not limited to the treatment of females: “It cannot be said that claims 1 or 3 incorporate the limitations of claims 15 or 17.”

• Bridgeview Manufacturing Inc. v. 931409 Alberta Ltd., 2009 FC 50 (F.C.) per Campbell J. at paras. 27 & 30, reversed in part 2010 CarswellNat 4009 (F.C.A.), leave to appeal refused 2011 CarswellNat 1109 (S.C.C.) where a dependent claim specified that a manipulator was “rotatably” mounted, the court concluded that “[t]his could mean that Claim 1 covers a manipulator that does not rotate.”

• Bauer Hockey Corp. v. Easton Sports Canada Inc., 2010 FC 361 (F.C.) per Gauthier J. at para. 147, affirmed 2011 CarswellNat 4827 (F.C.A.) where dependant claim 4 may well have had as an essential element to shape a portion of a skate boot before sewing on the foxing portion, parent
This is why, for the purpose of anticipation and obviousness analyses, where validity must be determined on a claim-by-claim basis, each claim must be construed because eventually, a narrowed claim may be sufficiently narrow to escape these prior art attacks, even though the broader claims may be invalid.\textsuperscript{330}

Although claim differentiation is a rebuttable presumption, the presumption is especially strong when the limitation in the dependent claim in dispute is the only meaningful distinction between the parent claim and the dependent claim.\textsuperscript{331} If two claims are identical in other respects, one infers, on a purposive construction, that the claims were intended to describe alternative devices.\textsuperscript{332} The tendency for an interpretation of a claim to render it redundant cannot overcome a purposive interpretation of the specification.\textsuperscript{333}

Claim differentiation can also be used to determine whether a claim element is essential. Where one claim differs from another in only a single feature it is difficult to argue that the different feature has not been made essential to that claim.\textsuperscript{334} The

\begin{itemize}
  \item See however Johnson \& Johnson Inc. v. Boston Scientific Ltd. / Boston Scientifique Ltée, 2008 FC 552, 71 C.P.R. (4th) 123 (F.C.) per Layden-Stevenson J., at para. 222, additional reasons 2008 CarswellNat 2118 (F.C.) where dependent claims 5 and 6 of the patent at issue alternately characterized the slots of claim 1 as being hexagonal when expanded (and thus rectangular complete slots (bounded on all sides) before expansion) and, parallelograms when expanded (and hence linear slits bounded on all sides, before expansion), the Court concluded that all slots of parent claim 1 were bounded on all sides and did not include half slots that were not completely enclosed.

  \item Eli Lilly \& Co. v. Apotex Inc., 2009 FC 991 (F.C.) per Gauthier J. at para. 162, affirmed 2010 CarswellNat 5866 (F.C.A.), leave to appeal refused 2011 CarswellNat 1368 (S.C.C.), additional reasons 2011 CarswellNat 4151 (F.C.) where the limitations of dependent claim 18 were not read into claim 1 as these limitations were claim 18's only distinguishing features from claim 1.

\end{itemize}


\textsuperscript{333} Bridgeview Manufacturing Inc. v. 931409 Alberta Ltd., 2010 FCA 188 (F.C.A.) per Sharlow J.A., Nadon \& Trudel JJ.A. concurring at para. 33, leave to appeal refused 2011 CarswellNat 1109 (S.C.C.) (citing Abbott Laboratories v. Canada (Minister of Health), 2007 FCA 83 (F.C.A.) at para. 33, and Nekoosa Packaging Corp. v. AMCA International Ltd. (1994), 172 N.R. 387 (Fed. C.A.) at para. 37). Arguably, the construction did not necessarily make the dependant claim redundant: claim 5 required at least 2 manipulator rollers. The parent claim could have included only 1 roller and thus not rendered claim 5 redundant.

function of the feature would be essential, but its precise form might not be and one
would still have to determine the proper scope of the meaning of the phrase describing
the added feature, in the context of the patent.

Similarly, where an essential feature of a patent is defined in a specific way and a
different more expansive term is also introduced that can include the specific term, one
would not generally interpret the two terms as denoting the same thing. The usual
purpose of using different words is to distinguish one feature from another and not to
express synonymy.335

4.7.2.8. Other Independent Claims

It is inappropriate to use one independent claim to aid in the construction of another
independent claim.336 If one were to incorporate the elements of one independent claim
into the elements of another independent claim, one would disregard the right of the
inventors to adopt different ways of defining their monopoly and describing different
aspects of an invention.337

Where some claims include an element and others do not, the court can conclude that
the element is essential in one set of claims but not in another.338

In contrast to claim dependency, where a patent separately claims a class of chemical
compounds and a single compound within that class, each separate claim is considered
to disclose separate inventions and each claim stands on its own.339

held at para 65 that it was an essential element of that claim that the pneumatic spring is provided by a
pneumatic cylinder “… since it is specifically claimed …”

335 ABB Technology AG v. Hyundai Heavy Industries Co., 2013 FC 947 (F.C.) per Barnes J. at para. 29,
additional reasons 2013 CarswellNat 3777 (F.C.); aff’d, 2015 FCA 181 (F.C.A. per Stratus J.A., Webb &
Near JJ.A. concurring) at para. 48, wherein the term “a moveable switch contact element” was held to
include “sliding contact switches” and a “knife blade switch”.

336 Bauer Hockey Corp. v. Easton Sports Canada Inc., 2010 FC 361 (F.C.) per Gauthier J. at para. 148,

337 Eli Lilly & Co. v. Apotex Inc., 2009 FC 991 (F.C.) per Gauthier J. at para. 123, affirmed 2010
CarswellNat 5866 (F.C.A.), leave to appeal refused 2011 CarswellNat 1368 (S.C.C.), additional reasons

338 Merck & Co. v. Canada (Minister of Health), 2010 FC 1042 (F.C.) per O’Reilly J. at para. 22:
… many of the patent’s claims are specifically addressed to a co-formulation of a CAI with a beta blocker.
In my view, co-formulation is an essential element of those claims. Others, namely the use claims (16-20),
address both co-administration of the two agents and co-formulations. Co-formulation, therefore, is not an
essential element of those claims.

No. 507 (S.C.C.); Laboratoires Servier v. Apotex Inc., 2008 FC 825, 67 C.P.R. (4th) 241 (F.C.) per Snider
J. at paras. 125-129 & 133, additional reasons 2008 CarswellNat 4195 (F.C.), affirmed 2009 CarswellNat
4-63 Cameron’s Patent and Trade Secrets Law

4.7.2.9. “Comprising” or “Consisting of”

The terms “comprising”, “consisting of” and “consisting essentially of” are transitional words or phrases used in the beginning of a claim to join the preamble to the claim elements.

The Canadian Patent Office’s Canadian Manual of Patent Office Practice (MPOP), a guide for Patent Office practice, recognizes that the choice of transitional phrase indicates whether the recitation is open or closed to additional elements.

The term “comprising” is frequently used in patent claims to separate the “fencing” function from the part of the claim that indicates what is the function of the claim. It is no vaguer than “includes”. It is generally understood to mean “includes, but is not limited to”.

In Johnson & Johnson Inc. v. Boston Scientific Ltd. / Boston Scientifique Ltée, although the Court agreed that the word “comprising” meant “includes, but not limited to”, the court stated that if the claimed device is said to include certain elements, it must not require any additional elements in order to function as described and intended in the patent. If the claimed device requires a specific element in order to function, that element must be found within the claim. Justice Layden-Stevenson, while on the Federal Court of Appeal continued such an interpretation in Purdue Pharma v. Canada.

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343 Schering-Plough Canada Inc. v. Pharmascience Inc., 2009 FC 1128 (F.C.) per Snider J. at para. 46 (“…the word “comprising” is not limiting. That is, what follows the word “comprising” does not necessarily identify everything that is included in the composition.”) and para. 150 (where “[a]ll of the experts accepted that use of the word “comprising” does not mean “limited to”.”)


345 Johnson & Johnson Inc. v. Boston Scientific Ltd. / Boston Scientifique Ltée, 2008 FC 552, 71 C.P.R. (4th) 123 (F.C.) per Layden-Stevenson J. at paras. 207–213, additional reasons 2008 CarswellNat 2118 (F.C.). If this is adding a utility requirement to claim construction, then it appears to be a departure from the Federal Court of Appeal in Dableh v. Ontario Hydro (1996), 68 C.P.R. (3d) 129 (Fed. C.A.) per Strayer J. (Linden and Robertson J.J.A. concurring) at p. 143, leave to appeal refused 1997 CarswellNat 3240 (S.C.C.) and Whirlpool Corp. v. Camco Inc. (2000), 9 C.P.R. (4th) 129 (S.C.C.) per Binnie, J. at 146, para. 43, reconsideration / rehearing refused 2001 CarswellNat 283 (S.C.C.), in holding that claim construction should precede considerations of validity (utility being one aspect of validity). The Court appears to have confounded determining the essential elements of the claim (claim construction under Whirlpool) versus determining whether the invention as claimed will work (utility).
where she held that the inclusion of an additional element requires some justification and that there must be a basis for it within the confines of the patent.

Similarly, the US Patent and Trademark Office Manual of Patent Examining Procedure (MPEP)\textsuperscript{347} Chapter 2111.03 cites US case law supporting the interpretation of “comprising” as being synonymous with “including” or “containing”\textsuperscript{348} and being open-ended and not excluding other elements or method steps. In contrast, the term “consisting of” excludes elements or steps not specified in the claim. The term “consisting essentially of” is said to limit the claim to the specified materials or steps and those that do not materially affect the basic and novel characteristics of the invention.

The phrase “consisting essentially of” is “closed”, being limited to the elements recited in the claim.\textsuperscript{349} In Abbott Laboratories v. Canada (Minister of Health)\textsuperscript{350} the court interpreted a claim relating to an abridged antibacterial composition. The composition was “abridged” to remove a component or component from the prior art composition so as to be more streamlined (presumably to make), less costly and possibly smaller in size and thus better tolerated by patients.\textsuperscript{351}

The prior art was an antibacterial composition that had some thirteen elements plus a colour dye that was recognized as being irrelevant to the issues in the case. Claim 1 claimed an abridged antibacterial composition “consisting essentially of” nine of the components from the prior art antibacterial composition. The claim did not recite four components from the non-abridged prior art composition: pre-gelatinized starch, 200 proof alcohol (ethanol), stearic acid and talc.\textsuperscript{352}

Two different definitions of “consisting essentially of” were proffered by the opposing parties:

<table>
<thead>
<tr>
<th>Having only the recited components</th>
<th>or</th>
<th>Having the recited components and more, but not having at least one of the four components that was in the prior art composition</th>
</tr>
</thead>
</table>

\textsuperscript{346} Purdue Pharma v. Canada (Attorney General), 2011 FCA 132 (F.C.A.) at para. 22.


\textsuperscript{348} Also as found in Sanofi-Aventis Canada Inc. v. Hospira Healthcare Corp., 2009 FC 1077 (F.C.) per Zinn J. at para. 157.


A plain reading of Claim 1 using the traditionally used meaning of “consisting essentially of” would lead a reader to believe that the claim was limited to the nine components recited.

| The term “abridged composition” was explicitly defined in the disclosure as containing clarithromycin (the active ingredient) “… and from which at least one of” the other 12 components of the prior art antibacterial composition “… have been omitted.”

| Claim 3, claimed “The composition of Claim 1 which is essentially ethanol-free.” This suggested that Claim 1 can include ethanol (If it could not, then Claim 3 would be redundant) and therefore Claim 1 could include more than just the recited components. Thus “consisting essentially of” could not mean “consisting only of.”

The court adopted the meaning set out in the right hand column above, having given the term a definition as used contextually as required by *Whirlpool.* The Court expressly rejected American jurisprudence and practice as support for a literal interpretation of the phrase “consisting essentially of” as having no support in Canadian law. It is respectfully suggested that this interpretation of “consisting essentially of” should be applied with caution as the case departs from the principle discussed in Chapter 4.7.2.3 above that the Court cannot limit the claims by simply saying that the inventor must have meant to only claim what he had described in the disclosure.

See however *Biovail Pharmaceuticals Inc. v. Canada (Minister of National Health & Welfare)* (2005), 37 C.P.R. (4th) 487 (F.C.) per Harrington J. at 505–506, paras. 57–60, where the Court held that a claim that claimed very generally (“a solid pharmaceutical carrier which affords a continuous release of active ingredient in a controlled manner”) 353

353 The removal of the dye was irrelevant.


358 If the claims are broader than the disclosure and go beyond the invention, the patent will be declared invalid: *Canadian Celanese Ltd. v. B.V.D. Co.,* [1937] S.C.R. 221 (S.C.C.) (per Davis, J.) at 236–237, varied 1939 CarswellNat 80 (Canada P.C.); *Amfac Foods Inc. v. Irving Pulp & Paper Ltd.* (1986), 12 C.P.R. (3d) 193 (Fed. C.A.) per Urie J.
was limited to the only form that was disclosed (an osmotic pressure system) because that “was what the inventors had in mind” as evidenced by the disclosure. In the alternative, the Court (more properly, it is suggested) held that the claim was invalid for covetous claiming (p. 506, para. 60).

Although not using the transitional phrase “comprising”, the use of a “use” claim is not necessarily limited to the use of that medicine alone. Where a use claim referred to the use of finasteride for the preparation of a medicament, the Court construed that such claims were not limited to the use of the named drug alone. Similarly, a patent claim including a signal representing changes in drilling pressure does not mean a signal representing only changes in drilling fluid pressure.

4.7.2.10. Dependent Claims: “... any of Claims ...”

Section 27(5) of the post October 1, 1996 Patent Act provides:

(5) For greater certainty, where a claim defines the subject matter of an invention in the alternative, each alternative is a separate claim for the purposes of sections 2, 28.1 to 28.3 and 78.3.

Where a claim was dependent from three claims (claim 7, 8 or 9), and two of those claims were held to be invalid (claims 8 and 9), the Court held that the dependent claim was valid “as far as it includes claim 7”.

Similarly, in a case where the dependent claim referred was said to comprise a compound selected from compounds selected from compounds according to any of claims 1-7, to refer to the claims separately and thus could be construed to refer to one specific claim (claim 4) only.

In contrast, a Markush claim, in the form of a method using a solvent “selected from a group consisting of (a number of individually names compounds)”, was interpreted to include all members of the group, the inutility of some of which would invalidate the claim.

359 Merck & Co. v. Pharmascience Inc., 2010 FC 510 (F.C.) per Hughes J. at paras. 103–105. The Court was assisted in that the description referred to the inclusion of other active drugs. See also Astrazeneca AB v. Apotex Inc. (2007), 60 C.P.R. (4th) 199 (F.C.) at paras. 21–25, 32 and 33, additional reasons 2007 CarswellNat 3755 (F.C.), per Barnes J. (at paras. 22 and 23).


4.7.2.11. **Method Claims: Order of Steps**

Where a person of skill in the art would recognize, at the time of publication of the application, that the steps could be done in a different order to achieve the exact same result, and where the steps were not numbered in the claim, the court held that the order of the steps in a claimed method were not an essential element of the claim.\(^{364}\)

4.7.3. **Use of External Material**

Generally, claims are to be interpreted without the use of material external to the patent.\(^{365}\) An exception is found where the patent refers to external documents to define terms within the patent.\(^{366}\)

One patent should not be construed with reference to another patent.\(^{367}\) In determining whether a patent claims a device or a drug, resort should not be had to whether a product is regulated under the Food and Drugs Regulations, as a drug and not as a device, and by the Patented Medicine Prices Review Board.\(^{368}\) A court is not entitled to consider such extraneous matters as the content of a new drug submission filed pursuant to the Food and Drug Regulations, C.R.C. 1978, c. 870 to determine whether a patent claims the drug itself.\(^{369}\)

Parole evidence is admissible to explain the meanings of words or technical matters and to inform the Court of relevant surrounding circumstances.\(^{370}\)

Notes made by an inventor are not relevant in construing the claims,\(^{371}\) nor is the testimony of the inventor.\(^{372}\) The inventor is not the best witness to assist with claim


\(^{368}\) *Novartis Pharmaceuticals Canada Inc. v. Canada (Minister of Health)*, 2003 FCA 299, 28 C.P.R. (4th) 1 (Fed. C.A.) per Malone J.A., Linden and Sexton JJ.A. concurring at para. 22.


construction. The inventor will have a strong self-interest and may not be reading the claim as an objective, first-time reader.\textsuperscript{373}

\textbf{4.7.3.1. \textit{Dictionaries}}

Dictionaries sometimes include definitions used by persons skilled in the art; sometimes not. Therefore, although dictionary definitions can be used, they are not determinative; it is the meaning of the term as used in the context of the patent that is paramount:

Though patent construction must be tied to the language of the patent, a simple “dictionary” or “grammatical” approach to patent construction is to be avoided. The terms of the specification, including the claims, must be given meaning and purpose by the skilled addressee applying his or her knowledge in the field to which the patent relates.\textsuperscript{374}

A dictionary definition should never trump the meaning of the word to persons in the relevant art. In \textit{Western Electric Co. v. Baldwin International Radio of Canada Ltd.},\textsuperscript{375} the Court cited earlier authority dealing with the word “conduit” as used in a patent claim. Duff C.J. accepted the proposition that “… [y]ou are not to look into the dictionary to see what ‘conduit’ means, but you are to look at the specification in order to see the sense in which the patentees have used it”. This analysis is consistent with the American approach where it has been held that evidence demonstrating that skilled persons in the art give a word a special meaning to a disputed term in a claim renders a contrary definition from a dictionary irrelevant.\textsuperscript{376}

Dictionaries have been referred to when the term in issues has no special meaning in the art. In the \textit{Solway Pharma} case, resort was had to a dictionary definition when the term “regulation” was referred to in the claims but nowhere else in the description.\textsuperscript{377}

\begin{thebibliography}{99}
\item Solvay Pharma Inc. v. Apotex Inc., 2008 FC 308, 64 C.P.R. (4th) 246 (F.C.) per Gauthier J. at para. 31.
\end{thebibliography}
In *Whirlpool*, Mr. Justice Binnie dismissed the defendant’s (appellant’s) submission that a broad, dictionary definition should be used to interpret the word “vane” when a more narrow definition would have been understood in the industry:

A second difficulty with the appellants’ dictionary approach is that it urges the Court to look at the words through the eyes of a grammarian or etymologist rather than through the eyes and with the common knowledge of a worker of ordinary skill in the field to which the patent relates. An etymologist or grammarian might agree with the appellants that a vane of any type is still a vane. However, the patent specification is not addressed to grammarians, etymologists or to the public generally, but to skilled individuals sufficiently versed in the art to which the patent relates to enable them on a technical level to appreciate the nature and description of the invention: H. G. Fox, The Canadian Law and Practice Relating to Letters Patent for Inventions (4th ed. 1969), at p. 185. The court, writes Dr. Fox, at p. 203, must place itself:

... in the position of some person acquainted with the surrounding circumstances as to the state of the art and the manufacture at the time, and making itself acquainted with the technical meaning in that art or manufacture that any particular word or words may have.\(^{378}\)

### 4.7.3.2. File Wrapper Estoppel

The “file wrapper”\(^{379}\) is the name given to the file in the Patent Office containing the correspondence between the inventor’s patent agent and the Patent Office Examiner during the prosecution (obtaining) of the patent. It sometimes contains statements made on behalf of the inventor as to what is the invention or how it differs from the prior art.

In the United States, statements made by the patent agent on behalf of the inventors during the prosecution of the patent in the Patent Office as to the scope of the invention and its differences from the prior art can be used at trial to limit the scope of the patent claims (file wrapper estoppel). In particular, a patent owner is precluded from claiming the benefit of the doctrine of equivalents to recapture ground conceded at the request of the Patent Office during prosecution.\(^{380}\)

Canadian case law prohibits the use of the file wrapper to construe the claims, however the origin of this case law predates cases dealing with statutory interpretation that examine legislative history. The Canadian or foreign patent application file relating to the patent at issue cannot be admitted into evidence in Canada to limit the construction

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\(^{379}\) It is sometimes called the “file history” or “prosecution history”.

A person attacking the validity of a patent cannot rely upon statements and submissions made to the Canadian Patent Office during the prosecution of the application as admissions as to what are essential features of the invention.

Just as a patentee could not have his patent broadened by showing his intention to claim a broader invention through evidence of what transpired during the prosecution of his patent application, neither should an alleged infringer be able to resort to such evidence to show it is narrower in scope than the patent states. To do so would be to override the words of the patent as issued which, in my understanding, are to be determinative of the scope of the patent.

File wrappers have been ruled inadmissible when they relate to changes made during the application or when proffered to stop a party from denying that certain claim elements were “essential”. Pleadings referring to a declaration made by an inventor in the course of the prosecution of a U.S. patent application, in support of an allegation that the claims were broader than the invention made by the inventors, have been struck out.

In *Free World*, Mr. Justice Binnie confirmed the rejection of file wrapper estoppel for Canada for two reasons: (1) the intention of the inventor is to be determined from reading the patent claims and not from extrinsic evidence (a self-fulfilling conclusion); and (2) such extrinsic evidence would undermine the public notice function of the claims (odd logic given that the admission against interest would be on the public record in the file history):

In my view, those references to the inventor’s intention refer to an objective manifestation of that intent in the patent claims, as interpreted by the person skilled in the art, and do not contemplate extrinsic evidence such as statements or admissions made in the course of patent prosecution. To allow such extrinsic evidence for the purpose of defining

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the monopoly would undermine the public notice function of the claims, and increase uncertainty as well as fuelling the already overheated engines of patent litigation. The current emphasis on purposive construction, which keeps the focus on the language of the claims, seems also to be inconsistent with opening the Pandora’s box of file wrapper estoppel. If significant representations are made to the Patent Office touching the scope of the claims, the Patent Office should insist where necessary on an amendment to the claims to reflect the representation.\textsuperscript{386}

In \textit{Distrimed Inc. v. Dispill Inc.},\textsuperscript{387} the claim elements of upwardly projecting protuberance(s) and holes were added to the claims by the applicant, in order to overcome a rejection during prosecution.\textsuperscript{388} After reviewing the prohibition Justice Montigny used an amendment of a claim during prosecution as evidence of the essentiality of a claim element:

I am not convinced that the letter referred to by the Defendants to the Counterclaim falls squarely within the compass of that exclusion. While statements or admissions made in the course of patent prosecution shall not be used for the purpose of interpreting a claim, this is not what the Court is called upon to do in the case at bar. A change in the wording of a claim as a result of an objection from the Patent Office is an objective fact from which an inference may be drawn, and is not the same as representations made to the Patent Office. A purposive construction should obviously focus on the wording of a claim, obviously, but this is a far cry from saying that nothing else should be considered.\textsuperscript{389}

Justice Locke has asked whether it is time to revisit the rule against using extrinsic evidence in claim construction.\textsuperscript{390} In \textit{Pollard}, he looked at the file history after construing the claim to corroborate a construction and to express that it was “remarkable”\textsuperscript{391} and “breathtaking”\textsuperscript{392} that the patentee took a position at trial “quite different” from that taken during prosecution, noting that excluding such extrinsic evidence resulted in a very

\begin{footnotes}
\item[387] \textit{Distrimed Inc. v. Dispill Inc.}, 2013 FC 1043 (F.C.) (per de Montigny J.).
\item[388] \textit{Distrimed Inc. v. Dispill Inc.}, 2013 FC 1043 (F.C.) (per de Montigny J.) at para. 207.
\end{footnotes}
different construction of one phrase in a claim than would otherwise have been the case.\textsuperscript{393}

File wrappers may still be admissible for purposes other than claim construction,\textsuperscript{394} for example, to clarify facts,\textsuperscript{395} or admit that something is a chemical process.\textsuperscript{396}

4.7.3.3. Prior Art

Reference to the prior art is not required for claim construction,\textsuperscript{397} however prior art may assist the court in defining the scientific or engineering landscape into which the invention was introduced. It could also assist the court in understanding how terms and phrases used in the claims were in common use in the art and thereby assist in giving meaning to terms or phrases in the patent.

Internal documents cannot be used to corroborate the views of experts as to the common general understanding of a person skilled in the art.\textsuperscript{398}

A patent must not be read with an eye on the prior art in respect of validity to avoid its effect.\textsuperscript{399} Whether a claim is invalid for obviousness or lack of novelty is irrelevant to its proper construction.\textsuperscript{400}

4.7.3.4. Testimony of the Inventor

Under the Free World test, the identification of elements as essential or non-essential is supposed to be made “… (iv) according to the intent of the inventor, expressed or inferred from the claims, that a particular element is essential irrespective of its practical

\textsuperscript{393} Pollard Banknote Limited v. BABN Technologies Corp. et al, 2016 FC 883 (F.C. per Locke J.) at para. 239.

\textsuperscript{394} Foseco Trading A.G. v. Canadian Ferro Hot Metal Specialties Ltd. (1991), 36 C.P.R. (3d) 35 (Fed. T.D.) at 47.


\textsuperscript{396} Laboratoire Pentagone Ltée v. Parke, Davis & Co. (1967), 55 C.P.R. 105 (S.C.C.) per Martland J. at 117 or, in the case of a Canadian trade-mark application for a gelatine capsule band, it was considered relevant that the applicant applied for a U.S. utility patent on the band: Parke, Davis & Co. v. Empire Laboratories Ltd. (1964), 43 C.P.R. 1 (S.C.C.) per Hall J. at 9.

\textsuperscript{397} Amfac Foods Inc. v. Irving Pulp & Paper Ltd. (1986), 12 C.P.R. (3d) 193 (Fed. C.A.) per Urie J. at 197.


effect; (v) without, however, resort to extrinsic evidence of the inventor’s intention.”

Although Pratte J.A. commented at p. 7 in *O’Hara*, that in claims interpretation the Court “is merely trying to find out what was the intention of the inventor”, those references to the inventor’s intention refer to an objective manifestation of that intent in the patent claims, as interpreted by the person skilled in the art, and do not contemplate extrinsic evidence such as statements or admissions made in the course of patent prosecution.

The general rule is that extrinsic evidence is inadmissible for the purpose of construing a patent specification and this must necessarily extend to the testimony of the inventor pertaining to the proper construction of the specification.

Likewise, if the direct testimony of the inventor is not admissible to assist in the construction of the patent, it follows that statements made elsewhere by the inventor would also not be admissible, as statements of the intention of the inventor.

The inventor’s testimony may still be admissible to prove facts in the case other than the construction of the patent such as why a typical result was used instead of mean values.

### 4.7.3.5. Other Patents of the same Owner

The intention of the inventor is not to be assessed subjectively. The intention is derived from the wording of the claims read in context harmoniously with its purpose. In *Whirlpool* and *Free World*, the Supreme Court made it abundantly clear that the objective intention of the inventor is to be found within the four corners of the patent. Therefore, a later issued patent cannot be used to establish such intention or the meaning of a word.

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402 *Eli Lilly & Co. v. O’Hara Manufacturing Ltd.* (1989), 26 C.P.R. (3d) 1


4.7.3.6. **Other Canadian Decisions Construing the Same Patent**

In respect of claim construction, inasmuch as it is an issue of law for the Court to decide, there should, in theory at least, be only one correct answer regardless of the expert evidence brought to bear upon it.\(^{409}\) The Court should be cautious and generally loathe to adopt an inconsistent construction of the same patent. The need for predictability and consistency dictates such an approach.\(^{410}\)

However, because claim construction is to be informed by what would have been understood by a person of ordinary skill in the art, the evidence of what that person may believe could differ in different cases.

In *Apotex Inc. v. Pfizer Canada Inc.*,\(^{411}\) Justice O’Reilly determined that he was bound by the doctrine of stare decisis to accept the construction given to a patent by a judge of the Federal Court in a previous action. Even where the evidentiary record was different and where the earlier judge sat on the same court, a subsequent judge will be bound by the construction of a patent given by an earlier judge so long as there is no basis for concluding that the earlier judge was “manifestly wrong”.\(^{412}\)

Decisions of the court on *PMNOC* proceedings are provisional only and do not bind another court however, where the construction issues were not to be resolved on the strength of much, if any, specialized knowledge, the unanimous views of the Federal Court of Appeal carry some persuasive weight.\(^{413}\)

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\(^{409}\) *Pfizer Canada Inc. v. Canada (Minister of Health)*, 2007 FC 446, 59 C.P.R. (4th) 166 (F.C.) per Barnes J., at para. 30, affirmed 2007 CarswellNat 2107 (F.C.A.). The same judge adopted the same construction of the same patent claims in subsequent litigation *Pfizer Canada Inc. v. Canada (Minister of Health)*, 2010 FC 447 (F.C.) per Heneghan J. at para. 71, reversed 2011 CarswellNat 3227 (F.C.A.), leave to appeal refused 2012 CarswellNat 193 (S.C.C.). On appeal, at para. 22, the Federal Court of Appeal held that Apotex, which was not a party to the previous proceeding, was not precluded from asserting a different construction of the patent based on an issue that was not previously raised.


\(^{413}\) *Astrazeneca Canada Inc. et al. v. Apotex Inc.*, 2015 FC 322 (F.C. per Barnes J.) at para. 175.
4.7.3.7. **Foreign Decisions and Issue Estoppel**

The Federal Court is not bound by decisions made in other jurisdictions, however, it will sometimes look to the corresponding US litigation for a consistent interpretation.

Canadian patent cases often have foreign counterparts but, because the patent laws in other countries are different, and because the corresponding patents are also usually different, Canadian courts have not yet applied issue estoppel in a Canadian patent case. As stated by Justice Hughes in *Bayer Inc. v. Cobalt Pharmaceuticals Co.*:

> None of these decisions is precedential in a Canadian Court. There may be many differences in the patents considered there, and here, that are critical. The evidence may have been different. There are differences in the law. I therefore note that different Courts and different judges can and do come to different results. These cases illustrate that. This is particularly so where the cases are vigorously contested and the decisions to be made could, in many cases, go either way; depending on the specifics of the patent, the evidence and the law with which each Court had to deal.

*Res judicata* is a legal principle that provides that there should be finality to litigation and that no person should be subjected to action at the instance of the same individual more than once in relation to the same issue.

Issue estoppel is a sub-category of *res judicata* that provides that where an issue has been decided in one action between the parties, that decision is conclusive in a later action between the same parties.

Three conditions are required for issue estoppel:

1. the same question has been decided;
2. the decision which is said to create the estoppel was final; and

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(3) the parties to the judicial decision or their privies were the same persons as the parties to the proceedings in which the estoppel is raised or their privies.\textsuperscript{419}

Because claim construction is a question of law, the claim construction in another country would be determined under that country’s law and the first criterion of issue estoppel is not met. The practice, procedure and jurisprudence are different.\textsuperscript{420}

It is open however to plead issue estoppel in respect of findings of fact\textsuperscript{421} and law, so long as it is the same issue that arises in the foreign litigation.\textsuperscript{422} However, an admission made in a foreign proceeding, which is expressly stated to be for the purpose of that proceeding only, cannot be relied upon to establish that very fact in another proceeding, in another jurisdiction.\textsuperscript{423}

The Courts have declined to apply issues estoppel where new evidence is before the Court that was unavailable in the prior proceedings.\textsuperscript{424}

Even if the conditions for issue estoppel are met, it is a matter of discretion for the judge as to whether it is an appropriate case to apply it\textsuperscript{425} to achieve fairness or and not work an injustice.\textsuperscript{426}


\textsuperscript{421} In Apotex Inc. v. Pfizer Ireland Pharmaceuticals, 2011 FCA 77, 93 C.P.R. (4th) 42 (F.C.A.), the Federal Court of Appeal referred to Connaught and recognized that: “it may be open to a judge to apply the doctrines of issue estoppel or abuse of process in the later proceeding to prevent a party from relitigating certain factual and legal issues decided in the earlier proceeding.”; Astrazeneca Canada Inc. v. Apotex Inc. (2011), 95 C.P.R. (4th) 414 (F.C.) per Lafrenière, Proth. at 417, para. 7, affirmed 2011 CarswellNat 3220 (F.C.), affirmed 2012 CarswellNat 475 (F.C.A.).

\textsuperscript{422} See, for example, Kirin-Amgen Inc. v. Boehringer Mannheim GMBH (1996), [1997] F.S.R. 289 (Eng. C.A.) at 314, per Aldous L.J.:

. . . I envisage cases where issue estoppel will arise in patent actions. For instance, the same issue can arise in different countries of the world, for example whether a particular scientific effect occurs when the invention or a manufacturing process is carried out or how an infringing product is made, or the properties of a product or its composition. Thus this judgment should not be taken as concluding that issue estoppel has no place in patent actions. To the contrary, I believe that it does in appropriate cases.


4.7.4. Use of Language: Synecdoche or Metonymy

In *Improve*, Justice Hoffman restated the *Catnic* test to be one searching for the meaning of terms (rather than one permitting redrafting of the claims so as to ignore or vary claim elements):

If the issue was whether a feature embodied in an alleged infringement which fell outside the primary, literal or acontextual meaning of a descriptive word or phrase in the claim ("a variant") was nevertheless within its language as properly interpreted, the court should ask itself the following three questions:

1. Does the variant have a material effect upon the way the invention works? If yes, then the variant is outside the claim. If no?

2. Would this (i.e. that the variant had no material effect) have been obvious at the date of publication of the patent to a reader of the patent skilled in the art? If no, the variant is outside the claim. If yes?

3. Would the reader skilled in the art nevertheless have understood from the language of the claim that the patentee intended that strict compliance with the primary meaning was a essential requirement of the invention? If yes, then the variant is outside the claim.

On the other hand, a negative answer to the last question would lead to the conclusion that the patentee was intending the word or phrase to have not a literal but a figurative meaning (the figure being a form of synecdoche or metonymy) denoting a class of things which include the variant and the literal meaning, the latter being the most perfect, best-known or striking example of the class.*

It is ironic that in a judgment meant to assist one in knowing how to interpret words or phrases, one must resort to a dictionary to understand it:

- "Synecdoche" is defined as "a figure of speech in which a more inclusive term is used for a less inclusive one or vice versa, as a whole for a part or a part for a whole." In this respect, a specie is used to refer to the genus, or vice versa.

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For example, one could claim, as a claim element, a bolt. Obvious mechanical equivalents would include a nail and a rivet. These fasteners would be species of the genus “fastener” or “fastening means”.

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<tr>
<td>genus</td>
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- “Metonymy” is defined\(^{432}\) as “(1) The substitution of a word denoting an attribute or adjunct of a thing denoting the thing itself; and instance of this. (2) A thing used or regarded as a substitute or symbol of something else.”

Hoffman J.’s characterization of the Catnic test changes it into one dealing with situations involving a variant from the literal or acontextual meaning of the word that is nevertheless within the language of the claim, as properly interpreted. It would appear to be a form of “all elements” test rather than one that allows the substitution or omission of a non-essential element, as Catnic expressly contemplated.

Hoffman, J.’s synecdoche/metonymy point appears to be a genus–species point. The way the patentee used that word or phrase, in that context, would make a reader understand that the word or phrase was referring to the genus and not the specific specie, the genus including those things which everyone would know, at the relevant time, could be substituted for the element at issue and which would have no material effect on the way the invention worked. Likewise, (although not dealt with by Hoffman J. in Improver) for a synecdoche, the reader might understand that although the patentee was using genus language, only a particular specie was meant. Either way, the focus was on determining how the term was being used in its context, not whether the term should be written out (by omission) or re-written.

\(^{431}\) For example in \textit{ABB Technology AG v. Hyundai Heavy Industries Co.}, 2013 FC 947 (F.C.) per Barnes J. at paras. 44–47, additional reasons 2013 CarswellNat 3777 (F.C.), the Court held that the use of the more generic term “moveable switch contact element” was indicative of the intent to not limit the claims to only one type of switch; aff’d 2015 FCA 181 (F.C.A. per Stratus J.A., Webb & Near JJ.A. concurring)

A more succinct way Hoffman J. could have stated the test would have been to ask whether a term or phrase used in the patent claim would be understood by the reader of the patent to have a broader or narrower meaning than the meaning that word or phrase has ordinarily or acontextually. In other words: With what degree of precision was the patent using the word or phrase? Such a question would have been consistent with a “purposive construction”, reading the claim language in context.

Lord Hoffmann in Kirin-Amgen noted that it is unusual for a specific word to be interpreted as having a meaning broader than its normal meaning:

... the invention should normally be taken as having been claimed at the same level of generality as that at which it is defined in the claims. It would be unusual for the person skilled in the art to understand a specification to be claiming an invention at a higher level of generality than that chosen by the patentee.\textsuperscript{433}

Without reference to the Improver approach, the Federal Court of Appeal appears to have agreed with its approach, recognizing that the construction of the claim may lead to an expansion or limitation of the text of the claim.\textsuperscript{434}

\textbf{4.7.4.1. Examples of Synecdoche and Metonymy}

Whirlpool appears to be an example of Hoffman’s synecdoche scenario where broad language was “read down” in context to mean something more specific.

In Whirlpool, Justice Binnie construed a prior art patent containing a claim for a general element (“vanes”), in context, as being limited to a narrower subset of vanes, namely “rigid vanes” and did not including the subject matter of the patent in issue, namely “flexible vanes”. Thus a term that otherwise might have been construed broadly (and included both rigid and flexible vanes), was construed narrowly (a synecdoche in the form of the genus being used to refer to a particular specie: “vanes”, used in its context, meaning “rigid vanes”).

Whirlpool, the patent owner, had a first patent (the ‘803 patent) on a washing machine having an agitator with “outwardly extending substantially vertically oriented vanes”.\textsuperscript{435}

The patent described the device as having “vanes” but did not specify whether the vanes were rigid or flexible (they were, in fact, rigid). Whirlpool also had a second patent


(the ‘734 patent) which explicitly stated that the vanes of the lower oscillator of a dual action agitator were flexible (rather than rigid). 436

Whirlpool argued that in the first patent (the ‘803 patent), the term “vanes” meant “rigid” only and did not include flexible vanes — otherwise its second patent (the ‘703 patent) may have been anticipated by the first patent: 437

In the present case, the appellants seek a broad interpretation of the word “vane” in the ‘803 patent claims. It is unusual, of course, to have accused infringers arguing for a broad interpretation of the patent claims under which they have been charged. It is equally unusual for a patent owner to be demanding a narrow interpretation. The unusual role reversal is dictated by the appellants’ desire to broaden the ‘803 patent to set up their argument for the invalidity of the later ‘734 patent. They contend that the plain unvarnished meaning of the word “vane” standing on its own in claims 1 and 2 of the ‘803 patent must, as a matter of language, include both flexible vanes and rigid vanes and that there is no call or entitlement to supplement the verbal analysis by reference to “purpose” or anything else. They plead in aid the “nose of wax” metaphor offered in the last century by the U.S. Supreme Court:

Some persons seem to suppose that a claim in a patent is like a nose of wax which may be turned and twisted in any direction, by merely referring to the specification, so as to make it include something more than, or something different from, what its words express. . . . The claim is a statutory requirement, prescribed for the very purpose of making the patentee define precisely what his invention is; and it is unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms. (White v. Dunbar, 119 U.S. 47 (1886), at pp. 51-52, per Bradley J.) 438

One expert said “vanes” in the ‘803 patent meant rigid vanes. Others were equivocal. 439 None of the experts interpreted the ‘803 patent as teaching the use of flexible vanes. 440

The Court concluded that a skilled reader would consider the term “vanes” in the ’803 patent to mean “rigid vanes” and not to include “flexible vanes”. Thus, what otherwise looked like a word with a broad meaning, read in context, at the relevant time, had a more limited meaning.

The reverse situation occurred in *Biovail Pharmaceuticals Inc. v. Canada (Minister of National Health & Welfare)*[^441] where the Court examined a claim element that was specific to determine whether it was meant to refer to the more general genus. Every claim referred to hydroxypropyl methylcellulose (“HPMC”) as a component of a controlled release tablet[^442]. The respondent Novopharm used hydroxypropyl cellulose (“HPC”) a different form of non-ionic, water-soluble cellulose ether useful as a hydrogelling polymer[^443]. Each would have been useful in a sustained release tablet[^444]. Justice Harrington asked: “Did the inventors intend to claim HPMC as an example of the greater, i.e. hydrogelling polymers, or not?”[^445] in effect asking whether the more specific was used in this case to include the more general. Without directly answering the question, the Court found the HPMC claim element to be essential[^446] thereby indirectly finding that the specific was not being used to refer to the more general genus.

In *Bridgeview Manufacturing Inc. v. 931409 Alberta Ltd.*,[^447] the general term “manipulator”, which, outside the context of the patent could have included any of three types of manipulators, when used in the context of the patent at issue, was limited[^448] to the type described in the “Background of the Invention” section of the patent as a “typical machine” which had rollers as the invention of the patent was an improvement of that type of manipulator[^449].

[^441]: *Biovail Pharmaceuticals Inc. v. Canada (Minister of National Health & Welfare)* (2005), 37 C.P.R. (4th) 487 (F.C.) per Harrington J.


[^444]: *Biovail Pharmaceuticals Inc. v. Canada (Minister of National Health & Welfare)* (2005), 37 C.P.R. (4th) 487 (F.C.) per Harrington J. at 500, para. 35.


[^448]: Although Justice Campbell said he gave the term an “expanded interpretation” 2009 FC 50 (F.C.) at para. 31, reversed in part 2010 CarswellNat 4009 (F.C.A.), leave to appeal refused 2011 CarswellNat 1109 (S.C.C.), he actually read it narrowly, as confirmed by the Federal Court of Appeal 2010 FCA 188 (F.C.A.) at para. 24, leave to appeal refused 2011 CarswellNat 1109 (S.C.C.).

In *Bombardier Recreational Products Inc. v. Arctic Cat Inc.* the otherwise broad term “snowmobile” was construed to mean one for an adult and not one for a child.

### 4.8. **STEP 2: IS A CLAIM ELEMENT “ESSENTIAL”**?

With the first step complete, the Court has given a meaning to the word or phrase in the claim.

The second group of principles set out in *Free World* provided that the claim language will, on a purposive construction, show that some elements of the claimed invention are essential while others are non-essential:

> The key to purposive construction is therefore the identification by the court, with the assistance of the skilled reader, of the particular words or phrases in the claims that describe what the inventor considered to be the “essential” elements of his invention.

Trudel, J.A. of the Federal Court of Appeal rephrased the test this way:

> When construing a patent claim, the task of a trial judge is to separate and to distinguish those elements of the claim that “are essential if the devices are to work as contemplated and claimed by the inventor” and the non-essential elements that “may be substituted or omitted without having a material effect on either the structure or the operation of the invention described in the claims” in order to define the boundaries of legal protection to which the patent is entitled (*Free World Trust v. Électro Santé Inc. et al.*, 2000 SCC 66 at paragraphs 15 and 20).

This determination is relevant to the application of the claim construction to (at least) infringement: There is no infringement if an essential element is different or omitted. There may still be infringement, however, if non-essential elements are substituted or omitted.

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450. *Bombardier Recreational Products Inc. v. Arctic Cat Inc.*, 2017 FC 207 (F.C. per Roy J.) at paras. 308-309.

451. *Bombardier Recreational Products Inc. v. Arctic Cat Inc.*, 2017 FC 207 (F.C. per Roy J.) at paras. 308-309. Similarly, at para. 348, the court held that an “engine cradle” meant a walled engine cradle.


In essence, the purpose is to identify what it is in the claims that the inventor considered to be essential.\textsuperscript{455} Claim elements are presumed to be essential, and a party alleging otherwise bears the onus of establishing non-essentiality.\textsuperscript{456}

This analysis presupposes that, at least in some cases, a claim will have a non-essential element, which element can be substituted or omitted.\textsuperscript{457} Thus, in this part of the \textit{Free World} analysis, the Court is effectively re-writing the claim by replacing the non-essential element with something other than what it was (a substitute or “variant”) or deleting the word or phrase from the claim altogether (by declaring it non-essential and ignoring it).

After analogizing patent claims to “fences”, Mr. Justice Binnie stated:

In reality, the “fences” often consist of complex layers of definitions of different elements (or “components” or “features” or “integers”) of differing complexity, substitutability and ingenuity. A matrix of descriptive words and phrases defines the monopoly, warns the public and ensnares the infringer. In some instances, the precise elements of the “fence” may be crucial or “essential” to the working of the invention as claimed; in others the inventor may contemplate, and the reader skilled in the art appreciate, that variants could easily be used or substituted without making any material difference to the working of the invention. \textbf{The interpretative task of the court in claims construction is to separate the one from the other, to distinguish the essential from the inessential}, and to give to the “field” framed by the former the legal protection to which the holder of a valid patent is entitled.\textsuperscript{458} [emphasis added]

In \textit{Free World}, Justice Binnie said:

\begin{itemize}
\item [(e)] … The identification of elements as essential or non-essential is made: …
\item [(iii)] having regard to whether or not it was obvious to the skilled reader at the time the patent was published that a variant of a particular
\end{itemize}

\begin{flushright}
\textsuperscript{456} \textit{Bristol-Myers Squibb Co. v. Apotex Inc.}, 2009 FC 137 (F.C.) per Hughes, J. at para. 37.
\textsuperscript{457} \textit{Mediatube Corp. v. Bell Canada}, 2017 FC 6, (F.C. per Locke J.) at para. 33.
\end{flushright}
element would not make a difference to the way in which the invention works; or

(iv) according to the intent of the inventor, expressed or inferred from the claims, that a particular element is essential irrespective of its practical effect

4.8.1. A Purposive Construction of Free World

The *Free World* test is explicitly disjunctive, whereas *Catnic* and *Improver* asked questions sequentially and dependently. In addition, unlike Justice Hoffman in *Improver*, Binnie J. did not provide specific questions, answers and directions as to how essentiality or non-essentiality were to be determined in applying the test.

In order for the disjunctive questions in *Free World* to be consistent with the conjunctive questions asked in *Catnic* and *Improver* (both of which Binnie J. approved) the questions for determining essentiality must be:

3) Was it obvious to the skilled reader at the time the patent was published that a variant of a particular element would not make a difference to the way in which the invention works? If modifying or omitting the element changes the way the invention works, and that was obvious at the relevant date, then the element is essential; or

4) According to the intent of the inventor, expressed or inferred from the claims, was a particular element essential irrespective of its practical effect? If the element appears to have been intended to be essential, then the element is essential.

Thus if either Question 1 or Question 2 established that the claim element is essential, then it is essential. In order to be non-essential, it must be found not to be essential under both questions.

This interpretation is consistent with the approach taken by the Federal Court of Appeal in *Halford v. Seed Hawk Inc.*:

An element may be found to be essential on the basis of the intent of the inventor as expressed or inferred from the claims, or on the basis of evidence as to whether it would have been obvious to a skilled worker at the time the patent was published that a variant of a particular element


460 *Free World Trust c. Électro Santé Inc.* (2000), 9 C.P.R. (4th) 168 (S.C.C.) per Binnie, J. at 183–184, para. 31. The disjunctive “or” was noted by Harrington J. in *Biovail Pharmaceuticals Inc. v. Canada (Minister of National Health & Welfare)* (2005), 37 C.P.R. (4th) 487 (F.C.) per Harrington J. at 503, para. 46 while he applied the *Improver* questions in para. 44.

461 See Appendix “A” for a comparison of the logic in *Catnic*, *Improver* and *Free World*. 
would make a difference to the way in which the invention works (Free World at paragraphs 31 and 55).462

Although the Free World test permits departing from the wording of the claims, Justice Binnie suggested that it be done sparingly:

The patent owner, competitors, potential infringers and the public generally are thus entitled to clear and definite rules as to the extent of the monopoly conferred. This in turn requires that the subjective or discretionary element of claims interpretation (e.g., the elusive quest for “the spirit of the invention”) be kept to the minimum, consistent with giving “the inventor protection for that which he has actually in good faith invented” (Western Electric Co. v. Baldwin International Radio of Canada, [1934] S.C.R. 570, at p. 574). Predictability is achieved by tying the patentee to its claims; fairness is achieved by interpreting those claims in an informed and purposive way.463 [emphasis added]464

Where patent language can bear more than one equally plausible meaning, one must adopt a “reasonable view” of patent language to “afford the inventor protection for that which he has in good faith invented”465 but this principle does not mean that in all cases it must adopt “any arguable interpretation that would uphold the patent”.466 Claim construction is supposed to be objective, not result-oriented.

4.8.2. Q. #1: The Obviously Superfluous Claim Element

The first question, in essence, asks: “Does the element really matter as to how the invention works?” If it matters, it is essential.

The first question set out in Free World by Justice Binnie as a way of determining whether a claim element was essential was:


... whether or not it was obvious to the skilled reader at the time the patent was published that a variant of a particular element would not make a difference to the way in which the invention works.\textsuperscript{467}

Presumably, if it would have been obvious that a variation or omission of a particular claim element would not make a difference to the way in which the invention works, then such element would be superfluous, or irrelevant, and it had to be obviously so.

This part of the question was derived from the language used in \textit{Catnic} by Lord Diplock:

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

The question, of course, does not arise where the variant would in fact have a material effect upon the way the invention worked. Nor does it arise unless at the date of publication of the specification it would be obvious to the informed reader that this was so. Where it is not obvious, in the light of then-existing knowledge, the reader is entitled to assume that the patentee thought at the time of the specification that he had good reason for limiting his monopoly so strictly and had intended to do so, even though subsequent work by him or others in the field of the invention might show the limitation to have been unnecessary.\textsuperscript{468} [emphasis added]
\end{quote}

Although \textit{Catnic} asked whether there was a “material” effect on the way the invention worked and \textit{Free World} merely asked whether the variant made “a” difference, there probably needs to have been a material rather than an immaterial difference.

\textbf{4.8.2.1. The Presence of a Variant}

Somewhat illogically, this part of the analysis has as a precondition that the device or process under consideration varies from what is claimed.

So there is, at least, some preliminary construction given to the claim which is then compared with, perhaps, the infringing device, to determine “what is the difference”. The defendant’s device or process in the case of an action for infringement or a piece of prior art in the case of validity, lacks or has varied a particular element of the claimed invention: “the variant”.


After already deciding that the variant is not within the claim language (by some form of initial construction), following in the footsteps of the *Catnic* test, the *Free World* test then asks the circular question as to whether the variant should be included in the claim.

As discussed above in Chapter 4.3.3, *Improver* specifically requires this initial construction to be done “acontextually”. No such restriction is imposed in *Catnic* or *Free World*. This precondition of there being a variant underlines the observation made by Lord Hoffman in the *Kirin-Amgen* case, discussed in Chapter 4.9.2 below, that the *Catnic* test was not meant to be a test of general application but rather to be applied only in circumstances where there was a variant present.

### 4.8.2.2. Does the Variant Affect the Way the Invention Works?

The first part of the *Free World* question requires a comparison to be made, by the notional person skilled in the art, between the way the invention works with the claim element and the way it works without the element or as replaced by the variant. According to Linden J.A. in *Janssen Pharmaceutica Inc. v. Apotex Inc.*:

> … the question of equivalence supposes that the person skilled in the art is told of both the invention and the variant and asked whether the variant would obviously work in the same way … .

“Working in the same way” means the variant “...would perform substantially the same function in substantially the same way to obtain substantially the same result.” The criterion is not whether the variant improves the performance of the invention but rather does it have a significant effect on how the device functions, be it positive or negative.

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471 In *Quadco Equipment Inc. v. Timberjack Inc.* (2002), 17 C.P.R. (4th) 224 (Fed. T.D.) per Heneghan, J. at para. 23, Justice Heneghan expressed an unusual variant on the *Free World* test that assumed essentiality unless it was obvious that the inventor knew that the element was immaterial:

> The fact remains however that strict compliance with a word or phrase will be considered an essential requirement by the courts unless it is obvious that the inventor knew that a failure to comply with that requirement would have no material effect on the way the invention worked. [emphasis added]


a) The Way the Invention Works

How does one determine the way in which the invention works as a point to start the comparison? Presumably it is the invention as claimed that is considered — but that is what is trying to be determined in the first place, making the analysis circular.

As a starting point for the comparison, does one envisage a hypothetical product, made according to the preferred embodiment taught in the disclosure of the patent or does one examine the plaintiff's product, determine whether it is an embodiment of the invention and examine how it works? This is probably the case, because the patent must not be construed with an eye on the article allegedly made in compliance with the patent. It is suggested however, that if the plaintiff can establish that its device or process is made according to the patent, then the plaintiff's device or process would provide at least a "real life" example of the way the invention works which would be preferable to a hypothetical one.

b) The Way (the Invention + the Variant) Works

Assuming one can determine how the invention works, to what does one compare it?

(a) a hypothetical product or process that has the variant?;

(b) a real product or method that has the variant (e.g., The defendant's product or process)?; or

(c) the invention minus the purportedly non-essential element?

Some understanding of the operation of the allegedly infringing device is necessary to pinpoint the variants that are in contention.

Assuming one knows how the invention works, if one compares that to how the defendant's product or method works, then claim construction is necessarily based in the reality of the defendant's device. Some case law has said the claims are to be construed without consideration of the defendant's device. In Janssen *Pharmaceutica Inc. v. Apotex Inc.*, the Federal Court of Appeal appears to have stated that the equivalence comparison can be made with the allegedly infringing product after an initial claim construction is done:

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The Motions Judge was careful to construe the essentials of the claims without reference to the particular variants in the Torcan Process. Only after he had completed his initial construction did he proceed to consider the issue of equivalence vis-à-vis the Torcan [the respondent’s] Process.\footnote{Janssen Pharmaceutica Inc. v. Apotex Inc. (2001), 13 C.P.R. (4th) 410 (Fed. C.A.) at 427–428, para. 42, affirming (2000), 5 C.P.R. (4th) 53 (Fed. T.D.). This case should be applied with caution as the claims at issue were “product by process” claims which, at the time, were permitted under subsection 41(1) of the Patent Act to prohibit claims for food or medicine except when prepared or produced by the methods or processes of manufacture particularly described and claimed or by their obvious chemical equivalents. Claim 1 claimed an intermolecular reaction whereas the Respondent’s Torcan process used a more complicated process that involved and intramolecular reaction: “The Torcan process, therefore, attempted to add complexity to the process claimed in the Janssen Patent for the purpose of differentiating itself from the patented process.” [at 420, para. 23]. Claim 5 in the Janssen Pharmaceutica case expressly claimed the compound “whenever prepared or produced by the process of claim 1 or by any obvious chemical equivalent thereof” [at 415, para. 11]. The Motions Judge held that the Apotex process was either within the scope of the claims or was an obvious chemical equivalent of the essential reaction described therein [at 414, para. 5]. The Court held that “…claim 1, by virtue of s.s. 41(1) of the Patent Act, already contemplates obvious chemical equivalents to the processes it specifically describes and claims.” at 427–428 [para. 42].}

In a later paragraph, the Federal Court of Appeal appears to approve using the allegedly infringing variant as a point of comparison:

He [the Motions Judge] was clearly aware of the main issue being whether Torcan’s intramolecular reaction was materially different from Janssen’s intermolecular acylation reaction.\footnote{Janssen Pharmaceutica Inc. v. Apotex Inc. (2001), 13 C.P.R. (4th) 410 (Fed. C.A.) at 428, para. 44, affirming (2000), 5 C.P.R. (4th) 53 (Fed. T.D.).}

It is suggested that if the defendant’s device or method has the variant or lacks the claim element at issue, it provides an empirical and realistic point of reference for determining equivalence as compared to some hypothetical device or method.


4.8.2.3. **Obvious Substitutability ... At the Time the Patent was Published**

The second part of the Free World question also had its roots in Catnic where Lord Diplock phrased the question in this manner:

Put in a nutshell the question to be answered is: **Would the specification make it obvious to a builder familiar with ordinary building operations that the description of a lintel in the form of a weight-bearing box girder of which the back plate was referred to as “extending vertically” from one of the two horizontal plates to join the other, could not have been intended to exclude lintels in which the back plate although not positioned at precisely 90 degrees to both horizontal plates was close enough to 90 degrees to make no material difference to the way the lintel worked when used in building operations?** No plausible reason has been advanced why any rational patentee should want to place so narrow a limitation on his invention. On the contrary, to do so would render his monopoly for practical purposes worthless, since any imitator could avoid it and take all the benefit of the invention by the simple expedient of positioning the back plate a degree or two from the exact vertical.\(^{482}\) [emphasis added]

The identification of elements as essential or non-essential is made on the basis of the common knowledge of the person of ordinary skill in the art to which the patent relates and as of the date the patent is published.\(^{483}\)

The onus is on the patentee to establish known and obvious substitutability at the date of publication of the patent,\(^{484}\) or presumably, for old-Act patents, at the date the patent issued. If the patent holder fails to discharge the onus, the descriptive word or expression in the claim will be considered essential unless the context of the claims language otherwise dictates.\(^{485}\)

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Unlike the test of obviousness when determining validity, in this context, the skilled person is permitted to know of the substitute’s existence.\textsuperscript{486} had the skilled worker at that time been told of both the element specified in the claim and the variant and "asked whether the variant would obviously work in the same way", the answer would be yes.\textsuperscript{487}

\textbf{a) At the Time the Patent Application is Published}

In \textit{Free World}, Justice Binnie reaffirmed that the substitutability of non-essential elements is to be determined as of the date of publication of the patent.\textsuperscript{488} His justification was that the scope of the patent would be broadened if the claim was to be able to encompass later developed equivalents:

\ldots the effect would be that the ambit of the monopoly would grow over the life of the patent as new substitutes are developed and absorbed into the common knowledge of the skilled worker. The inventor cannot be thought to have the necessary "intent" in relation to after-created knowledge except in the irrelevant sense of intending to reap the benefit of the maximum coverage available. In my view, \textit{Catnic}, \textit{supra}, and \textit{O'Hara}, \textit{supra}, were correct to put the onus on the patentee to establish known and obvious substitutability at the date of publication of the patent. If the patentee fails to discharge that onus, the descriptive word or expression in the claim is to be considered essential unless the context of the claims language otherwise dictates.\textsuperscript{489}

A corollary to the question as to whether it was obvious, as of the date the patent was published, that the variant would not make a difference to the way the invention works is that the variant must have existed at that time. If the variant did not exist at that time, then it could not have been obvious that it would not change the way the invention worked. Likewise, the inventor could not have intended to include a variant that did not exist.

The concept has been around since as early as 1912 in the context of infringement capturing something within the claim:

\begin{itemize}
\item \textsuperscript{488} \textit{Free World Trust c. Électro Santé Inc.} (2000), 9 C.P.R. (4th) 168 (S.C.C.) per Binnie, J. at 193–194, para. 55, quoted above.
\item \textsuperscript{489} \textit{Free World Trust c. Électro Santé Inc.} (2000), 9 C.P.R. (4th) 168 (S.C.C.) per Binnie, J. at 194–195, para. 57
\end{itemize}
... nothing is an infringement of the patent which the knowledge of the world on the publication of the specification would not have recognized as being an equivalent of the patented process.  

If no equivalent to a claim element existed as of the date of publication of the patent, the claim element under consideration was necessarily essential and therefore could not be varied. When the later developed equivalent was created, the element that was considered essential as of the date of publication of the patent became no longer de facto essential to the operation of the device. The device incorporating the variant of the essential feature would not be an infringement because the element that had been varied was essential as at the publication date.

If, however, there were obvious equivalents to the claim element at the date of publication, then the first question in Free World (Does it affect the way the invention works?), would not find the element to be essential.

Presumably for old-Act patents, these same considerations would be applicable at the date the patent issued.

4.8.3. Q. #2: Is the Element Essential, According to the Intent of the Inventor as Expressed or Inferred from the Claims?

Briefly, the second question in the Free World test requires that the patentee be limited to the language of the claims, as construed in the context of the patent. The claim element is essential, in effect, simply “… because it’s there.”

This question echoes the comment by the Federal Court of Appeal in O’Hara:

A court must interpret the claims; it cannot redraft them. When an inventor has clearly stated in the claims that he considered a requirement as essential to his invention, a court cannot decide otherwise for the sole reason that he was mistaken.


491 Answer given by British mountaineer George Leigh Mallory in an interview with The New York Times in March, 1923 when asked why he wanted to climb Mount Everest. He was lost on Everest a year later.

492 Eli Lilly & Co. v. O’Hara Manufacturing Ltd. (1989), 26 C.P.R. (3d) 1 (Fed. C.A.) per Pratte J.A. at 7. As discussed above, the claim never said the claim element was essential. The element was simply in the claim. See also Glaston Services Ltd. Oy v. Horizon Glass & Mirrors Ltd., 2010 FC 1191 (F.C.) per Mandamin J. at para. 65: “Unlike the claim 7 of the ‘257 Patent, an essential element of claim 3 of the ‘628 patent is the requirement that the pneumatic spring on the upper rollers is provided by a pneumatic cylinder since it is specifically claimed in the ‘628 Patent.” See also ABB Technology AG, ABB Inc. v. Hyundai Heavy Industries Co., Ltd., 2015 FCA 181 (F.C.A. per Stratus J.A., Webb & Near JJ.A. concurring) at para. 51 where, when a broad construction of a term in the claims was made, the “words may have mistakenly claimed too much: “Redrafting would undermine the public notice function of patents, which entitles readers to clear and definite guidance concerning the extent of the monopoly conferred (Free World Trust, at paragraphs 42-43.”
Hoffman J. described the analog to this question, the third *Improver* question, as the real construction question, the earlier questions being factual precursors.

This part of the test focuses on the primacy of the language of the claims:

The primacy of the claims language was already rooted in our jurisprudence and should, I think, be affirmed on this appeal.

Courts can use the “primacy” language from *Free World* to hold the patentee to the words of the claim (purposively construed, of course).

The words chosen by the inventor will be read in the sense the inventor is presumed to have intended, and in a way that is sympathetic to accomplishment of the inventor’s purpose expressed or implicit in the text of the claims. However, if the inventor has misspoken or otherwise created an unnecessary or troublesome limitation in the claims, it is a self-inflicted wound. The public is entitled to rely on the words used provided the words used are interpreted fairly and knowledgeably.

The facts of *O’Hara* have an echo in the facts of this case. Claim 1 of the ‘156 patent stipulates the “said magnetization coil being stationary” during treatment. Whether the magnetization is stationary may or may not affect the way the device works, but the inventor has explicitly so stipulated.

Similarly in *ABB v. Hyundai*, the trial judge characterized the inclusion of “cable grounding” as an element of claim 1, as making it an essential feature of the claims:

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(3) Would the reader skilled in the art nevertheless have understood from the language of the claim that the patentee intended that strict compliance with the primary meaning was an essential requirement of the invention. If yes, the variant is outside the claim.


It is worth noticing that Lord Diplock’s first two questions, although they cannot sensibly be answered without reference to the patent, do not primarily involve questions of construction: whether the variant would make a material difference to the way the invention worked and whether this would have been obvious to the skilled reader are questions of fact. The answers are used to provide the factual background against which the specification must be construed. It is the third question which raises the question of construction …


497 *Free World Trust c. Électro Santé Inc.* (2000), 9 C.P.R. (4th) 168 (S.C.C.) per Binnie, J. at 196, para. 60. See also *Eli Lilly & Co. v. Apotex Inc.*, 2009 FC 991 (F.C.) per Gauthier J. at para. 139, affirmed 2010 CarswellNat 5866 (F.C.A.), leave to appeal refused 2011 CarswellNat 1368 (S.C.C.), additional reasons 2011 CarswellNat 4151 (F.C.) where the court refused to read out the only element in a dependent claim as to do so would render the claim as having no meaning.
Here the inventor represented that cable grounding was required and included that component without reservation into Claim 1. If cable grounding was not an essential feature of Claim 1 there was no need to mention it. If it was intended to be an optional embodiment, it could have been described that way and included as a dependant claim. There is nothing in the claims or in the specification that would suggest to the skilled reader that including the cable grounding switch (ground conductor) in the [gas-insulated switchgear assemblies] compartment fulfilled some inventive purpose subordinate in importance to the circuit breaker isolator. Having included cable grounding as an essential feature of the claims, it is too late for ABB to resile from it.\footnote{498}

The language of the claims cannot be ignored. The care with which such language has been crafted has been stressed by the courts.\footnote{499}

The characterization in \textit{Free World} of the language of the claim being (for the patentee) “a self inflicted wound” is harmonic with the old “literal infringement” test which forced the patent scope to be limited to the words chosen by the patentee.

It is suggested that the only difference between the old literal infringement test and the second part of the \textit{Free World} test is that the words are to be interpreted “purposively” rather than “literally”, if they ever were. Given the Supreme Court \textit{dicta} in \textit{Smith Incubator Co. v. Seiling}, perhaps the words of the claim were never meant to have been read “literally” and we may have merely returned to reading them, simply, “in context”:

\begin{quote}
It is now settled law that, for the purpose of ascertaining the meaning of the claims, the language in which they are expressed must be read in light of the specification as a whole, but it is by the effect of the language employed in the claims themselves, interpreted with such aid as may properly be derived from the other parts of the specification, that the scope of the monopoly is to be determined.\footnote{500}
\end{quote}

\textbf{4.8.3.1. Adherence to the Language of the Claims}

“Purposive construction” is not an exercise divorced from the words used in the patent and the context in which they appear.\footnote{501} The first set of principles set out in \textit{Free

\begin{footnotes}
\end{footnotes}
World⁵⁰² stress the importance in claim construction of adhering to the language of the claim:

(a) The Patent Act promotes adherence to the language of the claims.
(b) Adherence to the language of the claims in turn promotes both fairness and predictability.
(c) The claim language must, however, be read in an informed and purposive way.
(d) The language of the claims thus construed defines the monopoly. There is no recourse to such vague notions as the "spirit of the invention" to expand it further.

Justice Binnie stressed the importance of claims having clear boundaries:

The scope of patent protection must not only be fair, it must be reasonably predictable. A patent is, after all, a public instrument issued under statutory authority which may result in severe financial consequences for its infringement. The scope of its prohibition should be made clear so that members of the public may know where they can go with impunity.⁵⁰³ [emphasis added]

The patent system is designed to advance research and development and to encourage broader economic activity. Achievement of these objectives is undermined however if competitors fear to tread in the vicinity of the patent because its scope lacks a reasonable measure of precision and certainty. A patent of uncertain scope becomes "a public nuisance" … There is a high economic cost attached to uncertainty and it is the proper policy of patent law to keep it to a minimum.⁵⁰⁴

In applying this principle to the facts in the Free World case, Justice Binnie limited the invention to "circuit means", as claimed and held it did not include a microcontroller (computer) which performed similar or even the same function:

The claims specify the presence of "circuit means" to control the electromagnetetherapy. There is nothing in the context of the claims to

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⁵⁰² Free World Trust c. Électro Santé Inc. (2000), 9 C.P.R. (4th) 168 (S.C.C.) per Binnie, J. at 184, para. 31(a) to (d).
suggest that the inventor considered circuit means to be non-essential. On the contrary, it is the core of the invention.\textsuperscript{505} [emphasis added]

The claims clearly require “circuit means”. As mentioned, a skilled reader in 1981 or 1983 would associate that descriptive phrase with specific technology and consider the use of such technology essential to the claimed invention. The fact that the Électro-Santé device uses a microcontroller to perform a similar or even the same function does not bring it within the claim. It performs the function in a very different way. Moreover, \textbf{there is no reason to think the inventor didn’t mean what he said}, or considered the use of “circuit means” a non-essential element of the claims, or intended to claim more broadly than “circuit means” and thereby put at risk for “covetous claiming” the validity of the patents.\textsuperscript{506} [emphasis added]

The determination of which elements are essential and which are non-essential, should not be based on the inventive concept of the patent as such approach risks overlooking the language used in the claims.\textsuperscript{507}

One judge may have characterized \textit{Free World} too narrowly, omitting the essential/ non-essential component of the test. In \textit{Halford v. Seed Hawk Inc.}, Pelletier J. stated:

\begin{quote}
The question of whether patents protect only the literal meaning of the claims or whether patent protection extends to the “substance of the invention” was put to rest in \textit{Free World Trust v. Electro Santé Inc. et al.} It is now clear that the patent protects only the invention described in the claims, as understood by a workman skilled in the trade, as of the date of the patent.\textsuperscript{508}
\end{quote}

Where the language of the claim and definitions in the disclosure make clear when the particle size is to be measured, a proffered purposive construction that is not supported by the language of the claims will not be followed. In \textit{Eli Lilly Canada Inc. v. Mylan Pharmaceuticals ULC et al}, \textsuperscript{509} claim 1 said the compound [tadalafil] was provided as a free drug comprising particles. The disclosure defined “free drug” as “solid particles consisting essential of the compound of [tadalafil], as opposed to the compound intimately embedded in a polymeric

\begin{flushleft}
\textsuperscript{505} \textit{Free World Trust c. Électro Santé Inc.} (2000), 9 C.P.R. (4th) 168 (S.C.C.) per Binnie, J. at 198, para. 68.

\textsuperscript{506} \textit{Free World Trust c. Électro Santé Inc.} (2000), 9 C.P.R. (4th) 168 (S.C.C.) per Binnie, J. at 199, para. 73. Ironically, computers contain almost nothing but circuitry.

\textsuperscript{507} \textit{Pollard Banknote Limited v. BABN Technologies Corp. et al}, 2016 FC 883 (F.C. per Locke J.) at para. 80.

\textsuperscript{508} \textit{Halford v. Seed Hawk Inc.} (2001), 16 C.P.R. (4th) 189 (Fed. T.D.) at 196, para. 27.

\textsuperscript{509} 2015 FC 178 (FC per de Montigny J.)
\end{flushleft}
The court found that it could hardly be clearer that the particles to be measured were the tadalafil particles before they were combined with the excipients and not after formulation when bioavailability can be affected.\(^{511}\)

### 4.8.3.2. The Inferred Intent of the Inventor

The “intent of the inventor” does not refer to the actual intent of the inventor,\(^{512}\) but rather what is determined from the patent itself. The Court is to embark upon an objective exercise as to what a skilled reader would have understood the inventor to mean.\(^{513}\)

> In my view, those references to the inventor’s intention refer to an objective manifestation of that intent in the patent claims, as interpreted by the person skilled in the art, and do not contemplate extrinsic evidence such as statements or admissions made in the course of patent prosecution.\(^{514}\) [emphasis added]

It should be noted that although *Free World* permits the entire patent to be examined to interpret the words of the claims,\(^{515}\) the language of the test appears to limit the search for the “intent of the inventor” to the claims themselves\(^{516}\) and the test has been applied as such.\(^{517}\) This may not have been the intention of the court in *Free World* as it did not

\(^{510}\) *Eli Lilly Canada Inc. v. Mylan Pharmaceuticals ULC et al*, 2015 FC 178 (FC per de Montigny J.) at para. 103.

\(^{511}\) *Eli Lilly Canada Inc. v. Mylan Pharmaceuticals ULC et al*, 2015 FC 178 (FC per de Montigny J.) at paras. 102 & 103.


\(^{513}\) *Pfizer Canada Inc. v. Canada (Minister of Health)* (2005), 46 C.P.R. (4th) 244 (F.C.) per Hughes J. at para. 39, affirmed 2007 CarswellNat 6 (F.C.A.) quoting with approval, Lord Hoffman in *Kirin-Amgen Inc. v. Hoechst Marion Roussel Ltd.* (2004), 331 N.R.1 (H.L.) at para. 32:

> Construction is objective in the sense that it is concerned with what a reasonable person to whom the utterance was addressed would have understood the author to be using the words to mean.


> While the appellants express concern that “purposive construction” may open the door to extrinsic evidence of intent, as is the case with certain types of extrinsic evidence in the United States, neither Catnic, supra, nor O’Hara, supra, goes outside the four corners of the specification, and both properly limit themselves to the words of the claims interpreted in the context of the specification as a whole. [emphasis added]

\(^{516}\) *Free World Trust c. Électro Santé Inc.* (2000), 9 C.P.R. (4th) 168 (S.C.C.) per Binnie, J. at 184, para. 31:

> (iv) according to the intent of the inventor, expressed or inferred from the claims, that a particular element is essential irrespective of its practical effect; [emphasis added]

\(^{517}\) In *Westaim Corp. v. Royal Canadian Mint* (2002), 23 C.P.R. (4th) 9 (Fed. T.D.) at para. 75, the Court looked only to the claims for the inventor’s intent:
indicate that it was departing from the *Catnic, O’Hara or Smith Incubating*\(^{518}\) tests, quoted above, which entitled the Court to look to the entirety of the specification to determine whether the patentee intended to exclude a variant.\(^{519}\)

In *Fournier Pharma Inc. v. Canada* (Minister of Health)\(^{520}\) the court inferred that a PK Profile set out in claims 1-3 that reflected a USFDA guideline was an essential feature of a claim given that the inventors were seeking bioequivalence, given that Canada requires that bioequivalence was established using the USFDA guideline, and given that the patent was for an invention to be marketed in Canada.\(^{521}\)

### 4.8.3.3. Most Claims Contain Only Essential Elements

It is probably fair for a court to assume that, in most cases, all claim elements are essential.\(^{522}\) A party alleging otherwise bears the onus of proving non-essentiality.\(^{523}\)

Section 34(2) of the Patent Act\(^ {524}\) requires that a patent specification end with a claim or claims which “distinctly and in explicit terms” set out the scope of the monopoly claimed.\(^ {525}\) This requirement suggests that a patentee should choose as claim elements only those things that are essential to the working of the invention.

This concept is echoed in *Catnic*, where Lord Diplock quoted *Electrical & Musical Industries Ltd. v. Lissen Ltd.* at page 242–243, for an “all elements” test or “literal construction” of patent claims:

> My Lords, a patent specification is a unilateral statement by the patentee, in words of his own choosing, addressed to those likely to have a practical interest in the subject matter of his invention (i.e. “skilled in the art”), by which he informs

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In my opinion there is nothing in the language of the claims to indicate that the inventors did not clearly intend that first layer 0.01 mm was a non-essential element. [emphasis added]


\(^{520}\) 2012 FC 740, 103 C.P.R. (4th) 77 (F.C.) per Zinn J.

\(^{521}\) *Fournier Pharma Inc. v. Canada (Minister of Health)*, 2012 FC 740, 103 C.P.R. (4th) 77 (F.C.) per Zinn J. at para. 74.

\(^{522}\) *Pollard Banknote Limited v. BABN Technologies Corp. et al*, 2016 FC 883 (F.C. per Locke J.) at p. 74.

\(^{523}\) *Pollard Banknote Limited v. BABN Technologies Corp. et al*, 2016 FC 883 (F.C. per Locke J.) at p. 74.

\(^{524}\) R.S., c. P-4.

\(^{525}\) As stated by Justice Snider in *Teva Canada Ltd. v. Novartis AG*, 2013 FC 141 (F.C.) at para. 76: … the claims — and not the disclosure — are the essence of a patent and it is the claims that must be interpreted. While the specification, as a whole, will describe the invention, the scope of the monopoly is defined by the claims.
them what he claims to be the essential features of the new product or process for which the letters patent grant him a monopoly.\textsuperscript{526}

Thus, if an inventor decides to include a certain element in his or her claim, why should the Court ignore or modify that element in construing that claim?\textsuperscript{527}

In circumstances of dependant claims, where a dependent claim adds only one new limitation, that limitation must be an essential element of that dependent claim, otherwise that claim would be redundant with the parent claim and would “essentially [be] read out of the patent and [have] absolutely no meaning.”\textsuperscript{528}

The difficulty for the patentee arises when the patentee has “underclaimed”\textsuperscript{529}—that is, the claims are narrower than the invention the patentee could have claimed. The inventor realizes that the language used in the patent suggests that a particular element is essential when subsequent experience shows that it is not. When drafting the patent, the inventor considered a particular element important enough to include in the claim when, later on, the court and the inventor no longer consider it necessary.\textsuperscript{530}

The prime example of “underclaiming” is \textit{Eli Lilly & Co. v. O’Hara Manufacturing Ltd.},\textsuperscript{531} discussed in Chapter 4.3.1.1 above. The Federal Court of Appeal held that, because the O’Hara device lacked the feature of “flexibly biasing the plenum against the drum”, there was no infringement. The Court said that it could not rewrite the patent claim to omit the feature that was later discovered to be unnecessary:

\begin{quote}
A court must interpret the claims; it cannot redraft them. When an inventor has clearly stated in the claims that he considered a requirement as essential to his
\end{quote}

\textsuperscript{526} \textit{Electrical & Musical Industries Ltd. v. Lissen Ltd.} (1938), 56 R.P.C. 23 (U.K. H.L.)


If cable grounding was not an essential feature if Claim 1 there was no need to mention it. If it was intended to be an optional embodiment, it could have been described that way and included as a dependent claim.”… Having included cable grounding as an essential feature of the claims, it is too late for ABB to resile from it.”


\textsuperscript{529} \textit{Biovail Pharmaceuticals Inc. v. Canada (Minister of National Health & Welfare)} (2005), 37 C.P.R. (4th) 487 (F.C.) per Harrington J. at para. 15(8).


\textsuperscript{531} \textit{Eli Lilly & Co. v. O’Hara Manufacturing Ltd.} (1989), 26 C.P.R. (3d) 1 (Fed. C.A.) per Pratte J.A.
invention, a court cannot decide otherwise for the sole reason that he was mistaken.\textsuperscript{532} 

In *Free World*, Justice Binnie approved this approach in these circumstances:

> The words chosen by the inventor will be read in the sense the inventor is presumed to have intended, and in a way that is sympathetic to accomplishment of the inventor's purpose expressed or implicit in the text of the claims. However, if the inventor has misspoken or otherwise created an unnecessary or troublesome limitation in the claims, it is a self-inflicted wound. The public is entitled to rely on the words used provided the words used are interpreted fairly and knowledgeably.\textsuperscript{533}

> ... there is no reason to think the inventor didn’t mean what he said....\textsuperscript{534}

Mr. Justice Binnie stated\textsuperscript{535} that the approach taken in the *O’Hara* case was the same as that of Duff C.J. in *J.K. Smit & Sons Inc. v. McClintock*.\textsuperscript{536} The patent in the Smit case related to a method of setting diamonds in devices such as rotary drill bits for earth boring. Duff C.J., citing the earlier jurisprudence, put the focus on the inventor’s own identification of the “essential” parts of his invention:

> Obviously, the invention, as described by the inventor himself, involves the use of air suction to hold the diamonds in place while the molten metal is being introduced into the mold. There can be no doubt, in my mind, that as the inventor puts it, that is an *essential* part of his process. That part of his process is clearly not taken by the appellants. Adapting the language of Lord Romer, it is not the province of the court to guess what is and is not of the essence of the invention of the respondent. The patentee has clearly indicated that the use of air suction at that stage of the process is an essential, if not the essential, part of the invention described in the specification.\textsuperscript{537} [emphasis added.]

It will be a rare instance for a patent to refer expressly to any element as being “essential”. Instead, the element will be merely one of many in the claim. For example, in the patent at issue in *J.K. Smits & Sons*, Canadian Letters Patent No. 368,042, the inventor never expressly identified any element as being “essential”. Of the nine claims

\begin{thebibliography}{10}
\bibitem{534} *Free World Trust c. Électro Santé Inc.* (2000), 9 C.P.R. (4th) 168 (S.C.C.) per Binnie, J. at 199, para. 73.
\end{thebibliography}
in the patent, eight referred to “air-suction” or “suction of air” and the other claim referred to “means tending to form a vacuum in the vacuum chamber”. The disclosure of the Lilly patent in the O’Hara case stated “It is essential that the exhaust inlet be positioned adjacent to the leading lower quadrant of the drum where the tablets tumble” but nowhere did the patent state that a plenum “flexibly biased against the drum” was essential to the invention. The claim merely included that claim element.

In Free World, Justice Binnie court limited the scope of the claim to the exact language of the claim:

The facts of O’Hara have an echo in the facts of this case. Claim 1 of the ‘156 patent stipulates the “said magnetization coil being stationary” during treatment. Whether the magnetization is stationary may or may not affect the way the device works, but the inventor has explicitly so stipulated.

4.8.3.4. **Words of Precision and the Precision of Words**

Because the words of the claims are supposed to be interpreted as they would be by a person skilled in the art (the notional addressee of the patent) and because different addressees give words meanings with different degrees of precision, it is suggested that the scope of the meaning of words could be easily found by answering the following question:

With what degree of precision are the words in question being used in the context of the claim?

Although he had the opportunity to decide the Catnic case on the similar reasoning, Lord Diplock, unfortunately, chose not to do so. He held that a rear wall slightly off vertical would be considered “vertical” for a builder. In the case of tree harvesting “vertical processors” — something inclined 35 degrees off vertical — was considered to be substantially vertical and within the claims.

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... it seems to me that the expression “extending vertically” as descriptive of the position of what in use will be the upright member of a trapezoid-shaped box girder, is perfectly capable of meaning positioned near enough to the exact geometrical vertical to enable it in actual use to perform satisfactorily all the functions that it could perform if it were precisely vertical; and having regard to those considerations to which I have just referred that is the sense in which in my opinion “extending vertically” would be understood by a builder familiar with ordinary building operation.

One indication of the intention of the inventor is the degree of particularity of the description of the element in question. Where an inventor claims a particular subset of a class, then the court can assume that the inventor considered that degree of specificity to be required and the description does not extend to the class itself.\textsuperscript{542}

Similarly, the use of the emphatic term “solely” indicated to one Court an intention that strict compliance with “solely” was required and that modification or additions were excluded.\textsuperscript{543}

\subsection*{4.8.3.5. Numbers}

Even when numbers are used to describe dimensions or quantities, they are described with a certain degree of precision.

In everyday measurement, numbers are rounded upwards from the half below and downwards from the half above. For example, something having a value of 6 could be any value between 5.5 and 6.49. On the other hand, when scientists describe something as having a weight of 6.002 grams, they mean that it is between 6.0015 and 6.00249 grams. Thus the number of significant digits expressed (the number of digits to the right side of the decimal point) is an indication of the precision of the value and the specificity of the description.

The following numerical ranges have been held to be essential elements of the claims of the patent in their respective cases:

\begin{itemize}
  \item “at least 1.3”. The plain and ordinary meaning of a succination ratio of “at least 1.3” cannot include 1.25;\textsuperscript{544}
  \item “a C4-C10 alpha-olefin having a density of from 0.916 to 0.930 g/cm\textsuperscript{3}”. An alpha-olefin having a density below the “crisp value” was considered to be outside the scope of the claim;\textsuperscript{545} and
  \item A dosage of a pharmaceutical at “13-15 mg/kg/day”.\textsuperscript{546}
\end{itemize}


\textsuperscript{545} DuPont Canada Inc. v. Glopak Inc. (1998), 81 C.P.R. (3d) 44 (Fed. T.D.) per Muldoon J. at 57, para. 34.
4-103 Cameron’s Patent and Trade Secrets Law

4.8.3.6.  “About”

The term “about” is usually used to modify a number: i.e., “about 5 mg”. The dictionary or ordinary meaning of “about” is “near” or “close”. 547 Absent the disclosure specifically defining the word, the ordinary meaning applies. 548

Justice Reed in the Apotex Inc. v. Syntex Pharmaceuticals International Ltd. 549 case, considered that the use of the term “about” in the phrase “about 4-9 weight percentage” meant a flexibility no greater than half way to the next number (3.5 to 9.5). Such use of the term “about” clearly indicates that a number below or above the stated amount was to be considered included, whereas if the term “about” was not used, the Court would have to understand and accept the concept of significant digits, discussed above, to otherwise achieve the same effect.

Everything depends on context. In Sanofi-Aventis Canada Inc. v. Ratiopharm Inc. et al 550 “about” was held to mean “within 10%” whereas in Eli Lilly Canada Inc. v. Apotex Inc. it was held to mean “approximately” and not plus or minus 10%. 551 In Eli Lilly Canada Inc. v. Mylan Pharmaceuticals ULC, 552 “about” was held not to include 20% more.

In Pfizer Canada Inc. v. Apotex Inc 553, the patent defined “about” two ways: (1) generally means within 10%, preferably within 5%, and more preferably within 1% of a

546 Axcan Pharma Inc. v. Pharmascience Inc. (2006), 50 C.P.R. (4th) 321 (F.C.) per Harrington J. at 330, paras. 34 and 35: …when it comes to grammar, and simple arithmetic, the Court does not need the expert advice of a physician…. The dosage portion thereof i.e. 13-15 mg/kg/day is an essential element. Otherwise what would be the point of mentioning dosage in a patent which asserts but one claim limited to a single sentence?

547 The Canadian Oxford Dictionary, (Toronto: Oxford University Press, 1998) defines “about” as, approximately; used to indicate understatement; here and there; at points nearby; all around; in every direction; on the move; in action. See also Ferance, Stephen J.; Indefinite: The Use of Terms Such As “About” and “At Least About” in Patent Claims; Canadian Intellectual Property Review; Patent and Trademark Institute of Canada; [1999], 185–187.

548 In Shire Biochem Inc. v. Canada (Minister of Health), 2008 FC 538, 67 C.P.R. (4th) 94 (F.C.) per Hughes J. at para. 108. The patent defined the use of the term “about” in the context of particle size as meaning plus or minus approximately ten percent of the indicated value. The Court limited the definition of “about” to that particular context and not to all uses of the term “about” in the patent. In Sanofi-Aventis Canada Inc. v. Ratiopharm Inc., 2010 FC 230 (F.C.) per Phelan J. at paras. 39-41, where the patent did not define the term “about”, the Court accepted the use of the term in the U.S. Pharmacopeia of “within 10%”.

549 Apotex Inc. v. Syntex Pharmaceuticals International Ltd. (1999), 1 C.P.R. (4th) 22 (Fed. T.D.) per Reed J. at 38, para. 45.

550 2010 FC 230 (F.C. per Phelan J.) at para. 41.


given value or range; or (2) within an acceptable standard error of the mean, when considered by one of ordinary skill in the art. For the endotherms, the Court preferred the latter definition because the other definition resulted in the numerical margins of error it would be ± 13, i.e., a 26°C variation, which was considered far too great a difference to have been intended by the inventors.554

In a case involving taps for maple tree sap collection,555 the dimension of the hole in the tree of 7/16th inch was expressed as a decimal measurement (0.4375 inches) and the size of the patented tap ranging from about 4.9/16th in. to 7/32nd in. in diameter was expressed in decimals as between about 0.30625 and 0.21875 in. Expressing dimensions in such manner normally implies a precision of 1/100,000th of an inch – a ridiculous precision for such a device. The issue was whether a 5/16th in. device fit within the claimed range. The Court wisely decided that the expression in decimal was merely a transposition from fractional to decimal and was not meant to be an expression of precision.556 The diameter difference of 1.4% outside the exact range was within the range covered by the term "about".557

4.8.3.7. "Substantially"

The term "substantially" is usually used in context to mean approximately or about the same as a reference item.

In Shire v. Apotex,558 the court took guidance as to whether a composition had a “plasma concentration/time curve which is substantially the same as that of Figure 7” of the patent, by noting what the patent described Figure 7, and another figure (#8), as being “similar to” Figure 1 while the curve of Figure 7 was claimed but that of Figure 8 was not. A subjective (graphical, qualitative) consideration of the characteristics of the various curves was made.559 Allegedly unnecessary features of Figure 7 were said to operate against the patentee as a self-inflicted wound.560

4.8.4. “Irrespective of its Practical Effect”

Free World provides that the question as to whether a claim element was essential, according to the intent of the inventor, expressed or inferred from the claims, was to be

555 Équipements d’érable C.D.L. inc. c. Côté, 2012 QCCS 1521 (C.S. Que.) per Michaud FSC.
559 Shire Canada Inc. v. Apotex Inc. et al, 2016 FC 382 (F.C. per Locke J.) at para.129.
560 Shire Canada Inc. v. Apotex Inc. et al, 2016 FC 382 (F.C. per Locke J.) at para.133.
determined “irrespective of its practical effect”. Presumably Justice Binnie was referring to the practical effect the element had on the operation of the invention.

Whereas the test in *Catnic*, as interpreted in *Improver*, permitted elements that had a material effect on the way the invention worked, to be immediately considered to be essential elements, Justice Binnie stated, for the purposes of the second test, this consideration is irrelevant to the second question.

### 4.8.5. An Inconsistency in Free World

Although Justice Binnie followed and endorsed *Catnic, Improver* and O’Hara, there is one portion of the judgment in *Free World* that is discordant with the conjunctive two step approach of the previous cases. After expressly stating the test of essentiality/non-essentiality, Justice Binnie later restated his test as a test of non-essentiality as follows:

It would be unfair to allow a patent monopoly to be breached with impunity by a copycat device that simply switched bells and whistles, to escape the literal claims of the patent. Thus the elements of the invention are identified as either essential elements (where substitution of another element or omission takes the device outside the monopoly), or non-essential elements (where substitution or omission is not necessarily fatal to an allegation of infringement). For an element to be considered non-essential and thus substitutable, it must be shown either (i) that on a purposive construction of the words of the claim it was clearly not intended to be essential, or (ii) that at the date of the publication of the patent, the skilled addressees would have appreciated that a particular element could be substituted without affecting the working of the invention, i.e. had the skilled worker at that time been told of both the element specified in the claim and the variant and “asked whether the variant would obviously work in the same way”, the answer would be yes...

If Justice Binnie meant exactly what he said at this portion of the judgment, his test would bifurcate the questions in *Catnic, Improver* and O’Hara into two, mutually independent questions, either of which could establish that a claim element was non-essential:

**Q#1**: (ii) that at the date of the publication of the patent, the skilled addressees would have appreciated that a particular element could be substituted without affecting the working of the invention.

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562 This section of this chapter is referenced in para. 142 of *Shire Canada Inc. v. Apotex Inc. et al*, 2016 FC 382 (F.C. per Locke J.).

This is the first question in *Catnic* and *Improver*.\(^564\) If this question was met, then the claim element would have had equivalents at the date of publication. If this was meant to be treated as an independent question, then it would not matter whether a clear intention was expressed or inferred from the claim that the element was essential, or even an express statement in the disclosure said that the element was essential. Under this interpretation, there could never be “self-inflicted wound” as there was in *O’Hara*. The test under this circumstance would allow for all equivalents known at the publication date to be variants included in the claim, no matter how specific the language of the claim.\(^565\) Such test would be contrary to Justice Binnie’s direction that the inquiry be “… anchored in the language of the claims…” otherwise “… the court may be heading into unknown waters without a chart.”\(^566\)

An example of an application of this reading of *Free World* can be found in *Pfizer Canada Inc. et al v. Novopharm Limited et al*,\(^567\) discussed in more detail below in Chapter 4.9.1 where the Court considered “wet granulation” to be included in a claim that expressly referred to “dry granulation” because the Court answered only the first *Free World* question and considered them to be obviously substitutable at the publication date.\(^568\)

Mr. Justice Locke has politely noted that “the series of three questions from *Improver* does not appear to be entirely consistent with the two-part analysis” earlier in paragraph 55 of *Free World*\(^569\) which said the test for non-essentiality was disjunctive (“or”). More bluntly, it is inconsistent with *Catnic* and *Improver*. Blunter still, it is 180 degrees out-of-phase with those cases and, therefore, wrong.

Justice Locke stated:

“… under the *Improver* test, the defendant need only be successful on one of the questions. In order for the patentee to establish that a claim element is not essential, it must succeed on all three questions. On the other hand, the SCC’s characterization of the analysis appears to indicate that the defendant must be successful on both parts of the analysis, and

\(^564\)As noted in para. 135 of *Shire Canada Inc. v. Apotex Inc. et al*, 2016 FC 382 (F.C. per Locke J.).

\(^565\) This would be analogous (in one respect) to the U.S. Doctrine of Equivalents in that the claims would cover that which is claimed and all equivalents of each element claimed: *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931 (Fed. Cir., 1987); *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17 (U.S. Ohio S.C., 1997), per Thomas J., at 37. It would differ in that no element could be omitted.


\(^569\) *Shire Canada Inc. v. Apotex Inc. et al*, 2016 FC 382 (F.C. per Locke J.) at para. 135.
that the patentee can establish that a claim element is not essential by succeeding on just one part.

It seems unlikely that the SCC intended this apparent difference. Its decision does not acknowledge any inconsistency between the *Improver* questions and its own test for determining essentiality. Nor does the SCC suggest any disapproval of the *Improver* questions. In fact, the SCC clearly relies in *Improver*.”570

Justice Locke refers to the analysis in this chapter at para. 142:

“More recently, Donald M. Cameron addressed this issue in *Canadian Patent Law Benchbook*, 2nd ed., D.M. Cameron ed., Carswell, 2014, at p 375, making another attempt at reconciling the inconsistency which effectively reads the *Free World Trust* characterisation of the test as conjunctive.”571

**Q#2: (i) that on a purposive construction of the words of the claim it was clearly not intended to be essential**

This is a version of the second question in *Catnic*, the third question in *Improver*572 and the analysis that resulted in the “self-inflicted wound” in *O’Hara*. If this was treated as an independent test, a variant could radically change the way the invention worked (i.e., be essential under the first *Catnic* and *Improver* questions) but if the Court considered that the inventor’s intention was to include the variant, then, under this test, the element would be found non-essential.

In contrast, in *Catnic*, *Improver* and *O’Hara*, the Courts effectively said “Even if the variant does not change the way the invention works, if the patentee clearly considered the claim element to be essential, then it is to be considered essential.”

The contrast in logic between these questions in *Free World* and those in *Catnic* and *Improver* is evident upon a comparison of their logic in *Catnic* and *Improver* and the interpretation of *Free World* given in Chapter 4.8.1 above,573 as illustrated in Appendix “A” to this Chapter.

Binnie J. quoted *Improver* with approval. In *Improver*, Hoffman J. stated that the second *Catnic* question (the third *Improver* question) the question that raised the question of


571 *Shire Canada Inc. v. Apotex Inc. et al*, 2016 FC 382 (F.C. per Locke J.) at para. 142.

572 As noted in para. 135 of *Shire Canada Inc. v. Apotex Inc. et al*, 2016 FC 382 (F.C. per Locke J.).

573 Compare the logic of this test, illustrated in Figure 4 in Appendix “A” with the “purposive” interpretation of *Free World* given above in Chapter 4.8, Figure 3 in Appendix “A” and that of *Catnic* and *Improver*, given in Figures 1 and 2 of Appendix “A” respectively.
construction (as compared to the factual background against which the claim is to be construed):

It is worth noticing that Lord Diplock’s first two [Catnic] questions, although they cannot sensibly be answered without reference to the patent, do not primarily involve questions of construction: whether the variant would make a material difference to the way the invention worked and whether this would have been obvious to the skilled reader are questions of fact. The answers are used to provide the factual background against which the specification must be construed. It is the third question which raises the question of construction and Lord Diplock’s formulation makes it clear that on this question the answers to the first two questions are not conclusive. Even a purposive construction of the language of the patent may lead to the conclusion that although the variant made no material difference and this would have been obvious at the time, the patentee for some reason was confining his claim to the primary meaning and excluding the variant. If this were not the case, there would be no point in asking the third [Improver] question at all.\(^{574}\)

If Binnie J. intended his test to be consistent with Catnic and O’Hara, it should have been expressed as a test for essentiality (rather than non-essentiality) and the negatives turned to positives, as follows:

**For an element to be considered essential and thus non-substitutable, it must be shown either:**

(i) that on a purposive construction of the words of the claim it was clearly intended to be essential, or

(ii) that at the date of the publication of the patent, the skilled addressees would have appreciated that a particular element could not be substituted without affecting the working of the invention, ...

Such test would be consistent with Catnic and O’Hara in that if either question found the element to be essential, then it would be essential and if both questions found the element not to be essential, then the element would be non-essential.

Justice Binnie appears to have repeated this apparent inconsistency in logic at another point of the decision. In dealing with the onus of proving that a variant was obvious at the publication date, Justice Binnie stated:

In my view, Catnic, supra, and O’Hara, supra, were correct to put the onus on the patentee to establish known and obvious substitutability at the date of publication of the patent. **If the patentee fails to discharge that onus,**

the descriptive word or expression in the claim is to be considered essential unless the context of the claims language otherwise dictates.\footnote{Free World Trust c. Électro Santé Inc. (2000), 9 C.P.R. (4th) 168 (S.C.C.) per Binnie, J. at 194, para. 57.}

The first part of the quote above\footnote{“If the patentee fails to discharge that onus [of proving substitutability], the descriptive word or expression in the claim is to be considered essential …”} is consistent with \textit{Catnic} and \textit{Improver}. The latter part\footnote{“…unless the context of the claims language otherwise dictates.”} is not.

Having found the claim element to be essential under the first question, the latter part of the sentence appears to be saying it is essential unless the context of the claims otherwise dictates (i.e., the element appears to be non-essential based on the wording of the claims — the paragraph (e)(iv) test). The test thus contemplates the possibility of the claim element being considered essential under the first question but non-essential under the second question, and the element therefore being non-essential. This is contrary to \textit{Catnic} and \textit{Improver} which asked the second question only after finding the element to be, at first blush, non-essential under the first question.

Perhaps the unusual nature of the proposed scenario renders it of minimal concern: a situation where the patentee has claimed something that, if changed, materially changes the way the invention works, but is referred to expressly as a claim element, yet the Court concludes that the inventor did not intend it to be essential, based on a determining such intent from the claim.

In 2010, Justice Gauthier said, in addressing this part of the \textit{Free World} decision, that this sentence cannot be construed as meaning that the Supreme Court found the third question in \textit{Improver}\footnote{Bauer Hockey Corp. v. Easton Sports Canada Inc., 2010 FC 361 (F.C.) per Gauthier J. at para. 144, affirmed 2011 CarswellNat 4827 (F.C.A.). Although the inventor knew that the tendon guard could be attached in an overlapping fashion [substitutable, and therefore non-essential under the first \textit{Improver} question], it was also evident that he chose to limit his monopoly to tendon guards attached in a side-by-side fashion [intention of the inventor as expressed in the claims, and therefore essential under the second \textit{Improver} question].} to be irrelevant.\footnote{Expressed as a positive: the Supreme Court still required the third question in \textit{Improver} to be asked.} Even in \textit{Free World}, Justice Binnie himself applied the third \textit{Improver} question, whether or not the variant affected the way the invention worked:

\begin{quote}
[59] In \textit{O’Hara, supra}, the Federal Court of Appeal held that a patent for a pill coating machine that specified a flexible exhaust could not be interpreted to
\end{quote}
cover a machine that fulfilled the same function and contained all of the other essential elements but which utilized a fixed exhaust. Pratte J.A., for the court, considered it important that the patentee had specified “exhaust inlet flexibly biased”, and must be taken to have attached significance to the words chosen (at p. 7):

... unless it be obvious that the inventor knew that a failure to comply with that requirement would have no material effect upon the way the invention worked.

Pratte J.A. also stated:

A court must interpret the claims; it cannot redraft them. When an inventor has clearly stated in the claims that he considered a requirement as essential to his invention, a court cannot decide otherwise for the sole reason that he was mistaken.

To the same effect see J. K. Smit & Sons, supra, per Duff C.J., at p. 285.

[60] The facts of O’Hara have an echo in the facts of this case. Claim 1 of the ‘156 patent stipulates the “said magnetization coil being stationary” during treatment. Whether the magnetization coil is stationary may or may not affect the way the device works, but the inventor has explicitly so stipulated.580

Had Justice Binnie truly intended the test of non-essentiality to be satisfied by either Catnic question, the last sentence of paragraph [60] of Free World would be nonsensical: if the magnetization coil had not affected the way the device worked, then it would have been non-essential and the second question would not have to have been asked. By Justice Binnie stated that the inventor had “explicitly so stipulated” in the context of this part of Free World, suggests that Justice Binnie intended to affirm logic of the O’Hara decision and that the test be conjunction (“and”) not disjunctive (“or”).

In Free World, Justice Binnie asked both Catnic questions. He decided that the claims clearly required “circuit means” finding that claim element to be “essential” under both questions:

• He appears to have decided that the defendant’s microcontroller performed the same or a similar function as the claimed “circuit means”, but performed that function in a “very different way”.581 Under the first Catnic question, the “circuit means” would be considered “essential”;

• With respect to the second Catnic question, Justice Binnie stated:


Moreover, there is no reason to think the inventor didn’t mean what he said, or considered the use of “circuit means” a non-essential element of the claims, or intended to claim more broadly than “circuit means” and thereby put at risk for “covetous claiming” the validity of the patents.

Likewise, under the second Catnic question, the “circuit means” would be considered “essential”.

4.9. DEVELOPMENTS IN CLAIM CONSTRUCTION SINCE FREE WORLD AND WHIRLPOOL

4.9.1. Subsequent Case Law

The Courts have struggled in trying to apply the Free World test of essential/non-essential elements.

In Westaim, Hansen J. interpreted Justice Binnie’s test as being one that determined whether an element was non-essential if it met either of the two questions.582 Hansen J. applied both parts of the Whirlpool test to the case at hand and determined, under one test, the one-step cladding was essential and under the other, that it was non-essential.583 The case turned on obviousness,584 and no findings of infringement were made so the construction did not affect the outcome of the case.


583 In the Westaim case, the patent claim called for electroplating a metallic cladding onto steel cores for coins “… until a plating thickness of at least 0.01 mm has been deposited”. The issue was whether the claims included putting on the cladding in multiple layers having a total thickness of more than 0.01 mm but where the first layer was less than 0.01 mm thick. In applying the two tests, Hansen J. held that it met one but not both tests:

1. In respect of the first test, it was not essential. The number of layers plated during the plating process did not make a functional difference to the process of the invention [para. 78]. A cladding consisting of multiple metallic layers would obtain “substantially the same result” as a cladding consisting of a single metallic layer: a coin blank with a cladding able to take an imprint, that is, a coin suitable for minting [para. 79]; and

2. In respect of the second test, the first layer thickness of 0.01 mm was essential [para. 75]. Three witnesses agreed that the language of the claims contemplated a cladding electroplated in a single continuous process. Although two other witnesses maintained that, in principle, the meaning of the word “cladding” could include multiple metallic layers, their opinions were not based on the use of the word within the context of specific language of the claims. Justice Hansen concluded with the rather awkward language of a triple-negative; “... there is nothing in the language of the claims to indicate that the inventors did not clearly intend that first layer 0.01mm was a non-essential element.”

In *Pfizer Canada Inc. v. Novopharm Ltd.* the Court was faced with a claim that referred only to “wet granulation” of tablets although the description indicated that tablet blends may be dry or wet granulation (but that wet granulation was preferred). A person skilled in the art would have known that these processes were substitutable without affecting the working of the invention. Based on asking only the first question in the *Free World* test, the Court concluded that the claim element “wet granulation” was not essential and therefore that dry granulation was included in the claim. It appears that the Court considered it need only ask the first question in order to determine non-essentiality and never the second *Catnic* question as to whether the inventor intended to limit the claim to “wet granulation” having used that specific term in the claim.

### 4.9.1.1. Back to Improver

Other courts have interpreted the *Free World* essentiality test in a manner consistent with *Catnic*, *Improver* and *O’Hara*: if the element is functionally non-essential, it may still be essential according to the intent of the inventor.

For example, in *Biovail* case, Harrington J. used the three part *Improver* test to find the elements at issue to be non-essential according to the first two parts of the test but essential according to the third.

In *Halford v. Seed Hawk Inc.*, the Federal Court of Appeal asked both *Free World* questions, requiring either question to be answered in the affirmative to result in a finding that the element was essential:

> An element may be found to be essential on the basis of the intent of the inventor as expressed or inferred from the claims, or on the basis of evidence as to whether it would have been obvious to a skilled worker at the time the patent was published that a variant of a particular element

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would make a difference to the way in which the invention works (*Free World* at paragraphs 31 and 55).\(^{592}\)

\[
\ldots
\]

While infringement may result from the hypothetical situation described in the quoted paragraph, if it was not obvious at the date of patent publication that the substituted member had no material effect upon the way the invention works, then there is no infringement. Alternatively, if the functional equivalence was obvious, but the patentee intended strict compliance with the claim, then there is also no infringement (*Free World* at paragraph 55).\(^{593}\)

As discussed above, in 2010, Justice Gauthier said that *Free World* cannot be construed as meaning that the Supreme Court found the third question in *Improver*\(^{594}\) to be irrelevant.\(^{595}\)

\[^{592}\text{2006 FCA 275 (F.C.A.) per Sexton J.A., Sharlow & Malone JJ.A. concurring at para. 13.}\]

\[^{593}\text{Halford v. Seed Hawk Inc., 2006 FCA 275 (F.C.A.) at para. 15. Although the Court skipped making an express determination of essentiality, it did so implicitly as explained in the table below where the Court’s statement is found in the left hand column and its logic explained in the right hand column.}\]

\[^{594}\text{See Chapter 4.3.3 above:}\]

\[^{595}\text{Bauer Hockey Corp. v. Easton Sports Canada Inc., 2010 FC 361 (F.C.) per Gauthier J. at para. 144, affirmed 2011 CarswellNat 4827 (F.C.A.). Although the inventor knew that the tendon guard could be attached in an overlapping fashion [substitutable, and therefore non-essential under the first *Improver* question], it was also evident that he chose to limit his monopoly to tendon guards attached in a side-by-side fashion [intention of the inventor as expressed in the claims, and therefore essential under the second *Improver* question]. See also Shire Canada Inc. v. Apotex Inc. et al, 2016 FC 382 (F.C. per Locke J.) at para. 143}\]

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<table>
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<tr>
<th>Quote from the judgment:</th>
<th>Logic</th>
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<tr>
<td>… if it was not obvious at the date of patent publication</td>
<td>If it was obvious that the variant materially affected the way the</td>
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<td>the substituted member had no material effect on the way</td>
<td>invention works</td>
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<td>the invention works,</td>
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<td>then there is no infringement.</td>
<td>then the element was essential and the variant was therefore</td>
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<td>Alternately, if the functional equivalence was obvious,</td>
<td>outside the claim and not infringing.</td>
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<td>but the patentee intended strict compliance with the claim,</td>
<td>On the other hand, if there was an obvious equivalent,</td>
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In 2013, the Federal Court of Appeal, after quoting the disjunctive “or” test from *Whirlpool* and *Free World* said:

The *Improver* questions are used for determining whether an element is essential.596

Justice Rennie, then of the Federal Court but now of the Federal Court of Appeal properly explained the test for essentiality in terms of how to determine when an element is essential:

An “essential element” of a patent is either: an element which, if varied, would make a difference to the way in which the invention works, or an element which is essential irrespective of its practical effect according to the intent of the inventor, expressed or inferred from the claims: *Free World Trust*, at para 31.597

The correct (in this author’s view) statement of the converse – how to determine whether an element is non-essential, was stated, expressly, in *Shire Canada Inc. v. Apotex Inc. et al*698 by Justice Locke:

In my view, the SCC likely intended that, in order for a patentee to establish that a claim element is non-essential, it must show both (i) that on a purposive construction of the words of the claim it was clearly not intended to be essential, and (ii) that at the date of publication of the patent, the skilled addressees would have appreciated that a particular element could be substituted without affecting the working of the invention.”599 [emphasis in original]

and in *Mediatube*600:

The foregoing questions are sometimes referred to as the *Improver* questions. It is understood that a party seeking to establish that a claim element is not essential (*i.e.* that the variant falls within the scope of the claim) must be successful on all three questions.

Until such time as the *Free World* test is clarified either by the Supreme Court of Canada, or by statutory amendment, it is respectfully suggested that the test as


598 2016 FC 382 (F.C. per Locke J.)

599 *Shire Canada Inc. v. Apotex Inc. et al*, 2016 FC 382 (F.C. per Locke J.) at para. 137.

600 *Mediatube Corp. v. Bell Canada*, 2017 FC 6, (F.C. per Locke J.) at para. 34.
expressed by Justice Locke in *Shire* (or by the Federal Court of Appeal in *Halford*, or by the Federal Court in *Astrazeneca*) should be followed by subsequent courts.

### 4.9.2. The 2004 Kirin-Amgen Decision

Ironically, only a few years after the Supreme Court of Canada embraced *Catnic*’s principles in *Free World* and *Whirlpool*, the U.K. House of Lords in the *Kirin-Amgen* decision\(^\text{601}\) took a fresh look at claim construction. Lord Hoffman, who decided the *Improver* case, distinguished *Catnic* stating that its double-negative test should not be used as a rule of general application in claim construction. Apparently therefore, the Supreme Court of Canada adopted as a general test in *Free World* one similar to *Catnic* which, a few years later, the House of Lords said should not be considered as a general test.

The patent in issue in *Kirin-Amgen* was granted after 1977 and had to be interpreted under the newer U.K. Patent Act which had to take into consideration Article 69 of the European Patent Convention (*EPC*). For patents granted after 1977, the UK Patent Act gave effect to article 69 of the EPC which applies to infringement proceedings in the domestic courts of all Contracting States:

> The extent of protection conferred by a European patent or a European patent application shall be determined by the terms of the claims. Nevertheless, the description and drawings shall be used to interpret the claims.

Article 2 added to the Protocol by the *Munich Act* revising the EPC, dated November 29, 2000 (and not yet in force) provides:

> For the purpose of determining the extent of protection conferred by a European patent, due account shall be taken of any element which is equivalent to an element specified in the claims.

The Protocol on the Interpretation of Article 69 provides that Article 69 is to be interpreted at a position between the extremes of applying a strict, literal meaning of the wording used in the claims on the one hand and extend to what the patentee had contemplated: namely, to combine a fair protection for the patentee with a reasonable degree of certainty for third parties.\(^\text{602}\) Thus, neither extreme is to be used.

Under U.K law, construction of the claims is not to be concerned with what the author meant to say, rather, it is concerned with what a reasonable person reading the patent would understand the author to mean using those words. The language chosen by the patentee is thus of critical importance.

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Lord Hoffman reviewed the history of the U.K. infringement of the “pith and marrow” versus “literal infringement” and the U.S. “doctrine of equivalents”, the effect of the latter of which it considered to “extend protection to something outside the claims which performs substantially the same function in substantially the same way to obtain the same result.” The Court said that the U.S. “doctrine of equivalents” was a way to adhere to literalism yet evolve a doctrine which supplements the claims by extending protection to equivalents. On the other hand, Lord Hoffman said that Catnic had abandoned literalism to adopt an approach that gave effect to what the person skilled in the art would have understood the patentee to be claiming.

According to Lord Hoffman, Article 69 “firmly shuts the door on any doctrine which extends protection outside the claims.” In his view, Catnic was differentiating between different meanings of the words in the claim:

If Lord Diplock did not invent the expression ["purposive construction"], he certainly gave it wide currency in the law. But there is, I think, a tendency to regard it as a vague description of some kind of divination which mysteriously penetrates beneath the language of the specification. Lord Diplock was in my opinion being much more specific and his intention was to point out that a person may be taken to mean something different when he uses words for one purpose from what he would be taken to mean if he was using them for another. The example in the Catnic case was the difference between what a person would reasonably be taken to mean by using the word “vertical” in a mathematical theorem and by using it in a claimed definition in the building trade.

Here, Lord Hoffman appears to be creatively applying “revisionist history” to say what Lord Diplock should have said in Catnic: that words should be read in their technological context and be given the scope or precision with which they are used in that technology or industry. This is exactly what Lord Diplock said in his “near enough” statement, immediately prior to going on to divide the claim into essential and non-essential elements:

... it seems to me that the expression “extending vertically” as descriptive of the position of what in use will be the upright member of a trapezoid-shaped box girder, is perfectly capable of meaning positioned near enough to the exact geometrical vertical to enable it


in actual use to perform satisfactorily all the functions that it could perform if it were precisely vertical;[606] [emphasis added]

In *Kirin-Amgen*, Lord Hoffman described his own rephrasing of the *Catnic* test in the *Improver* case, as follows:

Does the feature fall outside the primary, literary or acontextual meaning of a descriptive word or phrase in the claim ("the variant"). If it does, is it nevertheless within the language as properly interpreted? – the latter question answered by asking the following:

1. Does the variant have a material effect upon the way the invention works? If yes, then the variant is outside the claim. If not,

2. Would the fact that the variant had no material effect have been obvious, at the date of publication of the patent, to a reader of the patent skilled in the art? If no, the variant is outside the claim. If yes,

3. Would the reader have understood from the language of the claim that the patentee intended that strict compliance with the primary meaning was an essential requirement of the invention? If yes, then the variant is outside the claim. If no, it is within the claim.

A negative answer would lead to the conclusion that the patentee was intending the word or phrase to have not a literal but a figurative meaning denoting a class of things which include the variant and the literal meaning, the latter being the most perfect, best-known or striking example of the class.[607]

In *Kirin-Amgen*, Lord Hoffman held that *Catnic* questions (which he referred to as "the Protocol questions") had erroneously been used as a general rule: namely “… as a framework for deciding whether equivalents fall within the scope of the claims”. In contrast, the "*Catnic principle*, namely that of purposive construction, which gives effect to the requirements of the Protocol, is the "bedrock of patent construction" and is universally applicable. The Protocol questions are merely a guideline, more useful in some cases than in others.[608]

I am bound to say that the cases show a tendency for counsel to treat the Protocol questions as legal rules rather than guides which will in


appropriate cases help to decide what the skilled man would have understood the patentee to mean.\textsuperscript{609}

The determination of the extent of protection conferred by a European patent is an examination in which there is only one compulsory question, namely that set out in article 69 and its Protocol: \textit{what would a person skilled in the art have understood the patentee to have used the language of the claim to mean}? Everything else, including the Protocol questions, is only guidance to a judge trying to answer that question. But there is no point in going through the motions of answering the Protocol questions when you cannot sensibly do so until you have construed the claim. In such a case — and the present is in my opinion such a case — they simply provide a formal justification for a conclusion which has already been reached on other grounds.\textsuperscript{610} [emphasis added]

No doubt there will be patent lawyers who are dismayed at the notion that the Protocol questions do not provide an answer in every case. They may feel cast adrift on a sea of uncertainty. But that is the fate of all who have to understand what people mean by using language. The Protocol questions are useful in many cases, but they are not a substitute for trying to understand what the person skilled in the art would have understood the patentee to mean by the language of the claims.\textsuperscript{611}

The current U.K. test would appear to be a simple one: Applying a purposive construction to the patent, what would a person skilled in the art have understood the patentee to have used the language of the claim to mean?

Construction, whether of a patent or any other document, is of course not directly concerned with what the author meant to say. There is no window into the mind of the patentee or the author of any other document. Construction is objective in the sense that it is concerned with what a reasonable person to whom the utterance was addressed would have understood the author to be using the words to mean. Notice, however, that it is not, as is sometimes said, “the meaning of the words the author used”, but rather what the notional addressee would have understood the author to mean by using those words. The meaning of words is a matter of convention, governed by rules, which can be found in dictionaries and grammars. What the author would have been understood to mean by using those words is not simply a matter of rules. It is highly sensitive to the context of and the background to the particular utterance. It depends

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not only upon the words the author has chosen but also upon the identity of the audience he is taken to have been addressing and the knowledge and assumptions which one attributes to that audience.\(^{612}\)

*Kirin-Amgen* was quoted in great detail by Justice Hughes in *Pfizer Canada Inc. v. Canada (Minister of Health)*\(^{613}\) and, although quoted to a lesser extent or cited by other judges,\(^{614}\) none have yet noted its marginalization of *Catnic*.

### 4.9.3. The 2017 Actavis Decision

Article 69 of the European Patent Convention provides:

The extent of the protection conferred by a European patent or a European patent application shall be determined by the claims. Nevertheless, the description and drawings shall be used to interpret the claims.\(^{615}\)

The Protocol on the Interpretation of Article 69\(^{616}\) as revised by the Act revising the EPC of 29 November 2000, provides:

**Article 1 - General principles**

Article 69 should not be interpreted as meaning that the extent of the protection conferred by a European patent is to be understood as that defined by the strict, literal meaning of the wording used in the claims, the description and drawings being employed only for the purpose of resolving an ambiguity found in the claims. Nor should it be taken to mean that the claims serve only as a guideline and that the actual protection conferred may extend to what, from a consideration of the description and drawings by a person skilled in the art, the patent proprietor has contemplated. On the contrary, it is to be interpreted as defining a position between these extremes which combines a fair protection for the patent proprietor with a reasonable degree of legal certainty for third parties.

**Article 2 - Equivalents**

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\(^{613}\) *Pfizer Canada Inc. v. Canada (Minister of Health)* (2005), 46 C.P.R. (4th) 244 (F.C.) at para. 26, affirmed 2007 CarswellNat 6 (F.C.A.) and in *Merck & Co. v. Pharmascience Inc.*, 2010 FC 510 (F.C.) per Hughes J. at paras. 63–64.


For the purpose of determining the extent of protection conferred by a European patent, due account shall be taken of any element which is equivalent to an element specified in the claims.

Article 1

In *Actavis UK Limited et al v. Eli Lilly and Company*617 the UK Supreme Court said it “expressed in our own owrdsour reformulated version” of the Improver questions (emphasizing that they are guidelines, not strict rules:

i) Notwithstanding that it is not within the literal meaning of the relevant claim(s) of the patent, does the variant achieve substantially the same result in substantially the same way as the invention, ie the inventive concept revealed by the patent?

ii) Would it be obvious to the person skilled in the art, reading the patent at the priority date, but knowing that the variant achieves substantially the same result as the invention, that it does so in substantially the same way as the invention?

iii) Would such a reader of the patent have concluded that the patentee nonetheless intended that strict compliance with the literal meaning of the relevant claim(s) of the patent was an essential requirement of the invention?

In order to establish infringement in a case where there is no literal infringement, a patentee would have to establish that the answer to the first two questions was “yes” and that the answer to the third question was “no”.618

At first blush, the questions look very similar to *Improver*, but they and the other *dicta* in *Actavis* contain significant departures from *Catnic, Improver* and *Kirin-Amgen*:

1. Lord Neuberger differentiates between the meaning of the claims and the scope of protection afforded to a patentee, the latter not being limited to the former.

“... two points appear to be clear from the Protocol. The first, which can be deduced from article 1, is that the scope of protection afforded to a patentee is not to be limited by the literal meaning of the claims. However, it is not at all clear how far a court is permitted to move away from the literal meaning. ... it is very hard to be confident how far they were intended to permit a court to go beyond the actual language of a claim when interpreting a claim. Secondly, it is apparent from article 2 that there is at least potentially a difference between interpreting a claim and the extent of the protection afforded by a claim, and, when considering the extent of such protection, equivalents must be taken into account, but no guidance is given as to precisely what constitutes an equivalent or how

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617 [2017] UKSC 48 (per Lord Neuberger, President)

equivalents are to be taken into account with the need for a competitive market. In my view, issue (i) self-evidently raises a question of interpretation, whereas issue (ii) raises a question which would normally have to be answered by reference to the facts and expert evidence.\(^\text{619}\)

2. Lord Neuberger characterized Lord Hoffman’s approach in *Kirin-Amgen* as conflating the two issues:

   In *Kirin-Amgen* [2005] RPC 9, Lord Hoffmann, following his approach in *Improver* [1990] FSR 181 (which itself had followed Lord Diplock’s analysis in *Catnic* [1982] RPC 183) effectively conflated the two issues, and indicated that the conflated issue involved a question of interpretation. I have considerable difficulties with the notion that there is a single conflated, or compound, issue, and, even if that notion is correct, that that issue raises a question of interpretation. Indeed, in my view, to characterise the issue as a single question of interpretation is wrong in principle, and unsurprisingly, therefore, can lead to error.\(^\text{620}\)

3. Before embarking on an analysis of past UK jurisprudence and that of other Convention states, Lord Neuberger tellingly asked:

   The question of how far one can go outside the wording of a claim to enable the patentee to enjoy protection against products or processes which are not within the ambit of the actual language, construed in accordance with ordinary principles of interpretation, …

4. Lord Neuberger flips the order of the *Catnic/Improver* questions to first ask what is the scope of the claims as a matter of normal interpretation and then ask what scope of protection is afforded to such claim by including equivalents that are immaterial variants:

   In my view, notwithstanding what Lord Diplock said in *Catnic* [1982] RPC 183, 242, a problem of infringement is best approached by addressing two issues, each of which is to be considered through the eyes of the notional addressee of the patent in suit, ie the person skilled in the relevant art. Those issues are: (i) does the variant infringe any of the claims as a matter of normal interpretation; and, if not, (ii) does the variant nonetheless infringe because it varies from the invention in a way or ways which is or are immaterial? If the answer to either issue is “yes”, there is an infringement; otherwise, there is not. Such an approach complies with article 2 of the Protocol, as issue (ii) squarely raises the principle of equivalents, but limits its ambit to those variants which contain immaterial

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variations from the invention. It is also apparent that the two issues comply with article 1 of the Protocol in that they involve balancing the competing interests of the patentee and of clarity, just as much as they seek to balance the encouragement of inventions and their disclosure.\(^{621}\)

5. In reformulating the three *Improver* questions, Lord Neuberger said:

a. … the question as framed by Hoffmann J, with its emphasis on how “the invention” works, should correctly involve the court focussing on the “the problem underlying the invention”, “the inventive core”, or “the inventive concept” as it has been variously termed in other jurisdictions. In effect, the question is whether the variant achieves the same result in substantially the same way as the invention. If the answer to that question is no, then it would plainly be inappropriate to conclude that it could infringe. If, by contrast, the answer is yes, then it provides a sound initial basis for concluding that the variant may infringe, but the answer should not be the end of the matter.\(^{622}\) [emphasis added]

b. The second *Improver* question is more problematic. In my view, it imposes too high a burden on the patentee\(^{623}\)... the second question is better expressed as asking whether, on being told what the variant does, the notional addressee would consider it obvious that it achieved substantially the same result in substantially the same way as the invention. In other words, it seems to me that the second *Improver* question should be asked on the assumption that the notional addressee knows that the variant works to the extent that it actually does work.\(^{624}\) ...This reformulated second question should also apply to variants which rely on, or are based on, developments which have occurred since the priority date, even though the notional addressee is treated as considering the second question as at the priority date.\(^{625}\) [emphasis added]

Lord Neuberger’s greatest departure with *Improver* and *Catnic* occurs in his handling of the third *Improver* question:

c. The third *Improver* question as expressed by Hoffmann J is whether the notional addressee would have understood from the language of the claim

\(^{621}\) *Actavis UK Limited et al v. Eli Lilly and Company*, [2017] UKSC 48 (per Lord Neuberger, President) at para. 54

\(^{622}\) *Actavis UK Limited et al v. Eli Lilly and Company*, [2017] UKSC 48 (per Lord Neuberger, President) at para. 60.


that the patentee intended that strict compliance with the primary meaning was an essential requirement of the invention. That is in my view an acceptable test, provided that it is properly applied.

..., the fact that the language of the claim does not on any sensible reading cover the variant is certainly not enough to justify holding that the patentee does not satisfy the third question. Hence, the fact that the rubber rod in *Improver* [1990] FSR 181 could not possibly be said to be “an approximation to a helical spring” (to quote from p 197) was not the end of the infringement issue even in Hoffmann J’s view: indeed, as I have already pointed out, it was because the rubber rod could not possibly be said to be a helical spring that the allegedly infringing product was a variant and the patentee needed to invoke the three *Improver* questions.

Lord Neuberger seems to disregard the specificity of the term in question (e.g. “helical spring”) and does not ask (as was asked in *Catnic* and *Improver* respectively) whether the inventor intended to exclude the variant or whether the term was being used to mean something more or less than its acontextual meaning.

In the *Actavis* case, Lord Neuberger held that the claim for the “pemetrexed disodium” extended to include the Actavis products: (a) pemetrexed diacid, (b) pemetrexed ditromethamine, and (c) pemetrexed dipotassium diacid626 effectively ignoring the specific language of the claim:

In my opinion, the Court of Appeal adopted an approach which places too much weight on the words of the claim and not enough weight on article 2 of the Protocol (and it is only right to add that, in doing so, they were, like Arnold J at first instance, following Lord Hoffmann’s guidance in *Kirin-Amgen* [2005] RPC 9). … if one cannot depart from the language of the claim when considering those questions, what is the point of the questions in the first place? 627

Lord Neuberger, borrowing from *Catnic*, decided that “No plausible reason has been advanced why any rational patentee should want to place so narrow a limitation on his invention” as to limit the scope of protection afforded by the Patent to pemetrexed disodium … “.628 Note however that the patentee did not, but could have, claimed more broadly to define the claim in terms of a genus that included the specie of pemetrexed disodium and its equivalents, but chose not to do so.

626 *Actavis UK Limited et al v. Eli Lilly and Company*, [2017] UKSC 48 (per Lord Neuberger, President) at paras. 8 & 75.


628 *Actavis UK Limited et al v. Eli Lilly and Company*, [2017] UKSC 48 (per Lord Neuberger, President) at para. 73.
Actavis appears to have introduced a doctrine of equivalents to the scope of protection of UK patent claims: construe the claim and then include under its scope of protection, its equivalents.

Canadian courts have not yet commented on the Actavis decision. The Court of Appeal of Singapore declined to follow the Actavis case.629

4.10. “SWISS” TYPE CLAIMS

A “Swiss” type claim is one drafted in the following form:

The use of [an old compound] in the manufacture of a medicament for the treatment of [a new disorder].630

At one time, claims directed to medicines were not permitted, so claims were phrased to indirectly cover them. When a new use for an old medicine could not be claimed, the Swiss developed a way around this issue by claiming the use of a medicine for the manufacture of a pill for a new use, thus making it statutory subject matter as being “susceptible of industrial application”.631

The authorities on how to interpret such claims are divided. In Abbott Laboratories v. Canada (Minister of Health),632 the court held that a “Swiss” type claim was a claim for the use of a substance to make another substance and, therefore, was not an eligible claim under the NOC Regulations because it was not “… a claim for the use of a medicine for the diagnosis, treatment, mitigation or prevention of a disease, disorder or abnormal physical state, or the symptoms thereof”. However in Pfizer Canada Inc. v. Apotex Inc.633 Justice Mosley appears to have considered several “Swiss” type claims as being for the use of a medicine to treat ED “… and the manufacture of a medicament or the adaptation for oral treatment are merely secondary aspects to the essential claimed use.”634 In Merck & Co. v. Pharmascience Inc.,635 Hughes J. limited his

634 Pfizer Canada Inc. v. Apotex Inc. (2007), 61 C.P.R. (4th) 305 (F.C.) per Mosley J. at para. 153, affirmed 2009 CarswellNat 1151 (F.C.A.) quoted in Merck & Co. v. Pharmascience Inc., 2010 FC 510 (F.C.) per Hughes J. at para. 90. This approach mirrors the older U.K. approach at construing such claims by ignoring their form and considering them to be claiming a new use; otherwise such claims will lack novelty and inventiveness if all that is being considered is the making of the tablet.

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construction of a “Swiss” type claim to what had been alleged in Pharmascience’s Notice of Allegation: to the use of a particular dosage of a medicine to treat baldness.\footnote{Merck & Co. v. Pharmascience Inc., 2010 FC 510 (F.C.) per Hughes J.}

\section*{4.11. CONCLUSIONS}

The test set out in \textit{Free World} inherits the legacy of an inherently self-contradictory test that, on the one hand, considers the claim language to be paramount yet, on the other hand, permits claim elements to be considered non-essential and capable of variation or omission from consideration. A resolution of this situation can be made only through future jurisprudence at the level of the Supreme Court of Canada or by Parliament rendering all claim elements to be considered essential.

It is possible to apply a “purposive construction” to the claim construction test expressed in \textit{Free World} which is consistent with prior cases approved by the Supreme Court (\textit{Catnic, Improver} and O’Hara), however a lack of specificity in expressing what is to follow in answering the \textit{Free World} questions has resulted in diverse applications of the test. Until the \textit{Free World} test is clarified by the Supreme Court of Canada, there will likely continue to be unpredictable and inconsistent outcomes — a result that will frustrate litigants and fuel what Mr. Justice Binnie described as “the already overheated engines of patent litigation”\footnote{Free World Trust c. Électro Santé Inc. (2000), 9 C.P.R. (4th) 168 (S.C.C.) per Binnie, J. at 197–198, para. 66.} for years to come.

\footnote{Merck & Co. v. Pharmascience Inc., 2010 FC 510 (F.C.) per Hughes J.}

\footnote{Merck & Co. v. Pharmascience Inc., 2010 FC 510 (F.C.) per Hughes J. at paras. 94–99.}

\footnote{Free World Trust c. Électro Santé Inc. (2000), 9 C.P.R. (4th) 168 (S.C.C.) per Binnie, J. at 197–198, para. 66.}
4.12. **APPENDIX A**

The big questions to be asked to determine whether a claim element is essential are:

- Does varying or removing the claim element in question change the way the invention works?

and

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

The question, of course, does not arise where the variant would in fact have a material effect upon the way the invention worked. Nor does it arise unless at the date of publication of the specification it would be obvious to the informed reader that this was so. Where it is not obvious, in the light of then-existing knowledge, the reader is entitled to assume that the patentee thought at the time of the specification that he had good reason for limiting his monopoly so strictly and had intended to do so, even though subsequent work by him or others in the field of the invention might show the limitation to have been unnecessary. It is to be answered in the negative only when it would be apparent to any reader skilled in the art that a particular descriptive word or phrase used in a claim cannot have been intended by the patentee, who was also skilled in the art, to exclude minor variants which, to the knowledge of both him and the readers to whom the patent was addressed, could have no material effect upon the way in which the invention worked.\(^{638}\)

1. Does the variant have a material effect upon the way the invention works? If yes, then the variant is outside the claim. If no?

2. Would this (i.e. that the variant had no material effect) have been obvious at the date of publication of the patent to a reader of the patent skilled in the art? If no, the variant is outside the claim. If yes?

3. Would the reader skilled in the art nevertheless have understood from the language of the claim that the patentee intended that strict compliance with the primary meaning was an essential requirement of the invention? If yes, then the variant is outside the claim. If no?

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(e) The claims language will, on a purposive construction, show that some elements of the claimed invention are essential while others are non-essential. The identification of elements as essential or non-essential is made:

(iii) having regard to whether or not it was obvious to the skilled reader at the time the patent was published that a variant of a particular element would not make a difference to the way in which the invention works. [If it makes a difference, then it is essential.]; or

(iv) according to the intent of the inventor, expressed or inferred from the claims, that a particular element is essential irrespective of its practical effect. [If it was intended to be essential, then it is essential].

In order for an element to be non-essential, it must have been found not to be essential under both questions.
The claims language will, on a purposive construction, show that some elements of the claimed invention are essential while others are non-essential. The identification of elements as essential or non-essential is made:

(iii) having regard to whether or not it was obvious to the skilled reader at the time the patent was published that a variant of a particular element would not make a difference to the way in which the invention works; or

(iv) according to the intent of the inventor, expressed or inferred from the claims, that a particular element is essential irrespective of its practical effect;