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## **Best Mode Disclosure in Canadian Patents**

David Vaver

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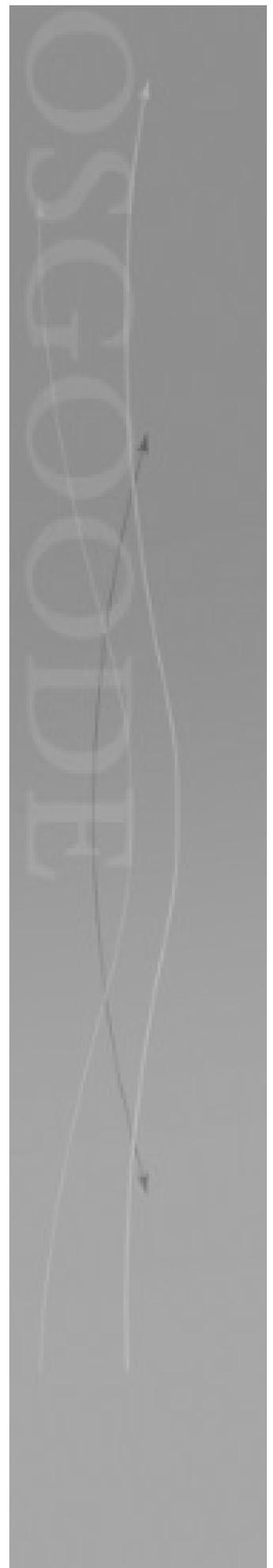
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Comparative Research in  
Law & Political Economy



## Best Mode Disclosure in Canadian Patents

David Vaver\*

But men may construe things after their fashion,  
Clean from the purpose of the things themselves.

- Shakespeare, *Julius Caesar* (I, iii)

*Abstract: A recent decision of the Federal Court of Canada, endorsed by the Federal Court of Appeal, holds that the duty under the Patent Act to provide in the patent specification the best mode of working the invention applies only to machines and no other class of invention. This paper reviews the history of the best mode requirement, from its origin in the wording of 18<sup>th</sup> century British patent grants and its migration into late 18<sup>th</sup> U.S. and early 19<sup>th</sup> century Canadian legislation, until the present time. It is clear that Canadian law from the beginning has always required an invention's best mode to be disclosed as a consequence of the statutory duty to correctly and fully describe the operation and use of every invention. The later express inclusion of a best mode duty for machines does not impliedly exclude the same duty for all inventions. Contrary case law is therefore wrong and should be overruled.*

### 1. Introduction

Many newly minted patent agents are going into practice holding the belief that a Canadian patent application need disclose the best

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mode of working an invention for only one class of invention: a machine.<sup>1</sup> If the application claims any other category of invention mentioned in section 2 of the *Patent Act* - any “art, process, ... composition of matter, or manufacture”, or improvement thereof<sup>2</sup> - the best mode of working or making that invention need not be disclosed.

This view would logically hold even where non-machine claims accompany a machine claim in the same application: the inventor may withhold the best mode of working everything connected to his invention, except whatever relates to the machine and its principle.

This paper argues that that the duty to disclose an invention’s best mode in fact applies to all inventions. The view that the duty is restricted to machines is wrong and should be overruled at the earliest opportunity.

Over 65 years ago Thorson P. said in *Minerals Separation North American Corp. v. Noranda Mines Ltd.* that

the inventor must act *uberrima fide* and give all information known to him that will enable the invention to be carried out to its best effect as contemplated by him.<sup>3</sup>

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<sup>1</sup> Thus, candidates for the 2010 Patent Agent Examination were expected to answer “no” to a question whether a specification claiming chemical compounds as the invention had to include the best method of making the compound: “there is no requirement [for an inventor] to describe his best method of making it. The ‘best mode’ requirement applies only to the application of a principle in respect of a machine, as set out in s. 27(3)(c) of the *Patent Act*, and not in respect of a compound” (*Patent Agent Exam 2010 - Marking Guide B*, Q. 13, at <http://www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/eng/wr02776.html#q13>).

<sup>2</sup> R.S.C. 1985, c. P-4, s. 2, def. “invention”.

<sup>3</sup> *Minerals Separation North American Corp. v. Noranda Mines Ltd.*, [1947] Ex. C.R. 306 at 317, rev’d on other grounds [1950] S.C.R. 36, aff’d (1952), 15 C.P.R. 133, 69 R.P.C. 81 (P.C.)

Thorson P.'s view on best mode - the "best effect" as he put it, or "preferred embodiment" as patent jargon sometimes has it - capped his statement of the main elements of the duty of disclosure imposed by the *Patent Act*. The entire statement has until very recently stood unchallenged by courts, practitioners, and the Patent Office alike as an authority applicable to all classes of invention.<sup>4</sup> In dealing generally with the duty to disclose in 1981, the Supreme Court in the leading case of *Consolboard Inc. v. MacMillan Bloedel (Sask.) Ltd.*<sup>5</sup> cited extracts from Thorson, calling him "an authority in these matters." On best mode Fox's standard text on patents accepted Thorson P.'s statement in saying that the *Patent Act* required an inventor "to describe correctly and fully what is his invention", and that "necessarily involves the duty of disclosing the best method of so doing as contemplated by him."<sup>6</sup> In its turn the

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<sup>4</sup> Ilsey Royal Commission on Patents, Copyright & Industrial Design, *Report on Patents of Invention* (Ottawa: Queen's Printer, 1960) at 44-45 setting out Thorson P.'s entire statement and saying the Commission could not improve on it. Similarly I. Goldsmith, *Patents of Invention* (Agincourt, Ont.: Carswell, 1981) at §161 n. 6 & A. MacRae, *Inventions and Patents in Canadian Practice* (Toronto: Canada Law Book, 1954) at 73-75 both quote Thorson P.'s entire statement with apparent approval.

The current *Manual of Patent Office Practice* is however confusing. At § 9.02.01 It cites Thorson P.'s full statement ([http://www.cipo.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/eng/wr03150.html#n9\\_02\\_02](http://www.cipo.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/eng/wr03150.html#n9_02_02)). Then at § 9.06 it sets out the current version of the *Patent Rules* (SOR 96/423 as am.), which merely prescribe "at least one mode contemplated by the inventor for carrying out the invention" (*Rules*, para. 80(1)(f)). This may suggest the "one" mode need not be the "best". But since a patent rule "cannot override a substantive legal requirement" (*Eli Lilly Canada Inc. v. Apotex Inc.*, 2008 FC 142 at para. 173) those who do not disclose their best known mode and rely on a narrow interpretation of para. 80(1)(f) are living dangerously.

Since nothing relevant in the *Patent Act* has changed since the earlier *Patent Rules* (SOR 78-673), it seems wiser to follow the guidance of the older *Rules*, particularly Schedule 1 Form 24 as prescribed by s. 21. Taking a product invention as their example, they required the specification to include a "full description of the best way of using or putting into operation [its] inventive idea" (Form 24, para. (4)).

<sup>5</sup> [1981] 1 S.C.R. 504 at 524.

<sup>6</sup> H. Fox, *Canadian Law & Practice relating to Letters Patent for Invention*, 4<sup>th</sup> ed. (Toronto: Carswell, 1969) at 180. Similarly, Goldsmith, *supra* note 4 at §§ 161, 163, 177 & 178; MacRae, *supra* note 4 at 73-75; D. Vaver, *Intellectual Property: Copyright, Patents, Trade-marks*, 2<sup>nd</sup> ed. (Toronto: Irwin Law, 2011) at 343-44.

Federal Court of Appeal in 1981 in *Lido Industrial Products Ltd. v. Teledyne Industries Inc.*<sup>7</sup> accepted Fox's view when asking whether or not the duty to disclose best mode had been broken in respect of a non-machine patent, and held on the facts that it had not. Had no duty existed at all, one would have expected the Court simply to say so instead of undertaking an irrelevant inquiry.

How then has the contrary view that best mode applies only to machines arisen? Why is it wrong? The rest of this paper is devoted to answering these questions.

## **2. Restricting Best Mode: the Recent Decisions**

In public policy terms, there is little reason why society should wish to grant an exclusive right in return for the disclosure of an inventor's second- or third-best method of realizing an invention while letting him keep the best to himself as a trade secret. The fact that no Canadian patent seems to have been invalidated solely for failing to disclose the invention's best mode<sup>8</sup> suggests the policy is working. The practical difficulty of demonstrating that the method disclosed is not in fact the best then known to the inventor may also play a part but, given that the penalty for non-compliance is invalidation of the patent, concealment must be considered a high risk strategy for a duty with potentially low patentee costs and high public benefit.

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<sup>7</sup> (1981), 57 C.P.R. (2d) 29 at 44-45 (Fed. C.A.) *per* Thurlow C.J.

<sup>8</sup> One however did come close: *Di Fiore v. Tardi*, [1952] Ex. C.R. 149 at 155-56 ultimately holding a patent invalid for insufficiency for more "important" reasons than the best mode failure in that case.

Non-compliance may also have effects beyond Canada since Canadian applications are often drafted in reliance on a corresponding United States application that traditionally has also needed to disclose an inventor's best mode. But the United States has recently made best mode a mere talking point between the applicant and a U.S. patent examiner, instead of a ground of invalidation if the mode does not appear in the issued patent,<sup>9</sup> and European law has long lacked a best mode requirement. The U.S. change was supposedly partly premised on a wish to help unwary foreign inventors because, as a textbook coauthored by the current Chief Judge of the Federal Circuit Court of Appeals baldly stated, "the United States is the only country with a best mode requirement".<sup>10</sup> Such assertions overlooked best mode requirements in Canada and Mexico as *NAFTA* partners, as well as in a number of Commonwealth nations (e.g. India, Pakistan, Bangladesh, Malaysia, Kenya, Tanzania, Namibia, Australia and New Zealand) and other significant jurisdictions (e.g. Brazil, Mexico, Andean Pact members, Egypt and Thailand). Best mode is also commonly recommended as the standard of disclosure for the patent laws of developing countries and is the default rule under the *Patent Co-operation Treaty*.<sup>11</sup> Filers of

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<sup>9</sup> *Patent Act*, 35 U.S.C. § 282(3), as am. by *America Invents Act*, P.L. 112-29, 125 Stat. 284 (2011), § 15.

<sup>10</sup> M. Adelman, R. Rader & G. Klancnik, *Patent Law* (St Paul, MN: Thomson West, 2008) at 216; compare L. Petherbridge & J. Rantanen, "The Pseudo-Elimination of Best Mode: Worst Possible Choice?" 59 U.C.L.A. L.Rev. Disc. 170 (2012) arguing that the new U.S. law helps ignorant foreign filers while disadvantaging U.S. inventors who will disclose best mode from habit, with J. Forstner, "International Implications of the U.S. Best Mode Requirement" 21 *AIPLA Q'ly J.* 157 at 165 (1993) claiming that little best mode litigation involves foreign applicants.

<sup>11</sup> UNCTAD, *Development Dimensions of Intellectual Property in Indonesia: Access to Medicines, Transfer of Technology & Competition* (N.Y. & Geneva: United Nations, 2011) at 28-29; D. Carlson, K. Przychodzen & P. Scamborova, "Patent Linchpin for the 21<sup>st</sup> Century? - Best Mode Revisited" 87 *Jo. Pat. & Tm. Off. Soc'y* 89 (2005); B. Lu, "Best mode Disclosure for Patent Applications: An International & Comparative Perspective" (2011) 16 *Jo. I.P.R.* 409; *Patent Co-operation Treaty*, Rule 5.1(v)

Canadian patents therefore still need to know whether they should include or dispense with such a disclosure in their application, or beef up the specification when preparing a draft based on an application from a jurisdiction with little or no best mode enforcement.

Since most patent law ultimately rests on interpretations of the *Patent Act* one naturally first turns there for answers. Subsection 27(3) of the *Act* reads:

The specification of an invention must

(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 it pertains, or with which it is most closely connected, to make, construct, compound or use it;

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

(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. [emphasis added]

Paragraph (c) might suggest that one need disclose and explain the best mode of working an invention only for machines, and in 2009 the

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([www.wipo.int/pct/en/texts/rules/r5.htm#\\_5](http://www.wipo.int/pct/en/texts/rules/r5.htm#_5)); *Agreement on Trade Related Aspects of Intellectual Property Rights*, Annex 1C to the *World Trade Organisation Agreement* 1994, art. 29(1) (best mode duty optional).

Federal Court so ruled for the first time in *Sanofi-Aventis Canada Inc. v. Apotex Inc.*:

Where Parliament has chosen to include a “best mode” obligation in respect of machine patents only, the courts must respect that choice. Accordingly, reading such a requirement into non-machine patents would be contrary to the principles of statutory interpretation.<sup>12</sup>

Snider J. therefore held a patent for a medicinal compound need not disclose the best mode of making or applying it.<sup>13</sup> The Federal Court of Appeal in one of the *Viagra* cases decided the following year specifically approved the above passage in *Sanofi-Aventis*.<sup>14</sup> Snider J. herself recently reaffirmed her earlier ruling, rejecting an argument that claiming a number of medical compounds required the inventor to disclose which of them he thought best for the purpose.<sup>15</sup> So *Sanofi-Aventis* and its progeny continue as precedents until they are overruled.

Two preliminary observations may be made on this development. First, apart from some reformatting and minor changes, subsection 27(3) has stayed the same since its enactment in 1935.<sup>16</sup> One therefore wonders

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<sup>12</sup> 2009 FC 676 at para. 330.

<sup>13</sup> Snider J. also held that a best mode duty was anyway not breached because the best mode known at the Canadian filing date was unknown at the earlier filing date on which the Canadian application was based, and the latter was the relevant time to test for best mode compliance (*ibid.* at para. 331).

<sup>14</sup> *Novopharm Ltd. v. Pfizer Canada Inc.*, [2012] 2 F.C.R. 69, 2010 FCA 242 at para. 72 (“*Viagra*”). In reversing *Viagra* for other defects in the specification the Supreme Court of Canada said nothing about the FCA’s best mode ruling: *Teva Canada Ltd. v. Pfizer Canada Inc.*, 2012 SCC 60. The Supreme Court’s ultimate decision on insufficiency has however been said to impose “a kind of best mode requirement”: N. Siebrasse, “Disclosure is the Quid Pro Quo” <http://www.sufficientdescription.com/2012/11/disclosure-is-quid-pro-quo.html>.

<sup>15</sup> *Teva Canada Ltd. v. Novartis AG*, 2013 FC 141 at para. 376.

<sup>16</sup> *Patent Act*, 1935, 25-26 Geo. V, c. 32, subs. 35(1).

why, if the point taken in *Sanofi-Aventis* were good, it somehow escaped Fox and the highly litigious patent bar for some 70 years. Second, Parliament can and does do some pretty silly things but it is certainly entitled to a presumption against silliness in its legislation. One therefore also wonders why any legislature that believes in any form of best mode disclosure for patents would be so addle-pated as to limit its application to only one class of invention, and enigmatically of all those classes, machines. Why, for example, given the enormous importance the Canadian Parliament has attached to health care patents for the best part of a century, would it decide that disclosing an inventor's best mode of making or administering a medicine was not needed, while disclosing his best method of working a machine for making hairclips or paper cups was? Yet it is precisely in the field of medicine that the federal courts have now decided that Parliament meant there to be no duty to disclose the best mode of making or using the invention. Snider J. said she thought the result was against "[c]ommon sense and fair play"<sup>17</sup> but saw no way out. *Stulta lex, sed lex.*

The research for this paper however strongly indicates that Thorson P. in *Minerals Separation* and Fox were right after all. *Sanofi-Aventis* and its followers were wrong in:

(a) not noticing that a proper interpretation of the duty in paragraph 27(3)(a) to "correctly and fully describe the invention and its operation or

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<sup>17</sup> *Supra* note 12 at para. 327.

use as contemplated by the inventor” would include a duty to describe the inventor’s best mode of operating or using the invention;<sup>18</sup>

(b) holding that the expression of a best-mode-for-machines duty in paragraph 27(3)(c) impliedly excludes a best mode duty for all other inventions;<sup>19</sup>

(c) discounting the significance of *Minerals Separation* and *Consolboard* in interpreting subsection 27(3) and the best mode duty in paragraph 27(3)(a).

It may seem extraordinary that legislation that aims to stimulate and protect advances in fields such as electronics and biotechnology can be best understood today only by returning to its forebears at a time when Watt was playing with steam and Volta with frogs. Yet, as Holmes J. was fond of saying, “continuity with the past is not a duty, it is only a necessity.”<sup>20</sup> Many provisions in today’s *Patent Act* reflect the language and concepts of patent law and policy of late 18<sup>th</sup> century Britain and the

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<sup>18</sup> *Sanofi-Aventis* omitted para. 27(3)(a) entirely when it set out subs. 27(3) (*ibid.* at para. 328). And while the *Viagra* court (*supra* note 14 at para. 13) did set out all of subs. 27(3), it referred to para. 27(3)(a) only on another submission on disclosure (2010 FCA at para. 70). On best mode it merely recorded the defendant’s submission (*ibid.* at para. 38, quoting Fox, *supra* note 4) and, after spending 25 paragraphs on other matters, returned to best mode (*ibid.* at paras. 72ff.) without noting that para. 27(3)(a) was critical on best mode too. This oversight vitiates its decision too and entitles the FCA to overrule this part of *Viagra*: see *R. v. George*, [1966] S.C.R. 267 at 279 *per* Cartwright C.J. dissenting: “I do not suggest that ... the Court of Appeal ... was ignorant of the existence of [the relevant statutory provision] but .... I am satisfied that that section was not present to [its] mind when rendering judgment, although it does appear to have been dealt with in the argument of counsel”, following *Young v. Bristol Aeroplane Co. Ltd.*, [1944] K.B. 718 at 728-29 (C.A.).

<sup>19</sup> See *Bauer Nike Hockey Inc. v. Regan*, 2001 FCT 1315 at [9]-[13] *per* Morneau Prothon., correctly interpreting the relationship between the two paragraphs and refusing to strike an allegation of invalidity based on a product patent’s failure to state the best known version of the product. Neither *Sanofi-Aventis* (*supra* note 12) nor *Viagra* (*supra* note 14) cite this case.

<sup>20</sup> R. Posner, ed., *The Essential Holmes: Selections from the Letters, Speeches, Judicial Opinions, and Other Writings of Oliver Wendell Holmes, Jr.* (Chicago: Univ. of Chicago Press, 1997) at 36 (letter to Harold Laski, Mar. 15 1917).

United States, and early 19<sup>th</sup> century colonial Canada. So it is with subsection 27(3), and paragraph 27(3)(a) in particular, of the current *Patent Act* of Canada. Bedrock principles established for patent law over two centuries ago have remained constant despite the enormous intervening changes in the social, industrial and legal order.

Whether these principles continue to serve a useful function is however not the focus of this paper. Nor does it canvass whether legislation should modify the principles or whether courts correctly applied them in cases where they determined a best mode duty was present. The concern is simply to establish that, until Parliament enacts otherwise, current Canadian legislation does require a best mode duty to be applied to all patented inventions.

The paper therefore starts by first examining the history of best mode flowing from paragraph 27(3)(a), starting with its forerunner in the British patent grant of the 18<sup>th</sup> century. It then traces the adoption of the British law by comparable language in United States patent laws from 1793, and by pre- and post-Confederation Canadian patent laws since 1824. These precursors of subsection 27(3) from the start were consistently considered to include a best mode duty for all inventions despite the addition in early U.S. and Canadian enactments of special provisions for machines, the paradigm invention that drove the Industrial Revolution during the late eighteenth through nineteenth centuries. The review of Canadian law, especially since 1923, confirms the continued presence of a general best mode duty for all inventions. The paper concludes by indicating where *Sanofi-Aventis* went wrong and how subsection 27(3) is best interpreted.

### 3. Best Mode Antecedents in British Law

In Britain, the link between best mode and the duty imposed by paragraph 27(3)(a) to “correctly and fully describe the invention and its operation or use as contemplated by the inventor” starts with the language of the British patent grant in use from the early 18<sup>th</sup> century. Because of the growing difficulty in discovering the nature of the invention from the often meagre description in the patent itself, the law officers who controlled the patenting process introduced into the document a proviso that rendered the patent void if the inventor did not

particularly describe and ascertain the nature of his invention, and in what manner the same is to be performed.<sup>21</sup>

A separate document containing the inventor’s description had to be filed within a stated period of months in Chancery. It came to be called a specification and was prefaced by language that recited the patent proviso.<sup>22</sup> The proviso, which was treated as a covenant or promise by the patentee to the Crown, was later called by Lord Moulton a “condition [that] is the foundation of modern Patent law”<sup>23</sup> and became a source for the “bargain” theory of patents so beloved of common law

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<sup>21</sup> *Webster’s Patent Cases* (1844), vi (“Web. P.C.”); *Bailey v. Robertson* (1878), 3 App. Cas. 1055 at 1074 aff’ing (1877), 4 S.C. 545 at 580 (Ct. Sess.); C. MacLeod, *Inventing the Industrial Revolution: The English Patent System, 1660-1800* (Cambridge: Cambridge Uni. Press, 1988) at 48ff.; *Report from the Select Committee on the Law relative to Patents for Invention* (H.C., U.K., 12 June 1829) at 63.

<sup>22</sup> See the form of patent and specification set out in W. Hindmarch, *A Treatise on the Law relating to Patent Privileges for the Sole Use of Inventions* (London: Stevens, 1846) at 628 & 631 (patent) & 633 (specification). See also John Dolland’s specification of 1758 in 1 *Carpmael’s Pat. Cas.* 29; Richard Arkwright’s patent of 1776 in Anon., *Trial of a Cause Instituted by Richard Arden to Repeal a Patent granted to Richard Arkwright* (1785), 6-7 (patent), 8 (specification).

<sup>23</sup> *British United Shoe Machinery Co. Ltd. v. A. Fussell & Sons Ltd.* (1908), 25 R.P.C. 631 at 650 (C.A.) per Fletcher Moulton L.J.; see also Hindmarch, previous note at 70.

courts to this day.<sup>24</sup> The language of the proviso and the specification was interpreted in light of its evident purpose: (i) to teach and enable other workers to work the invention; (ii) to notify the public of what it was not allowed to do during the patent term (a function today served by claims); and (iii) to put the public in full possession of the invention once the patent expired so that those with relevant skills could work it as fully as the patentee could.<sup>25</sup>

The inventor's duty under his patent and specification "particularly" to describe and ascertain his invention and how it performed amply supported not just the general duty to disclose, but also the particular duty to disclose the inventor's best method of making and using the invention.<sup>26</sup> Neither duty always went down well with inventors, who, while keen on having an exclusive right, were often less so about letting competitors in on all the inventor knew in return. In 1847 one judge noted that the common mode of drawing a specification was "to state, in some general language, what is the object of the invention, and to point attention to the subject matter in such a manner

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<sup>24</sup> See, e.g., *Teva*, *supra* note 14 at paras. 32-35 & *passim*; compare D. Vaver, "Intellectual Property: Is it Still a 'Bargain'?" (2012) 24 I.P.J. 143.

<sup>25</sup> *Liardet v. Johnson* (1778, K.B.) as reported in E. Hulme, "On the History of Patent Law in the Seventeenth and Eighteenth Centuries" (1902) 18 L.Q.R. 280 at 284ff.; *Arkwright v. Nightingale* (1785), 1 Web. P.C. 60 at 61 (K.B.); *R. v. Arkwright* (1785), 1 Web. P.C. 64 at 66, 1 Carp. P.C. 53 at 76 & 78-9, *aff'd ibid.* at 101 (K.B.) (machine patent); *Turner v. Winter* (1787), 1 Web. P.C. 77 at 81-82 (K.B.) *per Buller J.* (dye-making patent); *Select Committee Report*, *supra* note 21 at 65 (evidence of Francis Abbott); Hindmarch, *supra* note 22 at 156; *Oxford History of the Laws of England* (Oxford: Oxford Uni. Press, 2010), vol. 13 at 950 (entry by W.R. Cornish).

<sup>26</sup> Hindmarch, *ibid.* at 155-56, 159 & 165-172; H. Lund, *A Treatise on the Substantive Law relating to Letters Patent for Inventions* (London: Sweet, 1851) at 100 & 121ff.; J. Collier, *An Essay on the Law of Patents for New Inventions*, 2<sup>nd</sup> ed. (London: Longman & Rees, 1803) at 125ff.; W. Hands, *The Law & Practice of Patents for Inventions* (London: W. Clark & Sons, 1808) at 8 & 10; *Select Committee Report*, previous note at 63; J. Chitty, *A Treatise of the Prerogatives of the Crown* (London: Butterworth, 1820) at 182-3 & 186-87; *British United Shoe*, *supra* note 22 at 650.

as to give as little information as possible”.<sup>27</sup> An experienced patent lawyer was even more direct. In giving evidence to a Select Parliamentary Committee in 1829, Benjamin Rotch said that in his experience:

in three cases out of four, it is the main object of the patentee to deceive the public if he can, and nothing but the dread and fear of losing his patent altogether keeps him constantly from imposing on the public a false description...<sup>28</sup>

Lord Mansfield had nevertheless told inventors as far back as 1778 that their specifications must teach a person skilled in the art to make the invention “and to make it as well as you by your directions.”<sup>29</sup> What that meant in practice is well illustrated by an early 19<sup>th</sup> century infringement case in which a jury held a dye-making patent void for having an insufficient specification. The dye could be produced well enough from what the specification disclosed but, for the presiding judge Gibbs C.J., well enough was not good enough. He directed the jury that:

[a] man who applies for a patent, and possesses a mode of carrying on that invention in the most beneficial manner, must disclose the means of producing it in equal perfection, and with as little expence [sic] and labour as it costs the inventor himself. The price that he pays for his patent is, that he will enable

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<sup>27</sup> *Barber v. Grace* (1847), 1 Exch. 339 at 345 *per* Pollock C.B. Pollock had been a law officer and leader of the patent bar and sat on many patent cases after appointment.

<sup>28</sup> *Select Committee Report*, *supra* note 21 at 107; see also *ibid.* at 44-45 (evidence of Arthur Aikin) & 63 (evidence of Francis Abbott). Specifications were nevertheless practically difficult to access because they were randomly distributed uncatalogued among three offices that charged search fees even if the document was located elsewhere: *Report & Minutes of Evidence before the House of Lords Select Committee on the Patent Amendment Bills* (H.C., 4 July 1851) at 228-229.

<sup>29</sup> *Liardet*, *supra* note 25 at 285 and the other authorities cited in this note; D. Brennan, “The Evolution of English Patent Claims as Property Definers” [2005] I.P.Q. 361 at 369ff.

the public, at the expiration of his privilege, to make it in the same way, and with the same advantages. If anything which gives an advantageous operation to the thing invented be concealed, the specification is void.<sup>30</sup>

It is true that the ground based on the wording of the patent proviso or specification sometimes overlapped with what a Lord Chancellor, charged with both sealing patents on the monarch's behalf and also enforcing them in Chancery, called "a principle of patent law, that there must be the utmost good faith in the specification".<sup>31</sup> Any lie that misled the Crown, whether deliberately or innocently,<sup>32</sup> was a ground to avoid the grant for false suggestion or misrepresentation.<sup>33</sup> This defect was more than a matter of merely calling a specification "insufficient": a court could invalidate the patent on this ground of its own accord without the point even being pleaded.<sup>34</sup> Gibbs C.J. himself based a failure of the best mode duty in his case on both grounds: a

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<sup>30</sup> *Wood v. Zimmer* (1815), 1 Holt (N.P.) 58 at 60 (K.B.); similarly *Bovill v. Moore* (1816), 1 Carp. P.C. 320 at 339-340 *per* Gibbs C.J., *aff'd ibid.* 348 (C.P.) (machine patent); *Savory v. Price* (11823), Ry. & Mood. 1 at 3 (K.B); *Heath v. Unwin* (1852), 12 C.B. 522 at 550 (Ex. Ch.) *per* Coleridge J. (diss.), *rev'd (sub nom. Unwin v. Heath)* (1855), 5 H.L.C. 505 at 542 *per* Pollock C.B. & 545-56 *per* Cranworth L.C. (process patent).

<sup>31</sup> *Sturz v. De La Rue* (1828), 5 Russ. 322 at 325 (L.C.) holding patent void (best mode was deliberately concealed on the inventor's instructions: *Select Committee Report, supra* note 21 at 107). The good faith principle goes back earlier: see, e.g., Eldon L.C. who (when still C.J.) said that "patents were ... to be judged of on the principle of keeping good faith, by making a fair disclosure of the invention": *Cartwright v. Amatt* (1800, C.P.), noted in *Select Committee Report, ibid.* at 192.

<sup>32</sup> *Bovill, supra* note 30 at 348 *per* Gibbs C.J.

<sup>33</sup> Hindmarch, *supra* note 22 at 41-42 & 166-67; H. Fletcher Moulton, *The Present Law & Practice Relating to Letters Patent for Inventions* (London: Butterworth, 1913) at 98.

<sup>34</sup> *Natural Colour Kinematograph Co. (in Liq.) v. Bioschemes Ltd.* (1915), 32 R.P.C. 256 at 268-89 (H.L.) *per* Lord Parker, followed in *McPhar Engineering Co. of Canada Ltd. v. Sharpe Instruments Ltd.* (1960), 35 C.P.R. 105 at 136-38 (Ex.) *per* Thorson P. in dealing with an allegation that a claim was ambiguous or obscure.

“prejudicial concealment” and a “breach of the terms which the patentee makes with the public.”<sup>35</sup>

The grounds at common law and on the patent or specification were nevertheless independent, and the good faith requirement could equally flow from a purposive construction of the inventor’s duty to “particularly” describe the invention and its use. This ground based on the language of the patent or specification - literally, part of the bargain the patentee made with the Crown in exchange for the exclusive right - gave courts the clearest authority for invalidating a patent for non-compliance. Insufficiency as a defence was invariably raised by pleading that the plaintiff had not complied with the patent proviso. The plaintiff then had to prove full and frank compliance or lose his case.<sup>36</sup>

The language of the patent proviso was moved into legislation in 1852<sup>37</sup> and the proviso itself was eventually changed to allow for revocation on “any of the grounds from time to time by law prescribed”.<sup>38</sup> Thus from 1852 on, the new statutory language became

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<sup>35</sup> *Wood*, *supra* note 30 at 60. The dual grounds of decision were apparently recognized by H. Fisher & R. Smart, *Canadian Patent Law & Practice* (Toronto: Canada Law Book, 1914) at 78 & 198-9 referring to *Wood* in connection with the statutory provisions on both disclosure and concealment.

<sup>36</sup> *Hornblower v. Boulton* (1799), 8 T.R. 95 at 101 (K.B.); *Morgan v. Seaward* (1836), 1 Web. P.C. 170 at 173-75 (K.B.); *Walton v. Bateman* (1842), 1 Web. P.C. 613 at 621-23 (C.P.); *Tetley v. Easton* (1852), *Macrory’s Pat. Cas.* 48 at 76 (Ex.); *Heath* (1852), *supra* note 30 at 523 & 550; *Foxwell v. Bostock* (1864) 4 De G.J. & S. 313-14 (L.C.); *Bailey*, *supra* note 21 (1877) at 580; *Clark v. Adie* (1877), 2 App. Cas. 315 at 333-34 & 340 (H.L.); *Lund*, *supra* note 26 at 100 & 121ff. For proof and pleading see Hindmarch, *supra* note 22 at 475ff., 669-70 & 675-76; T. Turner, *The Law of Patents & Registration of Invention & Design in Manufacture* (London: Crockford, 1851) at 38, 40-41 & 80; similarly on post-1852 pleading *Bullen & Leake’s Precedents of Pleading*, 7<sup>th</sup> ed. (London: Stevens & Sweet & Maxwell, 1915) at 804-06 (although mixing statutory and common law grounds in the commentary).

<sup>37</sup> *Patent Law Amendment Act*, 1852, 15 & 16 Vict., c. 85, s. 9 (U.K.) requiring the filing of a complete specification “particularly describing and ascertaining the nature of the said invention, and in what manner the same is to be performed”.

<sup>38</sup> On later form of patents see *Patent Rules*, 1890, S.R. No. 950 (U.K.), Third Schedule, Form A.

the main source of the best mode obligation, on which the former case law continued to be treated as authoritative.<sup>39</sup> The requirement to disclose the inventor's "best method" was made explicit in the patent statute of 1932 and remained so until the passage of the *Patent Act 1977* (U.K.), when it disappeared on the U.K.'s joining the *European Patent Convention*.<sup>40</sup>

The presence of an overlapping common law duty of honesty or good faith is no doubt the reason for the occasional loose remark that the general duty to disclose, and the specific duty to disclose best mode, are rules of the common law.<sup>41</sup> But the duty to disclose the invention in a

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<sup>39</sup> "It is expressly enacted that the patentee must, in the complete specification, describe the manner in which the invention is to be performed, and the description will not be sufficient unless it includes the best means known to him at the time of filing the document": R. Frost, *Law & Practice relating to Letters Patent for Inventions*, 2nd ed. (London: Steven & Hayes 1898) at 205ff. on the same language carried into the *Patents, Designs & Trade Marks Act*, 1883 (U.K.), s. 5(4); similarly S. Brice *The Law, Practice, & Procedure, relating to Patents, Designs, & Trade Marks* (London: Clowes, 1885) at 11; J. Johnson, *A Treatise on the Law & Practice of Patents for Invention*, 6<sup>th</sup> ed. (London: Longmans, Stevens, 1890) at 100 & 121-24; W. Bewes, *Copyright, Patents, Designs, Trade Marks* (London: A. & C. Black) at 101-02; L. Edmunds, *The Law & Practice of Letters Patent for Inventions*, 2nd ed. (London: Stevens, 1897) at 156ff.; Fletcher Moulton, *supra* note 33 at 85 & 96; J. Roberts, *The Grant & Validity of British Patents for Invention* (London: John Murray (1903) at 72 & 74ff.; K. Swan, *The Law & Commercial Usage of Patents, Designs & Trade Marks* (London: Archibald Constable, 1908) at 45-46, 53 & 59; D. Fulton, *The Law & Practice relating to Patents & Designs*, 4<sup>th</sup> ed. (London: Jordan, 1910) at 96 & 99-100; *Penn v. Bibby* (1866), L.R. 2 Ch. App. 127 at 132 *per* Lord Chelmsford; *Plimpton v. Malcolmson* (1878), 3 Ch. D. 351 at 536, 580 & 582; *British Dynamite Co. v. Krebs* (1879), 13 R.P.C. 190 at 192 (H.L.) *per* Cairns L.C. (referring to Act) & 195 & 196 *per* Lord Hatherley; *Edison v. Woodhouse* (1886) 32 Ch. D. 520 at 523; *Siddell v. Vickers* (1887), 39 Ch. D. 92 at 104 (C.A.), *aff'd* (1890), 15 App. Cas. 496 (H.L.); *Pneumatic Tyre Co. v. East London Rubber Co.* (1896), 14 R.P.C. 77 at 101 (Ch.), *aff'd ibid.* 573 (C.A.); *British United Shoe, supra* note 23 at 650; *R.C.A. Photophone Ltd. v. Gaumont-British Picture Corp.* (1936), 53 R.P.C. 167 at 195 (C.A.) *per* Romer L.J.

<sup>40</sup> *Patents & Designs Act*, 1932 (U.K.), s. 3; *Patent Act*, 1949 (U.K.), s. 32(1)(h); see *Terrell on the Law of Patents*, 12<sup>th</sup> ed. (London: Sweet & Maxwell 1971) at para. 226.

<sup>41</sup> See, e.g., in Canada, *Fisher & Smart, supra* note 35 at 198; *De Forest Phonofilm of Canada Ltd. v. Famous Players Canada Corp.*, [1931] Ex. C.R. 27 at 43 *per* Maclean P. on predecessors of paras. 27(3)(a) & (b) ("This was an obligation of the Common Law and it is now an obligation by Statute"); *Fox, supra* note 4 at 180 on best mode in para. 27(3)(a) ("At common law a patent was always held invalid ... if he failed to communicate all his knowledge with respect to the invention"), as cited by *Lido, supra* note 7; *Consolboard, supra* note 5 at 518 *per* Dickson J. (changes to subs. 27(3) "merely gave statutory recognition to what had always been the common law") [emphasis added throughout].

specification was not imposed by the common law, and so no “common law” of specifications or patent provisos ever existed in the way a judge-made common law of contracts and torts did - any more than there has been a “common law” of obviousness, anticipation or patent infringement, despite the enormous body of case law on these concepts that nevertheless firmly rested on legislation or the words of the patent grant.<sup>42</sup> As the old rules of pleading and evidence clearly recognized,<sup>43</sup> the duties of disclosure and best mode were best based on the language of the patent proviso and specification. A decision on the meaning of a power or provision in a statute or deed does not become part of the “common law” just because a common law-trained judge delivers or deduces it, or common law principles are applied to interpret the instrument’s language or the consequences of non-compliance with its provisions.<sup>44</sup>

If a best mode duty can therefore be drawn from the proviso of the British patent grant it should equally flow from the language of paragraph 27(3)(a) of the Canadian *Act*. The principle of the proviso as interpreted by the British judges is equally that of the Canadian paragraph. Although paraphrase is normally frowned on as a method of interpretation, exceptionally it works here, as the Supreme Court of Canada seems to have recognized in 1930 in equating compliance with the British patent

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<sup>42</sup> *Synthon B.V. v. SmithKline Beecham plc*, [2006] 1 All E.R. 685, [2005] UKHL 59 at paras. 57-58 *per* Lord Walker, cited in part and approved in *Apotex Inc. v. Sanofi-Synthelabo Canada Inc.*, [2008] 3 S.C.R. 265, 2008 SCC 61 at para. 12 *per* Rothstein J.

<sup>43</sup> Hindmarch, *supra* note 22 at 475ff., 669-70 & 675-76.

<sup>44</sup> Whether a duty was based on common law or statute became important in Britain only after 1949 when common law grounds could no longer be used to revoke a patent: *Patent Act*, 1949 (U.K.), s. 32(1); *American Cyanamid Co. v. Upjohn Co.*, [1970] 1 W.L.R. 1507 at 1510-11 (H.L.) *per* Lord Reid.

proviso with compliance with another aspect of subsection 27(3).<sup>45</sup> Conceptually and functionally the Canadian duty to “correctly and fully describe the invention” is no different from the British duty to “particularly describe and ascertain the nature of his invention”; the Canadian duty to “correctly and fully describe [the invention’s] operation or use as contemplated by the inventor” must equally be the same as the duty undertaken by the inventor to “particularly describe and ascertain ... in what manner the [invention] is to be performed”.

Nothing in the Canadian *Act* points to a different conclusion - including the presence of the best-mode-for-machines paragraph 27(3)(c). This becomes clear as we trace the importation of British law into American law, and the migration of the American provisions into the forerunners of Canadian paragraphs 27(3)(a) and (c).

#### **4. Best Mode in American Law**

The first patent law of the United States in 1790 amounted to only one section although a longer and more expansive one than its inspiration in section 6 of the *Statute against Monopolies* of 1624,<sup>46</sup> the only patent legislation Britain then had. An inventor who successfully petitioned the government with the assertion of a “sufficiently useful and important” invention or discovery would receive a patent that “recit[ed] the allegations and suggestions of the said petition, and describ[ed] the said

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<sup>45</sup> *French’s Complex Ore Reduction Co. of Canada v. Electrolytic Zinc Process Co.*, [1930] S.C.R. 462 at 476 per Rinfret J. citing from Lord Halsbury in *British Ore Concentration Syndicate Ltd. v. Minerals Separation Ltd.* (1909), 27 R.P.C. 33 at 47 (H.L.).

<sup>46</sup> 21 Jac. 1, c. 3 (Eng.).

invention or discovery clearly, truly and fully”.<sup>47</sup> Inventors’ complaints and the administrative burden of dealing with and rejecting around half of the 120 petitions presented under the 1790 law caused a new statute to be enacted in 1793 that more clearly set out what paperwork was needed for registration.<sup>48</sup> Not only did the inventor have to supply drawings, specimens and (on request) models, but by § 3 he also had to

deliver a written description of his invention, and of the manner of using, or process of compounding the same, in such full, clear and exact terms, as to distinguish the same from all other things before known, and to enable any person skilled in the art or science, of which it is a branch, or with which it is most nearly connected, to make, compound, and use the same.

This primary obligation was followed by one contained in a second sentence which imposed a more specific duty for machines. The inventor had to disclose not just his best mode but “the several modes” of working his machine, thus:

And in the case of any machine, he shall fully explain the principle, *and the several modes* in which he has contemplated the application of that principle or character, by which it may be distinguished from other inventions...

This several-modes duty was clearly additional to the one contained in the prior sentence. The machine inventor was not absolved by the several-modes duty from delivering a “written description” of the machine and “the manner of using” it “in such full, clear and exact terms” etc.

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<sup>47</sup> *Patent Act*, ch. 7, 1 Stat. 109 (1790).

<sup>48</sup> *Patent Act*, ch. 11, 1 Stat. 318-323, § 1 (1793). See O. Bracha, *Owning Ideas: A History of Anglo-American Intellectual Property* (Harvard S.J.D. Dissert., 2005) at 414; D. Maxey, “Samuel Hopkins, the Holder of the First U.S. Patent: A Study of Failure” 122 *Penn. Mag. Hist. & Biog.* 3 at 8 (1998).

Nearly two centuries later when examining the current Canadian version of § 3 of the 1793 U.S. *Act*, Dickson J. for the Supreme Court of Canada criticized it for not being “happily phrased” and giving “the impression of a mélange of ideas gathered at random rather than an attempt to enunciate, clearly and concisely, a governing principle or principles.”<sup>49</sup> He thought the defect could be the result of multiple amendments over the years; but the problem plainly existed from the start. Commentators on the 1793 *Act* noted it while more clearly discerning the provision’s pattern. Thus Phillips in his 1837 treatise mentioned, in words reminiscent of Dickson J.’s “mélange of ideas” remark, how the 1793 requisites were “blended and intermixed” but emphasized the dominance of § 3’s opening language: “it is by observing the first of these requisitions” - i.e., the duty to deliver a written description in full, clear and exact terms - “that the latter are complied with”, and “what is said of one requisite, is, in many instances, equally applicable to another”.<sup>50</sup>

These provisions remained much the same when the U.S. *Act* was revised in 1836 to create a system of examination, except that the several-modes-for-machine provision in a renumbered § 6 became part of the earlier sentence, separated by a semi-colon rather than a period.<sup>51</sup> The change of punctuation indicated no change in meaning: the conjunction “and” indicated that the special duty for machines was

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<sup>49</sup> *Consolboard*, *supra* note 5 at 518.

<sup>50</sup> W. Phillips, *The Law of Patents for Inventions* (Boston: American Stationers’ Co., 1837) at 237-38.

<sup>51</sup> *Patent Act*, ch. 357, 5 Stat. 117 (1836).

additional to the duties for machines and other inventions expressed in the preceding language.

Machines were likely singled out for special treatment because they were the prototypical invention of the Industrial Revolution of the late 18<sup>th</sup> and early 19<sup>th</sup> centuries, and petitions for their patenting under the 1790 law may have been disproportionately unsatisfactory.<sup>52</sup> The requirement that their several known modes of working - and not just their best mode - be fully explained was thought to add to what was required for other inventions by the good faith duty to describe any invention in “full, clear and exact terms”.<sup>53</sup>

What is clear is that if an inventor had several modes of working the machine’s principle, he could not avoid also saying which was or were his best. Since that duty was not expressed in the machine provision, it could come only from the earlier language that required the invention and its manner of use to be described in such “full, clear and exact terms” as would enable a skilled worker to use it as well.<sup>54</sup> In other words, this primary duty must have applied as fully to machines as it applied to other inventions.

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<sup>52</sup> A. Pottage & B. Sherman, *Figures of Invention: A History of Modern Patent Law* (Oxford: Oxford Uni. Press, 2010) at 14 indicating that the machine was the “central case” for the development of specific rules for patents throughout the 19<sup>th</sup> century, and most U.S. patent litigation in the first part of the century “concerned mechanical devices”.

<sup>53</sup> *Sargent v. Carter* (1857), 21 F. Cas. 495 at 497 (C.C.D. Mass.) *per* Curtis J. saying of a patented machine that the inventor “describes two devices. If he was then possessed of a third, he was bound to describe that also”.

<sup>54</sup> J. Anderegg, “The Best Mode Requirement of 35 U.S.C. Section 112” 6 APLA Q’ly J. 219 at 220-21 (1978) rests best mode on the statutory codification of the common law duty, stemming from § 6 in the 1793 Act through later Acts, to tell the whole truth and not deceptively conceal anything “relative to his discovery”. But the overlapping duty in §6 not to lie is conceptually distinct from the duty in §3 to fully disclose: see text accompanying *supra* notes 30-36; *Grant v. Raymond*, 31 U.S. 218 at 247 (1832).

We have until now assumed that the British approach of interpreting the language of the primary duty to include best mode was followed in the United States, and indeed it was.<sup>55</sup> American lawyers understood that the disclosure section, like much else in the U.S. statute, was inspired by the old *Statute against Monopolies* of 1624 and the wording of the patent grant as interpreted by British case law, which by 1793, and even more so by 1836, had established a best mode requirement for all inventions. Thus, U.S. Supreme Court Justice Joseph Story, later hailed as “one of the architects of American patent law”,<sup>56</sup> wrote in a paper published in 1818:

The patent acts of the United States are, in a great degree, founded on the principles and usages which have grown out of the [*Statute against Monopolies*] on the same subject. It may be useful, therefore, to collect together the cases which have been adjudged in England, with a view to illustrate the corresponding provisions of our laws.<sup>57</sup>

Story proceeded to do just that by setting out the provisions of the *Statute against Monopolies* and the British patent proviso on specifications and discussing the English decisions, which he perceptively recognized as made “[u]pon the construction of the British patent act, taken in connection with the conditions inserted in the letters patent.” Among the decisions discussed were of course the English judgments on

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<sup>55</sup> *Magic Ruffle Co. v. Douglas*, 16 F. Cas. 394 at 397 (C.C.S.D.N.Y., 1863) (article of manufacture).

<sup>56</sup> F. Prager, “The Influence of Mr. Justice Story on American Patent Law” 5 Am. Jo. Legal History 254 (1961).

<sup>57</sup> J. Story, “Of the Patent Laws”, in 3 U.S. (Wheaton) Repts. (1818), Appendix (Note II), 13 (although anonymous, Story J.’s authorship is confirmed by his son: W. Story, ed., *Life & Letters of Joseph Story* (Boston: Little & Brown, 1851), vol. 1 at 303; see also Prager, previous note at 254, n. 1); see too E. Waterscheid, “The Early Evolution of the United States Patent Law: Antecedents (Part I)” 75 Jo. Pat. & Tm. Off. Soc’y 697 at 698-99 (1994) .

best mode.<sup>58</sup> The clear inference, acted on by Story J. in his many patent judgments, was that American law and practice should generally follow British law and practice in interpreting the U.S. statutes except where the latter took a different tack.

That too was the view of the leading treatise writers. Phillips in his book on the 1793 *Act* included a section headed “The specification must direct how to make, and describe the best way known to the Inventor of making, the article”<sup>59</sup> and discussed the British case law, including that dealing with machine inventions, with no hint that machines were somehow exempt from the duty in the United States. In fact, Phillips thought § 3’s several-modes-for-machine provision was of so little importance that, after including it when setting out § 3 verbatim, he did not refer to it again in his treatise.

Curtis’s treatise on the 1836 *Act* is more explicit. In passages retained in all editions from 1849 to 1873, Curtis cited the relevant parts of § 6 of the 1836 *Act* and went on to approve the English cases, including Gibbs C.J.’s dye-making case,<sup>60</sup> as exemplifying the inventor’s duty to describe the invention so that it could be practised from the specification alone:

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<sup>58</sup> See Story J., *ibid.* at 13-14 & 20-21. Story J. repeated and applied these views in *Pennock v. Dialogue*, 27 U.S. (2 Pet.) 1 at 18 (1829) (prior use); see too U.S. House of Representatives Comm. debate on *Patents Bill* of 1793, *Annals of the Congress of the United States*, vol. 3 at 853 (Jan. 30 1793), by Mr Williamson (“the principles of the bill [were] an imitation of the Patent System of Great Britain”); *Senate Report Accompanying Senate Bill No. 239*, 24th Cong., 1st Sess. (April 28, 1836); Bracha, *supra* note 48 at 415-16. Note that Hindmarch’s leading English patent treatise (1846), *supra* note 22, was reprinted and published the following year in the U.S. by McKinley & Lescure, Harrisburg, Pa., with an added Appendix of current U.S. patent statutes and notes of U.S. patent cases.

<sup>59</sup> Phillips, *supra* note 50 at 282.

<sup>60</sup> Wood, *supra* note 30.

the patentee is bound to give the most advantageous mode known to him, and any circumstance conducive to the advantageous operation; otherwise he does not pay the price for his monopoly, because he does not give the public the benefit of all that he knows himself. ... [I]t is necessary that a specification should ... give the best process, materials, and methods, known to the inventor...”<sup>61</sup>

After citing the several-modes-for-machine sentence, he made it plain that the duty to disclose several modes was in addition to the primary duty to disclose the machine’s best mode:

[H]e is to state not only the peculiar device or construction which he deems best for producing the new effect exhibited in his machine, but also all the other modes of producing the same effect, which he means to claim as being substantially applications of the same principle.<sup>62</sup>

Two cases under the 1836 Act on machine improvement patents bear Curtis out. The first claimed improvements to a cotton gin that left greater spaces between the machine’s ribs to avoid clogging, and then gave three ways to achieve that spacing. Story J. said the inventor need not specify further how the three ways could be implemented: it sufficed “for him to state the modes which he contemplates to be best.”<sup>63</sup>

The second case also involved a machine patent, an improved portable sawmill, and the judge drew no distinction between machine and other inventions in his direction to the jury:

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<sup>61</sup> G.T. Curtis, *A Treatise on the Law of Patents for Useful Inventions in the U.S.A.* (Boston: Little & Brown, 1849) at 166 & 170.

<sup>62</sup> *Ibid.* at 148-49.

<sup>63</sup> *Carver v. Braintree Mfg. Co.*, 5 F. Cas. 235 at 238 (C.C.D. Mass. 1843).

The patentee is bound to disclose in his specifications the best method of working his machine known to him at the time of his application. The specification is intended to teach the public the improvement patented; it must fully disclose the secret [and] must give the best mode known to the inventor...<sup>64</sup>

When a new *Patent Act* was enacted in 1870, it repeated the specification provision but the several-modes-for-machine sentence was now replaced by a best-mode-for-machine provision:

and in case of a machine, he shall explain the principle thereof, *and the best mode* in which he has contemplated applying that principle so as to distinguish it from other inventions...<sup>65</sup>

The purpose of the amendment was not to impose for the first time a best mode duty for machine patents. On the contrary, it confirmed the holdings of prior case law that machine inventors were subject to that duty under the general provision to describe the invention and its use in “full, clear and exact terms”. The amendment’s evident purpose was rather to remove the special duty on machine inventors to disclose not merely the best mode but also “the several modes” for working the machine invention.<sup>66</sup> Machines were now put on a par with all the other sorts of significant inventions that were making their presence felt on the patents register.

In other words, after 1870 the best mode requirement continued as before for all inventions and, for the avoidance of doubt, machine

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<sup>64</sup> *Page v. Ferry*, 18 F. Cas. 979 at 984 (C.C.E.D. Mich. 1857).

<sup>65</sup> *Patent Act*, c. 230, 16 Stat. 198, § 26 (1870) [emphasis added].

<sup>66</sup> Thus overruling *Sargent*, *supra* note 53.

inventions too were made subject to that same duty. No case law or text writer suggested that restricting machine inventors to a best mode duty somehow impliedly repealed the best mode duty for all other inventions. The best mode duty continued to be discussed and applied, including by the Patent Office,<sup>67</sup> in terms that applied to all inventions without discrimination.<sup>68</sup>

The drafting anomaly was finally removed by Congress in its comprehensive revision of the U.S. *Patent Act* in 1952. The best mode requirement was explicitly imposed on all inventions and the special machine provision was dropped as now “unnecessary.”<sup>69</sup>

## 5. Best Mode in Canadian Law

The drafting anomaly the U.S. removed in 1952 remains in Canadian legislation despite the Ilsley Royal Commission’s recommendations in 1960 to amend the Canadian *Act* in line with the U.S. reform.<sup>70</sup> Canada’s

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<sup>67</sup> See Patent Rule 35 under the 1870 *Act* in E.J. Stoddard, *Annotated Rules of Practice in the United States Patent Office* (Detroit: Drake, 1920) at 62-63: “The specification must set forth the precise invention for which a patent is solicited, and explain the principle thereof, *and the best mode in which the applicant has contemplated applying that principle*, in such manner as to distinguish it from other inventions” (emphasis added).

<sup>68</sup> *Lorillard v. McDowell*, 15 F. Cas. 893 (C.C.E.D. Mich. 1877) (product); *Grier v. Castle*, 17 F. Cas. 523 at 524 (C.C.W.D. Pa. 1883) (product improvement); Anderegg, *supra* note 54 at 222; W. Simonds, *A Summary of the Law of Patents for Useful Inventions* (New York, N.Y: Strouse & Co., 1883) at 136-37 & W. Robinson, *The Law of Patents for Useful Inventions* (Boston: Little Brown, 1890), vol. 2 at §§ 484-86 & 498 both applying the English case law to all inventions; similarly O. Bump, *The Law of Patents, Trade-marks, Labels & Copy-Rights*, 2d ed. (Baltimore: Cushings & Bailey, 1884) at 139; B.V. Abbott, *The Patent Laws of All Nations* (Washington, D.C.: Brodrix, 1886), vol. 2 at 68; W. Elfreth, *Patents, Copyrights, & Trade-Marks* (New York: Baker Voorhis, 1913) at 53-54; J. Waite, *Patent Law* (Princeton: Princeton Univ. Press, 1920) at 170.

<sup>69</sup> House Committee on the Judiciary, *Proposed Revision & Amendment of the Patent Laws, Preliminary Draft, Notes*, § 28 (U.S. Govt. Printing Off., 1950); *Patent Act*, 35 U.S.C. § 112 (2006).

<sup>70</sup> Royal Commission, *supra* note 4 at 44-45 also setting out Thorson P.’s entire *Minerals Separation* statement on disclosure as indicating what a suggested redraft of the *Patent Act* meant to achieve. There is no suggestion that the redraft intended to change the law.

current substantive legal position on best mode is nevertheless the same as that reached by U.S. law since 1870 and confirmed by the 1952 U.S. amendment. Canadian statutes on best mode followed a similar path to the U.S. statutes, albeit sometimes with a significant time lag. The only variation simply confirms a universal best mode duty.

In *Consolboard* the Supreme Court of Canada traced the history of patent specifications back to Canada's first patent statute of 1869, based on the U.S. *Patent Act* of 1836.<sup>71</sup> American influence however goes back well before Confederation to the first patent legislation of Lower and Upper Canada in 1824 and 1826 and the maritime colonies in the 1830s which drew heavily on the U.S. *Patent Act* of 1793. The written description and separate several-modes-for-machine provision was taken by Lower and Upper Canada and Nova Scotia almost word for word.<sup>72</sup> Others like New Brunswick and Prince Edward Island in 1834 and 1837<sup>73</sup> applied the requirement to "explain the principle and the several modes in which [the inventor has] contemplated the application of that principle or character" to all inventions,<sup>74</sup> and Nova Scotia in 1851 also removed the "several modes" language from machines and required only the machine's "principle to be explained".<sup>75</sup> The Province of Canada in 1859

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<sup>71</sup> *Supra* note 5 at 518.

<sup>72</sup> *An Act to promote the progress of useful arts in this Province*, L.C. 1824, 5 Geo IV, c. 25; *An Act to Encourage the Progress of Useful Arts within this Province*, U.C. 1826, 7 Geo IV, c. 5, s. 3. *An Act for granting Patents for useful Inventions*, S.N.S. 1833, c. 44, s. 7. For a list of the amendments to the pre-Confederation statutes, see Fisher & Smart, *supra* note 35 at 2-3.

<sup>73</sup> *An Act for granting patents for useful Inventions*, R.S.P.E.I. 1837, 7 Will. IV, c. 21, s. 6.

<sup>74</sup> *An Act for granting Patents for Useful Inventions*, R.S.N.B. 1834, 26 Geo. 4, c. 27, s. 6.

<sup>75</sup> *Of Patents for Useful Inventions*, R.S.N.S. 1851, c. 120, s. 7.

just largely copied the 1836 U.S. *Act* including its several-modes-for-machine clause.<sup>76</sup>

The Dominion of Canada's first *Patent Act* in 1869 was also modeled on the 1836 U.S. *Act* with a few variations. The specification's description had to be in "full, clear and exact terms" and also had to "correctly and fully describe the mode or modes of operating contemplated by the applicant" for all inventions. The redundancy of the 1869 *Act*'s retention of a provision for machines that required a full explanation of "the several modes in which it is intended to apply and work out" the machine's principle apparently went unnoticed.<sup>77</sup>

These provisions continued with minor stylistic variations through amendments and consolidations of Canada's patent laws until the reforms of 1923; but the more things changed, the more things stayed the same. All the Canadian statutes since the 1820s were written against the backdrop of British and American treatises and case law, which were treated as authoritative in Canada. Thus Fisher and Smart in their 1914 treatise said the Canadian specification requirements were "in substance the same as in England and the United States, although differing somewhat in terms".<sup>78</sup> Those terms nonetheless included a duty imposed

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<sup>76</sup> *An Act respecting Patents for Inventions*, C.S.C. 1859, 22 Vict., c. 34, s. 7 & subs. 7(2). For the early history of U.S. and Canadian cross-border technology transfer and tensions, see R.T. Naylor, *The History of Canadian Business 1867-1914*, 2<sup>nd</sup> ed. (Montreal & Kingston: McGill-Queen's Univ. Press, 2006), c. 10, "Patents, Foreign Technology, and Industrial Development".

<sup>77</sup> *An Act respecting Patents of Invention*, S.C. 1869, 32-33 Vict., c. 11, s. 14.

<sup>78</sup> *Supra* note 35 at 75; see also *ibid.* at 78 citing *Turner*, *supra* note 25, *Sturz*, *supra* note 31, & *Wood*, *supra* note 30, after noting both the statutory requirements of the then patent laws of the U.S. (1870) and the U.K. (1883); *Smith Incubator Co. v. Seiling*, [1937] S.C.R. 251 at 253-55 *per* Duff C.J. also indicating overlap between common law and statute; *Emery v. Iredale* (1861), 11 U.C.C.P. 106, 1861 CarswellOnt 214 at paras. 20ff. noting the different respective wording of the English and Upper

on inventors “in the public interest” to reveal “the best manner known to the inventor of performing” the invention as part of the “condition ... that he has disclosed completely his invention”: so said the Supreme Court of Canada when reviewing “some long established and well understood principles of patent law”.<sup>79</sup>

Nobody doubted that, despite all the legislative tinkering, the statutory duty applied across the board to machines as much as to any other invention. Thus Ridout in his 1894 treatise wrote that the inclusion of the several-modes-for-machine provision did not

necessarily mean that all alternate modes of operation are to be illustrated and described, for there might be many; *the best method of applying and working out the principle is the one to be described.*<sup>80</sup>

A universal best mode duty was particularly important for Canada because of some special features of its early legislation that were not always present in American or British law. First, Canada allowed patents to be used by the government without the patentee’s consent, although he was entitled to reasonable compensation as fixed by the Commissioner of Patents.<sup>81</sup> Second, the Canadian *Acts* required early local working of

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Canada patents but drawing no distinction between them and Britain’s and Upper Canada’s law on specifications.

<sup>79</sup> *Western Electric Co., Inc. v. Baldwin International Radio of Canada*, [1934] S.C.R. 570 at 571 & 573-74 *per* Duff C.J. speaking of combination patents granted in 1915 and 1916 (one being reissued in 1921) and thus referring to the *Patent Act*, R.S. 1906, c. 61 with its several-modes-for-machine provision in subs. 13(3).

<sup>80</sup> J. Ridout, *Treatise on the Patent Law of the Dominion of Canada* (Toronto: Rowsell & Hutchison, 1894) at 106 [emphasis added], on *Patent Act*, S.C. 1886, 35 Vic. c. 26, subs. 13(3), although failing to note that his view was contrary to the U.S. case of *Sargent*, *supra* note 53, which appears nowhere in his book.

<sup>81</sup> See, e.g., *Patents Act*, 1869, *supra* note 77, s. 21.

patents by invalidating those which after 18 months relied on imports or after 2 years were not locally worked to meet public demand.<sup>82</sup> This requirement, extending beyond machines to manufactures as well, was supplemented in 1903 by a system of compulsory licensing that allowed anyone to apply to the Commissioner of Patents to work the patent on terms fixed by the Commissioner, where the reasonable requirements of the public for the invention were not being met.<sup>83</sup> These provisions applied across to the board to all patented products and processes as well as machines. They were progressively eliminated over the course of the 20<sup>th</sup> century, but while in force their purpose was evident: to make inventions quickly available to the Canadian public at a reasonable price or royalty and to ensure that “Canadian industry and Canadian labor should, in the shortest possible time, be made to profit by new inventions”.<sup>84</sup> Those objects would have been seriously undermined if third party use could start only below the best mode the inventor had achieved when the patent had been applied for.

The general extent of the best mode duty was further reinforced by the patent reforms of 1923. The *Patent Act* of that year eliminated the several-modes-for-machine provision but did not replace it with a best-mode-for-machine provision as contained in the 1870 U.S. *Act*. Instead the new Canadian *Act* just said:

14.(1) The specification shall correctly and fully describe the invention and its operation or use as contemplated by the inventor. It shall set forth clearly the

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<sup>82</sup> *Ibid.*, s. 28.

<sup>83</sup> *An Act to amend the Patent Act*, S.C. 1903, c. 46, 3 Edw. VII, s. 7.

<sup>84</sup> *Mayes v. R.* (1877), 2 Ex. C.R. 403 at 484 & 485.

various steps in a process, or the method of constructing, making or compounding, a machine, manufacture, or composition of matter.

The Parliamentary debates reveal an intention to keep Canadian patent applications in line with U.S. and British practice,<sup>85</sup> no doubt because of the common traffic between Canada and those countries in corresponding patent applications. The first sentence of subsection 14(1) is certainly consistent with that intention. It returns to the simple concept of the British patent grant and the prevailing interpretation of the pre-1870 U.S. specification statutes that deduced a universal best mode duty from comparable general language.

The presence of such a duty is also confirmed by the fact that three sections later Parliament introduced new provisions, inspired by recent British reforms, to limit patents over the critical areas of food, medicine and their ingredients. If the substance intended for food or medicine was prepared or produced by a chemical process, only the substance as prepared by that process could be claimed. Parliament must have meant these patents to be subject to the best mode provisions of subsection 14(1). Since everyone was free to make the food or medicine by a different non-infringing process, disclosing the best mode of the product and process would encourage others to find better ways of making food and medicine.<sup>86</sup> The patents were also subject to compulsory licensing at a royalty fixed by the Commissioner of Patents with regard to

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<sup>85</sup> Thus, on the *Patent Bill's* second reading, a government amendment was put forward to subs. 14(2) to simplify the requirement for signing the drawings that accompanied specifications "to conform with the practice of Great Britain, the United States and other countries" (*H.C. Debates*, 14th Parl., 2d Sess., 13-14 Geo V, Vol. 3 at 2073 (1923) by Mr Robb).

<sup>86</sup> *Dairy Foods Inc. v. Co-op. Agricole De Granby*, [1976] 2 S.C.R. 651 at 663 per Dickson J.

the desirability of making the food or medicine available to the public at the lowest price consistent with giving to the inventor due reward for the research leading to the invention.<sup>87</sup>

The research leading to the invention would have included the best mode both of working the process and also achieving the best version of the food or medicine at the lowest price. Requiring licensees to make inferior or costlier products by inferior or costlier methods, while paying a royalty based on the included cost of undisclosed best modes, would have frustrated this purpose.

The legislative debates on the next round of patent reforms of 1935 do not reveal what, if anything, had broken that needed fixing. Doubts may have arisen over the meaning of subsection 14(1) or pressure may have mounted to copy the U.S. law of 1870 to standardize the contents of specifications that were regularly being filed in both jurisdictions. In any event, having removed one tautology in 1923, the *Patent Act* of 1935<sup>88</sup> introduced another by amending the specification provision again, this time to include an explicit best-mode-for-machine provision:

35.(1) The applicant shall in the specification shall correctly and fully describe the invention and its operation or use as contemplated by the inventor, and set forth 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 it appertains, or with which it is most closely connected, to make, construct, compound or use it. In the case of a*

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<sup>87</sup> *Patent Act*, S.C. 1923, 13-14 Geo. V, c. 23, subs. 17(2).

<sup>88</sup> *Supra* note 16.

*machine he shall explain the principle thereof and the best mode in which he has contemplated the application of that principle.* In the case of a process he shall explain the necessary sequence, if any, of the various steps, *so as to distinguish the invention from other inventions.* [Emphasis added]

The emphasized language is with immaterial grammatical changes taken verbatim from § 26 of the U.S. *Patent Act* 1870. The whole subsection is essentially today's subsection 27(3), except that the latter is divided into four paragraphs for ease of reading and reference.

Despite all the added verbiage the 1935 changes indicate no intent to change the law on best mode as it stood both before and after the 1923 *Act*. By repeating the first sentence of the 1923 *Act*, the drafter must have intended to retain the 1923 *Act*'s universal best mode duty. He would equally have known that the addition of a best-mode-for-machine duty would not affect the universal application of the best mode duty in Canada any more than it had in the United States when § 26 of the 1870 U.S. *Act* was enacted. That was the result of Thorson P.'s *Minerals Separation* decision on best mode under the 1923 *Act*, a view that Thorson P. and other judges maintained under the 1935 and later *Acts*.<sup>89</sup>

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<sup>89</sup> *Minerals Separation*, *supra* note 3; *Di Fiore*, *supra* note 8 at 154-56 (process patent under 1935 *Act*); *Radio Corp. of America v. Raytheon Mfg. Co.*, [1956-60] Ex. C.R. 98 at 108-9 *per* Thorson P. (method patent); *Traver Investments Inc. v. Union Carbide & Carbon Corp.*, [1965] 2 Ex. C.R. 126 at 148 *per* Gibson J. (method & apparatus patent), *aff'd* [1967] S.C.R. 196; *Société des Usines Chimiques Rhone Poulenc v. Jules R. Gilbert* (1967) 35 Fox P.C. 174 at 191-93 & 202 (Ex.) *per* Thurlow J. (process for preparing medicine), *aff'd* [1968] S.C.R. 950; *Jules R. Gilbert Ltd. v. Sandoz Patents Ltd.* (1970) 64 C.P.R. 14, [1970] Ex. C.J. No. 1 at paras. 55ff. (process for preparing medicine), *rev'd* on other grounds (*sub nom. Sandoz Patents Ltd. v. Gilcross Ltd.*) [1974] S.C.R. 1336; *TRW Inc. v. Walbar of Canada Inc.* (1991), 39 C.P.R. (3d) 176 at 195-97 (Fed. C.A.) *per* Stone J.A. (method); *Thomas & Betts, Ltd. v. Panduit Corp.* (1997), 74 C.P.R. (3d) 185 at 192 & 194 (Fed. T.D.) *per* Richard J., *rev'd* on other grounds [2000] F.C. 3 (C.A.) (product); *Pfizer Canada Inc. v. Novopharm Ltd.*, 2005 FC 1299 at para. 42 *per* Blanchard J. (medicine and dosage).

Any idea that the introduction of the best-mode-for-machine sentence impliedly repealed best mode for everything else is implausible. The food and medicine provisions introduced in 1923 remained in the 1935 *Act*, and nothing indicates any Parliamentary intention then or since to reverse the 1923 policy of applying best mode to them, despite their later repeal and the introduction of different schemes to regulate access to patented medicines.

Nor is implied repeal suggested from anything in the 1870 U.S. *Act*. On the contrary, as noted earlier, the universal best mode duty was held by treatise writers, the U.S. Patent Office, and court opinion to continue under that *Act* despite the switch from the several-modes-for-machine provision to the best-mode-for-machine one.<sup>90</sup> Parliament could no doubt have at any time copied the 1952 U.S. reform that explicitly made best mode universal. Since a universal best mode duty was however already generally understood to continue as before in Canada after the 1935 reforms, there was no pressure for yet further cosmetic tinkering merely to confirm that understanding.

## 6. *Sanofi-Aventis* Revisited

The Federal Court of Appeal in *Viagra* endorsed Snider J.'s view in *Sanofi-Aventis* that *Minerals Separation's* statement applying best mode universally was *obiter*, and that nothing in *Minerals Separation* or the

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*Almecon Industries Ltd. v. Anchartek Ltd.*, 2001 FCT 1404 at paras. 57ff. *per* Gibson J., *aff'd* (*sub nom. Anchartek Ltd. v. Almecon Industries Ltd.*) 2003 FCA 168, is the rare example of an application of para. 27(3)(c) to a "machine", although the plastic seismic hole plug there seemed to qualify more as a "manufacture". No breach of duty was found.

<sup>90</sup> *Supra* notes 65-68 and accompanying text.

Supreme Court's *Consolboard* decision required best mode to be applied beyond machine inventions.<sup>91</sup>

The Court of Appeal is not bound to follow an Exchequer Court decision, and *Consolboard* is indeed *obiter* on best mode. But the view that *Minerals Separation* was also *obiter* on best mode is incorrect, and *Consolboard* was far more relevant to her case than Snider J. seemed to realize.

**(a) *Minerals Separation* and *Consolboard Redux***

*Minerals Separation* involved an allegation that a new process was not disclosed sufficiently to comply with what is now subsection 27(3)(a) - the 1923 version of the *Act* which lacked subsection 27(3)(c), the best-mode-for-machine provision. Thorson P. made clear that, while his statement of principle was based on decisions of prior Canadian and English courts, he was in fact interpreting paragraph 27(3)(a). The sentence in his judgment that

the inventor must act *uberrima fide* and give all information known to him that will enable the invention to be carried out to its best effect as contemplated by him

was followed by another indicating that the preceding statement referred to

the extent to which the disclosures must go in *describing the invention and its operation or use as contemplated by the inventor*, if the patent is not to fail for either the ambiguity or insufficiency of such description.<sup>92</sup>

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<sup>91</sup> *Viagra*, *supra* note 14 at para. 72 approving *Sanofi-Aventis*, *supra* note 12 at para. 324.

The italicized words indicate his view of what the duty in paragraph 27(3)(a), “to correctly and fully describe [the invention’s] operation or use as contemplated by the inventor”, requires - a view that the historical analysis above shows to be correct.

Although the point is somewhat obscured by his lengthy analysis of other defences, Thorson P. did consider whether his inventor had sufficiently disclosed the best mode of working the patented process of using a new but unclaimed substance (xanthates), and concluded that he had and that there was “no lack of good faith”.<sup>93</sup> Thorson P. then held:

In my opinion, the inventor has correctly and fully described his invention in its various aspects so that any person skilled in the froth flotation art would know precisely what the inventor has found to be new and useful, *primarily as his best invention the use of the xanthates he defined, and also, on the ores specified and within the limits stated, the use of the other substances specified.*<sup>94</sup>

He then rejected another best mode submission, that the specification did not disclose the best method of making xanthates:

*It was contended that in the course of the tests at Anaconda, in which an acid circuit was used, the inventor had learned a better method of preparing xanthate for use in an acid circuit than that described in paragraph 8 but had failed to disclose this useful knowledge. ... [T]here are, I think, two answers to [this contention]. The first is that the inventor did not have to describe any method of preparing xanthate at all, since xanthate itself as a*

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<sup>92</sup> *Supra* note 3 at 317 [emphasis added].

<sup>93</sup> *Ibid.* at 336.

<sup>94</sup> *Ibid.* at 346 [emphasis added].

*new substance is not the subject of his invention. The second answer is that there was no real chemical difference, having regard to the ingredients used, between the method described in paragraph 8 and that used in the successful test at Anaconda. ...*<sup>95</sup>

Thorson P. went on to dismiss the whole case based on non-disclosure under paragraph 27(3)(a). On the best mode point under that paragraph, he said that the skilled reader was “directed to the use of the best substance without any need for experimentation and can then deal with the other substances found to be useful as he chooses under the conditions mentioned”.<sup>96</sup>

*Minerals Separation* is therefore a holding that the best mode and good faith duties exist for all inventions by virtue of paragraph 27(3)(a). Thorson P. did not apply the duty to the chemical compound because the compound was not claimed, but he did apply it to the chemical process, which was claimed. Whether he was right or wrong in his application is irrelevant for present purposes, except to notice that neither a compound nor a process is of course a machine.

The Supreme Court in *Consolboard* approved another passage in Thorson P.’s judgment, requiring that

when the period of monopoly has expired the public will be able, having only the specification, to make the same successful use of the invention as the inventor could *at the time of his application*.<sup>97</sup>

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<sup>95</sup> *Ibid.* at 351-52 [emphasis added].

<sup>96</sup> *Ibid.*

<sup>97</sup> Cited by *Consolboard*, *supra* note 5 at 520 [emphasis by Snider J.].

While Snider J. quoted this passage and relied on the words above that she emphasized,<sup>98</sup> she could equally have emphasized the earlier part of the sentence. For an insistence on a correct and full description, so that

when the period of monopoly has expired the public will be able, having only the specification, to make the same successful use of the invention as the inventor could

does indeed “import[.] a ‘best mode’ requirement”. How else can the public make “the same successful use of the invention as the inventor could” if the inventor gave just some second-best option that he had moved on from by the time he filed his patent application? That point has been the justification for a best mode duty since the 18<sup>th</sup> century.<sup>99</sup>

While Dickson J.’s statement is *obiter* because best mode was not in issue in *Consolboard*, there is *obiter* and *obiter*. The statement was not casually tossed out but was a part of a “wider circle of analysis which is obviously intended for guidance and which should be accepted as authoritative” unless good reason exists to ignore it.<sup>100</sup>

### **(b) “To Express A Is To Exclude B”: A Shaky Concept Re-examined**

The good reason for ignoring *Consolboard* must lie in Snider J.’s insistence that her job was statutory interpretation and presumably not the application of judicial comments that were inconsistent with it. Thus

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<sup>98</sup> *Supra* note 12 at para. 324.

<sup>99</sup> Text accompanying *supra* note 25.

<sup>100</sup> *R. v. Henry*, [2005] S.C.R. 609 at para. 57.

her quotation from Thorson P. and Dickson J. is followed by an extract from subsection 27(3) - omitting paragraph (a) - and the Supreme Court's judgment in *Apotex Inc. v. Sanofi-Synthelabo Inc.*<sup>101</sup> on the importance of sticking to the language of the *Patent Act* and not relying on judicial glosses. *Viagra* too repeated this passage and stressed the "importance of fidelity to the Act".<sup>102</sup>

It is true that the words "best mode" refer only to "a machine" in paragraph (c) and "best mode" does not appear in paragraph (a) at all. Snider J. did not direct her judgment to paragraph (a) but might still have reasoned that:

[w]here Parliament has chosen to include a "best mode" obligation in respect of machine patents only, the courts must respect that choice. Accordingly, reading such a requirement into non-machine patents would be contrary to the principles of statutory interpretation.<sup>103</sup>

The unnamed "principles" of statutory interpretation presumably boil down to the concept that "to express A is to exclude B" or *expressio unius est exclusio alterius* in its ancient Latin form. In rejecting *Consolboard's* relevance,<sup>104</sup> Snider J. failed to appreciate that *Consolboard* itself also dealt with the same "principle" not once but twice, accepting it in one instance but rejecting it in the other. As will shortly be seen, the reasons for rejection suggest the *Consolboard* court

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<sup>101</sup> *Apotex*, *supra* note 42 at para. 12, cited in *Sanofi-Aventis*, *supra* note 12 at para. 329.

<sup>102</sup> *Viagra*, *supra* note 14 at para. 73.

<sup>103</sup> *Sanofi-Aventis*, *supra* note 12 at para. 330.

<sup>104</sup> *Ibid.* at para. 332 rejecting *Consolboard*, *supra* note 5, because it addressed "the issue of sufficiency." But the duty to disclose best mode is a part of the general duty of disclosure and thus clearly an "issue of sufficiency".

would also have rejected the idea that the expression of a special best mode duty for machines excluded a best mode duty for all other inventions.

The implied exclusion concept, often called a “maxim”, may be less a rule of law than a rule of language for it determines the meaning a text *can* have, not what it *does* have.<sup>105</sup> The concept applies most often where the statute’s drafting is precise, coherent and consistent,<sup>106</sup> when it tends to elevate itself into a “principle”, “canon” or even “rule”. With less virtuous drafting it tends to stay a “maxim” or slides into “presumption” or mere “hint”. At worst the concept becomes a banality that the spurious mystique of Latin otherwise obscures.<sup>107</sup> One court called it the “weakest and least reliable” of “the hints or examples of common drafting practices”: “If I state that I have a pen, that does not imply that I have no pencil (nor ruler nor eraser)”,<sup>108</sup> let alone that you do or do not have any or all of these implements. In such contexts the “maxim” - like others of its ilk - has been called “shaky” and “often perilous”,<sup>109</sup> one that “hardly ever plays a useful role” but instead is

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<sup>105</sup> A. Barak, *Purposive Interpretation in Law* (Princeton & Oxford: Princeton Univ. Press, 2005) at 107-09.

<sup>106</sup> J. Keyes, “Expressio Unius: the Expression that Proves the Rule” (1989) 10 *Statute L. Rev.* 1 at 25.

<sup>107</sup> Speaking of the *volenti non fit injuria* maxim, Lord Esher M.R. said “if we put this maxim into plain English, part of it is true” but generally “I detest the attempt to fetter the law by maxims. They are almost invariably misleading; they are for the most part so large and general in their language that they always include something which is really not intended to be included in them”: *Yarmouth v. France* (1887), 19 Q.B.D. 647 at 653 (D.C.).

<sup>108</sup> *R. v. C.K.W.* (2005), 53 *Alta L.R.* (4th) 274, 2005 ABCA 446 at para. 61 *per* Côté J.A.

<sup>109</sup> *International Power Plc v. Healy*, [2001] 1 W.L.R. 864, [2001] UKHL 20 at paras. 55 & 67 *per* Lord Hoffmann.

“almost always a means of stating a conclusion.”<sup>110</sup> For by expressing A, I may not mean to exclude B at all; indeed, I may be content to let A and B overlap and co-exist.

A quick review of decided cases that cite the implied exclusion concept indicates that it is disregarded at least as often as it is applied because the context in which it is invoked varies so widely. A statute may be drafted precisely, coherently and consistently, or it may be imprecise, incoherent, inconsistent or all three in varying degrees. The concept’s value will decrease as the material with which it has to work moves from the positive to the negative end of this spectrum. Such are the realities of legislation and why the concept is often “merely a guide to interpretation [that] does not pre-ordain conclusions”<sup>111</sup> or apply where it “leads to inconsistency or injustice”.<sup>112</sup> It must be clear that the express and tacit “cannot reasonably be intended to co-exist”,<sup>113</sup> for one must “realize that a general rule of interpretation is not always in the mind of a draughtsman; that accidents occur; that there may be inadvertence; that sometimes unnecessary expressions are introduced, *ex*

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<sup>110</sup> *Bruce v. Cole*, [1998] NSWSC 260 (N.S.W.C.A.) *per* Spigelman C.J. No U.S. legislature with an interpretation statute includes the maxim and three reject it, prompting the comment that interpreters “must do more work to justify the use” of such a tool: J. Scott, “Codified Canons and the Common Law of Interpretation” 98 *Georgetown L.J.* 341 at 409 (2010).

<sup>111</sup> *Jones v. A.G. (N.B.)*, [1975] 2 S.C.R. 182 at 195-96 *per* Laskin C.J.

<sup>112</sup> *Nicholson v. Haldimand-Norfolk Regional Police Commissioners*, [1979] 1 S.C.R. 311 at 322 *per* Laskin C.J.

<sup>113</sup> *Ibid.* citing *Lowe v. Darling*, [1906] 2 K.B. 772 at 785 (C.A.) as approved in *Alliance des Professeurs Catholiques de Montréal v. Quebec Labour Relations Board*, [1953] 2 S.C.R. 140 at 154.

*abundanti cautela*, by way of least resistance, to satisfy an insistent interest, without any thought of limiting the general provision.”<sup>114</sup>

A nice example of the concept working mischief is *A.G. for Quebec v. Begin*.<sup>115</sup> One section of the *Criminal Code* provided that drunk driving causing death was manslaughter. Another later-added section made impaired driving an offence and blood tests admissible if the accused had been warned before testing of their admissibility. A person charged with manslaughter argued that his blood test was inadmissible because he had not been warned. The application of the implied exclusion concept might make blood tests admissible only for impaired driving charges, and then only on prior warning. The court that so held was reversed by the Supreme Court. Blood tests had earlier been admitted without warnings in motor manslaughter cases, and the new impaired driving provisions demonstrated no intent to cut down admissibility elsewhere. The Court’s quote from *Maxwell on Interpretation of Statutes* is particularly apt:

Provisions sometimes found in statutes enacting imperfectly or for particular cases only that which was already and more widely the law have occasionally furnished ground for the contention that an intention to alter the general law was to be inferred from the partial or limited enactment, resting on the maxim *expressio unius est exclusio alterius*. But that maxim is inapplicable in such cases. The only inference which a Court can draw from such superfluous provisions (which generally find a place in Acts to meet unfounded objections and idle doubts), is that the Legislature was either ignorant or unmindful of the

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<sup>114</sup> *Turgeon v. Dominion Bank*, [1930] S.C.R. 67 at 70-71 *per* Newcombe J.; similarly *Dorval v. Dorval* (2006), 285 Sask. R. 104, 2006 SKCA 21 at paras. 10-17 & 20 *per* Cameron J.A; Barak, *supra* note 105 at 109.

<sup>115</sup> [1955] S.C.R. 593.

real state of the law, or that it acted under the influence of excessive caution.<sup>116</sup>

*Maxwell's* words easily fit the case of paragraph 27(3)(a). In 1923 when subsection 27(3) had no explicit best-mode-for-machines provision, paragraph 27(3)(a) was universally accepted as including a best mode duty for all inventions. The addition in 1935 of a new best-mode-for-machines paragraph - a "partial or limited enactment" - does not therefore imply an intention to "alter the general law" of a universal best mode duty. The opposite inference is more plausible in a statute where precision, coherence and consistency are not conspicuously present: the "superfluous provision" of best-mode-for-machines likely occurred to "meet unfounded objections and idle doubts". Although Parliament was probably not "either ignorant or unmindful of the real state of the law", it likely "acted under the influence of excessive caution."

This explanation is entirely consistent with how *Consolboard* dealt with subsection 27(3). Although, just as in *Sanofi-Aventis*, the implied exclusion concept was not mentioned by name, its influence was apparent in the decisions of both the lower courts and the Supreme Court.

Two of the points before the Supreme Court were whether the Federal Court of Appeal had rightly held that:

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<sup>116</sup> *Ibid.* at 603 *per* Taschereau & Fauteux JJ. citing *Maxwell on Interpretation of Statutes*, 9<sup>th</sup> ed. (London: Sweet & Maxwell, 1953) at 318.

(i) the duty in paragraph 27(2)(d) - to explain the sequence of steps in a process “so as to distinguish the invention from other inventions” - did not apply to non-process inventions; and

(ii) the duty in 27(3)(b) - to explain how the invention worked in terms understandable by “any person skilled in the [relevant] art or science” - did not apply to the duty (since repealed) in paragraph 27(3)(e),<sup>117</sup> to “particularly indicate and distinctly claim the part, improvement or combination which he claims as his invention”.

The Supreme Court summarily agreed with the lower courts on point (i): the paragraph’s interpretation had been watered down to virtual non-existence over the years and the Court plainly saw no need to reverse this trend and extend the provision beyond processes. In short, the implied exclusion concept applied.<sup>118</sup>

The Supreme Court however disagreed with the Court of Appeal on point (ii): the skilled person test in one paragraph was not excluded from another paragraph just because it was not restated there expressly. The lower court had in effect wrongly applied the implied exclusion concept to reason that the requirement to disclose to a skilled person one paragraph implied that disclosure in another must be directed to a non-skilled person, i.e., a member of the public at large. That interpretation ran counter to a “well established principle” that specifications are addressed to workers skilled in the art: the adoption of “different

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<sup>117</sup> Actually paragraph 34(1)(e) in *Patent Act*, R.S.C. 1985, c. P-4 in its original 1985 consolidation.

<sup>118</sup> *Consolboard*, *supra* note 5 at 526-27 & 531-33.

standards of disclosure for different parts” of the document was thus wrong.<sup>119</sup>

The Supreme Court therefore held that the expression of a “well established principle” in only one paragraph of subsection 27(3) does not necessarily imply its exclusion elsewhere. The best mode standard is no less well established than the skilled worker standard in issue in *Consolboard*: both stem from and are indeed linked in two of the earliest 18<sup>th</sup> century English cases on patent infringement and revocation,<sup>120</sup> and both featured among the principles the Supreme Court in 1934 called “long established and well understood.”<sup>121</sup> One may therefore surmise that the *Consolboard* Court would have been equally inclined to hold the best mode duty applicable to all inventions despite the *Act*’s mentioning it just for machines. Otherwise in a patent with separate claims for a “machine” and its output (a “manufacture”), “different standards of disclosure” would illogically exist “for different parts” of the specification: a duty to disclose the best mode for the machine but merely second- or third-best modes for the machine’s output.

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<sup>119</sup> *Ibid.* at 521.

<sup>120</sup> *Liardet*, *supra* note 25 at 285 *per* Lord Mansfield (1778): “you must specify upon record your invention in such a way as shall teach an artist, when your term is out, to make it - and to make it as well as by your directions. ... The inventor has the benefit during the term, and the public have the benefit after”; *R. v. Arkwright*, *ibid.* at 66 *per* Buller J. (1785): it is “clear law” that to be valid a specification must: (1) “put the public in possession of the secret in as ample and beneficial a way as the patentee himself uses it”, and (2) be “such that mechanical men of common understanding can comprehend it”. *Liardet*’s patent was held valid and infringed, while *Arkwright*’s patent was revoked for its deliberately defective specification: see further Brennan, *supra* note 29 at 369-72.

<sup>121</sup> *Western Electric*, *supra* note 79 at 571, 573 (skilled worker) & 573-574 (best mode) *per* Duff C.J. for the Court.

Significantly, the Court's discriminating exercise in interpretation occurred within a subsection that it called not "happily phrased".<sup>122</sup> We earlier noted a passage from Dickson J.'s judgment for the Court when reviewing the U.S. *Patent Act* of 1793.<sup>123</sup> Snider J. did not mention this passage at all. It is nevertheless worth quoting as it shows that Dickson J. fully recognized that his task was to interpret a provision that he called "the heart of the patent system". But the disclosure subsection was not the sort of precisely, coherently and consistently drawn provision where guides such as the implied exclusion concept could be routinely applied:

It gives the impression of a mélange of ideas gathered at random rather than an attempt to enunciate, clearly and concisely, a governing principle or principles. This is perhaps understandable in that the section is the product of amendment over a period of many years. The language simply does not lend itself to a tight, literal interpretation. It is, and should be treated as, a parliamentary pronouncement, in general terms, of that which must be set forth by the applicant to the world before being qualified to receive the grant of monopoly under a patent.<sup>124</sup>

And after leafing through the provision's forerunners back to 1869 and the U.S. law of 1836, Dickson J. said of other additions made in 1935 to the disclosure subsection:

It is not entirely clear what was intended to be achieved by the addition of the quoted words. They may have been added *ex abundante cautela*, seeking

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<sup>122</sup> *Consolboard*, *supra* note 5 at 518.

<sup>123</sup> Text accompanying *supra* note 49.

<sup>124</sup> *Consolboard*, *supra* note 5 at 518.

greater particularity of description, but they appear to be little more than pleonasm... It is not readily apparent that anything of substance was added in 1935 to that which had been required since 1869.<sup>125</sup>

The addition of the best-mode-for-machines provision in 1935 stands in the same position as the other provisions to which Dickson J. alluded. If subsection 27(3) is approached with his words in mind, most things in it fall neatly into place. Paragraph (a) would then be read, like the old British patent grant and U.S. law, to state duties that apply to all inventions. Paragraphs (b), (c) and (d) then simply provide examples of the application of that primary duty, for caution's sake or to avoid doubt.

On this reading, subsection 27(3) would be better understood if the italicized words below were added at the end of paragraph (a):

(a) The specification of an invention must correctly and fully describe the invention and its operation or use as contemplated by the inventor; *and, in particular, without limiting the generality of the foregoing, it must:*

(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 it pertains, or with which it is most closely connected, to make, construct, compound or use it;

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

(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.

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<sup>125</sup> *Ibid.* at 519.

Modern convention would reformat the provisions as follows:

(3) The specification of an invention must correctly and fully describe the invention and its operation or use as contemplated by the inventor; *and, in particular, without limiting the generality of the foregoing, it must:*

(a) set out clearly the various steps in a process, etc...

(b) in the case of a machine, explain the principle, etc....; and

(c) in the case of a process, explain the necessary sequence, etc.

## **7. Conclusion**

The duty to disclose an invention's best mode of working as part of the price of receiving a lengthy period of market exclusivity for an invention has been part of Canadian patent law from the beginning. It is a modest enough obligation:

Full disclosure creates few added transaction costs; eliminating it lessens the value of the public's return for the grant of exclusivity and imposes additional costs on those who rely on the patent. Only what the inventor honestly believes, at the claim date, to be her best method of practising the invention need be disclosed and enabled.<sup>126</sup>

Whatever difficulties best mode compliance may have faced elsewhere, the record in Canada, so far as revealed by reported litigation, indicates a doctrine that has encouraged good practice and been sensibly applied - apart from the recent deviation in the case law, which, one hopes, will be soon overruled. Whether or not Parliament retains a general best mode duty, subsection 27(3) could anyway do with

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<sup>126</sup> Vaver, *supra* note 6 at 345.

redrafting to overcome Dickson J.'s objection of its failure to enunciate its governing principles "concisely" and therefore "clearly".<sup>127</sup> Meanwhile, even if subsection 27(3) currently still reads like an 18<sup>th</sup> century statute that is overly focused on machines, there is no duty nor necessity for its interpretation to create more anomalies than were present in its forbears in those less than best of times or modes.

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<sup>127</sup> The Royal Commission's Report on Patents, *supra* note 4 at 44, provided a helpful suggested redraft over 50 years ago.