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The Interpretation of Means Expressions During Prosecution

Abstract

This article briefly explains how the scope of a claim including a means expression is determined both under the PTO view and a strict application of the statutory language. The lack of consensus and current state of the law in the area are illustrated through an analysis of several recent decisions of the Federal Circuit. The policies underlying the PTO and statutory methods of interpreting means expressions during prosecution are examined in an effort to demonstrate that the statutory method more effectively furthers the policies underlying the patent system.

Keywords

patents, patent claims, federal circuit courts, PTO, means expressions, prior art, CCPA

Disciplines

Business Organizations Law | Intellectual Property Law

R. Carl Moy* **THE INTERPRETATION OF MEANS
EXPRESSIONS DURING PROSECUTION**

This type of encounter is familiar to many patent practitioners: An attorney is discussing a newly submitted claim, which contains a "means plus function" expression as described in the sixth paragraph of 35 U.S.C. §112¹, with an examiner of the United States Patent and Trademark Office (PTO). The attorney points out that the prior art does not contain the recited "means," say for example, "means for travelling through space." The examiner responds with the assertion that the new claim is anticipated by a reference already of record which discloses a shoe, observing that "this shoe could travel through space if it were launched upward fast enough, and so your means expression reads on the reference."²

The scope assigned to means expressions by the PTO during prosecution is of considerable importance, given the widespread use of such expressions by patent practitioners. The PTO's approach to their interpretation may be unduly restrictive in view of the literal language of the statute, and has the effect of forcing an applicant to address prior art having no reasonable relationship to the subject matter that would be protected by such an expression after issuance. Recent decisions by the United States Court of Appeals for the Federal Circuit suggest that the previously existing law in this area may no longer be valid. Those decisions suggest means expressions are to be interpreted during validity determinations exactly as in infringement questions.

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1 "An element in a claim for a combination may be expressed as a means for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material or acts described in the specification and equivalents thereof." 35 U.S.C. §112 (1982). While the language of the paragraph, by referring to "structure, material, or acts," clearly is not intended to be limited to claims drawn to inventions in any particular category of 35 U.S.C. Section 101, this article will discuss the use of such language in claims drawn to articles of manufacture, primarily for ease of illustration.

2 This fanciful example was offered by an Associate Solicitor during oral argument before the United States Court of Appeals for the Federal Circuit to illustrate the PTO's view of how the scope of such expressions is determined.

This article briefly explains how the scope of a claim including a means expression is determined both under the PTO view and a strict application of the statutory language. The lack of consensus and current state of the law in the area are illustrated through an analysis of several recent decisions of the Federal Circuit. The policies underlying the PTO and statutory methods of interpreting means expressions during prosecution are examined in an effort to demonstrate that the statutory method more effectively furthers the policies underlying the patent system.

I.

THE PTO AND STATUTORY METHODS OF INTERPRETATION

The use of functional language in patent claims to define elements of an invention is very old. Prior to the enactment of the Patent Act of 1952 (the '52 Act), these recitations were generally understood to result in coverage, as to the element so defined, broad enough to encompass all elements capable of performing the recited function.³ They were consequently used by practitioners to describe a portion of an invention in terms that would result in a broad exclusive right.

This broad coverage, however, often ran afoul of other perceived statutory limits on the scope of a patentee's exclusive rights. Since such an expression covered all possible means of achieving the recited result, it was argued, how could they particularly point out and distinctly claim the invention,⁴ or be supported by an enabling disclosure?⁵ This view is typified by the Supreme Court's decision in *Halliburton Oil Well Cementing Co. v. Walker*,⁶ in which claims found to use "conveniently functional language at the exact point of novelty"⁷ were held to be invalid as indefinite.

³ *Holland Furniture Co. v. Perkins Glue Co.*, 277 U.S. 245 (1928); *Morse v. Reilly*, 56 U.S. (15 How.) 62 (1854). See generally 2 D. Chisum, *Patents* § 8.04 (1983).

⁴ *Holland Furniture Co. v. Perkins Glue Co.*, 277 U.S. 245 (1928); *Morse v. Reilly*, 56 U.S. (15 How.) 62 (1854).

⁵ *General Electric Co. v. Wabash Appliance Co.*, 304 U.S. 364, 37 USPQ 466 (1938).

⁶ 329 U.S. 1, 71 USPQ 175 (1946).

⁷ *Id.* at 8, 71 USPQ at 178 (quoting *General Electric v. Wabash Appliance*, 304 U.S. 364, 371, 37 USPQ 466, 469).

The sixth paragraph of 35 U.S.C. §112⁸ was included in the Patent Act of 1952 to ameliorate the results flowing from *Halliburton*,⁹ by explicitly authorizing the use of functional language in patent claims drawn to a combination, provided that the function is used to describe the ability of a "means" for its performance. Under the language of that paragraph, a claim expressing an element in a combination as a means for performing a specified function is defined as covering "the corresponding structure . . . described in the specification and equivalents thereof."

The analysis employed when applying the statutory language to claims including a means expression can be illustrated by brief examination of *Stearns v. Tinker & Rasor*.¹⁰ In that case, the patentee had alleged infringement of claims drawn to an apparatus for detecting irregularities in the thickness of rust preventative layers coating the outside of pipes. The prior art had settled on the method of utilizing the electrical insulating properties of the coating by wrapping a coil spring in an annulus about the circumference of the pipe. When a large voltage difference was applied between the spring and the pipe, variations in the thickness of the insulation could be electrically detected when the spring was dragged along the length of the pipe.

This system, however, suffered from a loss of accuracy as the spring inevitably separated from the insulation due to the uneven "pull" applied to various points of the spring by its supporting frame. The patentee solved this problem by devising an apparatus in which the spring was rolled, rather than dragged, along the insulation layer. The movement was much smoother, and the accuracy of detection correspondingly increased. The mechanism that was disclosed in the specification for performing this function comprised a pusher that included sets of rollers in contact with the outside diameter of the annular spring. The spring was held against the

⁸ At the time of enactment there were only three paragraphs in section 112. Three additional paragraphs were inserted by Public Law No. 94-131, Section 7, 89 Stat. 685, 691 (Nov. 14, 1975) to authorize multiply-dependent claim practice. The original third paragraph thereby became the sixth.

⁹ See notes 32 and 101, *infra*, and accompanying text.

¹⁰ 252 F.2d 589, 116 USPQ 222 (9th Cir. 1957).

pipe by being seated between the sets of rollers, so that when the pusher was moved along the axis of the pipe, the spring rotated down the pipe's length.

The claims recited this mechanism as a "means rotatably engaging and forming a movable electrical contact with [the] spring at a position remote from the surface of the [pipe] for connecting said spring to a high voltage testing circuit and for rolling said spring along such [pipe]." ¹¹

The accused device also used a rolling annular spring to detect imperfections in insulative coatings of pipes. However, instead of driving the spring by a wheeled pusher, the accused device moved the spring along the length of the pipe by a set of nonrotating pushers each having contacts closely conforming to the coil diameter of the spring. The makers of the accused device argued that the claims did not cover their configuration since the patent disclosed only a wheeled pusher. This contention was bolstered, they urged, by testimony of the inventor to the effect that he had considered using non-wheeled pushers similar to the accused device prior to executing his application, and discarded them as inferior.

The Court in *Stearns* disagreed. It noted the statutory language of §112's last paragraph, and construed that section to mean "that while an *element* in a *claim* for a combination may be expressed as a means . . . for performing a function without recital of structure . . . in support thereof; the structure . . . must be described in the *specification*, and if so described, the claim will be construed to cover that which is described *and the equivalent thereof*." Therefore, the Court concluded, "the structure [corresponding to the recited function] need not as well be recited in the claim" to form a limitation. Since the corresponding structure in the patentee's specification clearly did not include non-wheeled pushers, "[t]he question then becomes whether the rollers or wheels shown in the specification . . . are equivalent to the . . . pusher-contactor of [the accused device]." ¹²

¹¹ *Id.* at 592, 116 USPQ at 224.

¹² *Id.* at 598, 116 USPQ at 228 (emphasis in original).

The court answered this question by observing that “both [the patented and accused devices] rotatably engage the spring electrode so as to roll it along the pipe while maintaining electrical contact between the spring electrode and the high voltage unit.” Consequently, and in view of the district court’s statements that the pushers “do substantially the same work” and “produce substantially the same result,” the court held that “the wheels or rollers employed in [the patented device] are equivalent to the sleeve bearing used in [the accused] device.”¹³ The claims were therefore held to be infringed.

While not cited at this point, the reasoning employed by the court in *Stearns* clearly mirrors the often used¹⁴ formulation of the doctrine of equivalents enunciated in *Graver Tank & Manufacturing Co. v. Linde Air Products Co.*,¹⁵ in which the Supreme Court stated that “a patentee may invoke this doctrine to proceed against the producer of a device ‘if it performs substantially the same function in substantially the same way to produce the same result’ ”¹⁶ as the patented subject matter. Briefly, under this test an accused device must simultaneously satisfy all three requirements of (i) performing substantially the same function as the corresponding structure in the specification, (ii) in substantially the same way as that structure, (iii) to produce the same result. A failure to satisfy any one of these requirements will result in a finding that the accused device is outside the claims’s scope.¹⁷

¹³ *Id.* 116 USPQ at 228–229.

¹⁴ *E.g.*, *Palumbo v. Don-Joy Co.*, 762 F.2d 969, 226 USPQ 5 (Fed. Cir. 1985); *Radio Steel & Mfg. Co. v. MTD Products, Inc.*, 731 F.2d 840, 221 USPQ 657 (Fed. Cir.), *cert. denied*, 105 S.Ct. 119 (1984); *Raytheon Co. v. Roper Co.* 724 F.2d 951, 220 USPQ 592 (Fed. Cir. 1983), *cert. denied*, 105 S.Ct. 127 (1984); *Hughes Aircraft v. U.S.*, 717 F.2d 1351, 219 USPQ 473 (Fed. Cir. 1983); *Caterpillar Tractor Co. v. Berco, S.P.A., Etc.*, 714 F.2d 1110, 219 USPQ 185 (Fed. Cir. 1983).

¹⁵ 339 U.S. 605, 85 USPQ 328 (1949).

¹⁶ *Id.* at 608, 85 USPQ at 330 (quoting *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30, 42, 3 USPQ 40, 44 (1929)).

¹⁷ *Bolkom v. The Carborundum Co.*, 523 F.2d 492, 187 USPQ 466 (6th Cir. 1975), *cert. denied*, 425 U.S. 951 (1976); *Deyerle v. Wright Mfg. Co.*, 496 F.2d 45, 181 USPQ 685 (6th Cir. 1974); *Blaw-Knox Co. v. Hartsville Oil Mill*, 394 F.2d 877, 157 USPQ 475 (4th Cir. 1968); *Bullard Co. v. General Electric Co.*, 348 F.2d 985, 146 USPQ 141 (4th Cir. 1965).

The Court in *Stearns* was dealing with a question of infringement, not validity, and until recently cases strictly applying the statutory language of the sixth paragraph of section 112 in validity questions were rare.¹⁸ This is undoubtedly because the PTO and Federal Circuit precedents, as discussed below, have historically treated means expressions during prosecution without regard to the statutory language.

On those occasions when the language of the sixth paragraph is used to interpret a claim's scope during validity determinations, the method is very similar to that used by the Court in *Stearns*.¹⁹ When a court, confronted with a combination claim including a recitation of a means for performing a specified function, decides to apply the statutory language, it ascertains what structure in the specification corresponds to the function recited in the claim and compares that structure to the relevant prior art. If the court determines that the corresponding structure is both novel and unobvious, the question then is whether the prior art discloses or makes obvious any equivalents of that corresponding structure. Just as in infringement determinations, the determination of equivalents during prosecution is the same as, or at least closely parallel to, that in *Graver Tank*: Does the prior art disclose or make obvious a device that performs substantially the same function as the corresponding structure in the specification, in substantially the same way, to obtain the same result?

The paradigm applied by the PTO to means expressions is quite different. The space shoe illustration offered above highlights the PTO practice of disregarding the statutory language when determining the scope of claims including a means-plus-function expression.

Instead, the PTO has continued to interpret the scope of these expressions in a manner very similar to the standard

¹⁸ Only two such cases are known to the author to have applied this standard prior to the creation of the Federal Circuit. They are *Stewart-Warner Corp. v. City of Pontiac*, 717 F.2d 269, 219 USPQ 1162 (6th Cir. 1983), discussed *infra*, and *Technitrol, Inc. v. Control Data Corp.*, 550 F.2d 992, 193 USPQ 257 (4th Cir.), *cert. denied*, 434 U.S. 822 (1977).

¹⁹ *See id.*

prevailing before the '52 Act. The PTO's position is that only the literal language of the means expression is limiting during prosecution. A claim including a means expression therefore, under the PTO's view, encompasses, or "reads on," every means for achieving the recited function.²⁰ Every structure or device that performs the recited function anticipates the means expression, regardless of what corresponding structure is disclosed in the specification or what its equivalents are.

A problem surfaces with the PTO view when the prior art disclosure under consideration contains structure that *would* be adequate to perform the recited function, but does not disclose or make obvious its *actual performance*. Many examiners are reluctant to allow a claim drawn to an apparatus based solely on the absence of a teaching of how that apparatus is to be used. This reluctance is reinforced by a line of Court of Customs and Patent Appeals (CCPA)²¹ decisions enunciating the well settled rule that recitations of intended use cannot impart patentability to an otherwise unpatentable claim drawn to an apparatus.²²

The PTO corrects this anomaly by expanding the art that will anticipate the recited means expression to include any disclosure containing structure capable of performing the recited function. This is the basis for the examiner's position in the example at the beginning of this article that the recitation of a "means for travelling through space" only requires the application of a reference disclosing a shoe, since that shoe is capable of travelling through space.

²⁰ *E.g.*, *Ex parte Coady*, 172 USPQ 83 (Pat. Off. Bd. App. 1970) (" 'Means' covers all means capable of performing the stated function, and is not limited to the structure disclosed in the application. "); *Ex parte Machlanski*, 111 USPQ 459 (Pat. Off. Bd. App. 1959). *See also* P. Rosenberg, *Patent Law Fundamentals* ch. 4, Sec. 4 (1975); Commentaria, *Functional Claims*, 37 JPOS 753 (1955). For a recent description of the PTO view, *see* Manzo, *Means Claims in Patent Infringement Litigation*, 68 J.P.O.S. 97, 110-11 (March 1986).

²¹ The decisions of the CCPA and the Court of Claims are precedents in the Federal Circuit. *South Corp. v. United States*, 690 F.2d 1368, 215 USPQ 657 (Fed. Cir. 1982).

²² *E.g.*, *In re Pearson*, 494 F.2d 1399, 181 USPQ 641 (CCPA 1974); *In re Mason*, 240 F.2d 362, 114 USPQ 127 (CCPA 1957); *In re Arbeit*, 206 F.2d 947, 99 USPQ 123 (CCPA 1953). The PTO has indicated its acceptance of this view in its Manual of Patent Examining Procedure Section 706.03(c) (5th ed. 1983).

II.
PRE-FEDERAL CIRCUIT CASE LAW

Shortly after the enactment of the '52 Act, it was suggested that the language of the last paragraph of section 112 prescribed the method of interpreting means expressions during both infringement and validity determinations.²³ About this same time, attempts were made to secure the allowance of means expressions by arguing that the statute now compelled a narrow interpretation.²⁴

The first of these cases to be ruled on by the CCPA was *In re Arbeit*.²⁵ The applicants in *Arbeit* were attempting to claim a glass-making furnace which carried molten glass sequentially from one portion of the furnace to another through conduits that were small enough to prevent any backflow. They relied on the following claim language to overcome a prior art rejection:

[C]onduit means having a flow rate related to the flow rate [of finished glass withdrawn from the furnace] so that the normal operation [of the furnace] produces in the conduit means a glass velocity having a minimum in the range from several mm to 1 cm per second.²⁶

It was the PTO's opinion that this language was a statement of operation, defining no "positive structure by which the claims may be distinguished from the prior art. The flow rate is not structure."²⁷

On appeal, the CCPA viewed the applicants as contending that "under the phraseology of the last paragraph [of section 112], it is proper to look to purely functional limitations expressed in claims for novelty to support patentability." It viewed the Solicitor as taking "a position which, in our opinion, if adopted, requires a holding that in cases

²³ E.g., Commentaria, *Functional Claims*, 37 J.P.O.S. 753 (1955).

²⁴ E.g., *In re Lundberg*, 244 F.2d 543, 113 U.S.P.Q. 530 (CCPA 1957); *In re Arbeit*, 206 F.2d 947, 99 U.S.P.Q. 123 (CCPA 1957). See *Ex parte Ball*, 99 U.S.P.Q. 146 (Pat. Off. Bd. App. 1953).

²⁵ 206 F.2d 947, 99 USPQ 123 (CCPA 1953).

²⁶ 206 F.2d at 948, 99 USPQ at 124.

²⁷ *Id.* at 951, 99 USPQ at 127.

where purely functional limitations constitute the sole matter relied upon for novelty, the phraseology . . . has no application, and the matter is governed by the first and second paragraphs.’²⁸

After observing that under prior law, functional language could not be solely relied upon for patentability, the Court addressed the effect the last paragraph of then newly enacted section 112 had on its conclusion. “It seems obvious to us that the construction of that paragraph, such as appellant contends for, would render it wholly inconsistent with the first and second paragraphs which . . . are explicit and *mandatory* in requiring a written description expressed in ‘full, clear, concise, and exact terms’ *in the specification*, and so set forth *in the claims*.’²⁹ In other words, despite the language of the last paragraph of section 112, the applicant’s means expression continued to read on all structures capable of performing the recited function. The rejection was therefore affirmed.

The issue was addressed even more squarely in *In re Lundberg*,³⁰ where the applicants contended both that (1) their claim language describing a support holding an instrument in an airplane as “adapted automatically to stabilize [the instrument] in relation to the level and orientation regardless of motions of the airplane” was equivalent to a recitation of a means for performing the function, and (2) as such, the language had to be construed as limited to the corresponding structure described in the specification and equivalents thereof.

The Court agreed to assume that the “adapted” language was equivalent to the statutory language of a means plus function and found that the function recited was present in the prior art.

Therefore, unless the . . . third [now sixth] paragraph of §112 is to be construed to mean that . . . the claims may, through the medium of a “means” clause, be held to include the limitations which comprise said means and which are set forth in the disclo-

²⁸ *Id.* at 956, 99 USPQ at 130.

²⁹ *Id.* at 958, 99 USPQ at 131 (emphasis in original).

³⁰ 244 F.2d 543, 113 USPQ 530 (CCPA 1957).

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sure, we must reject appellants' contentions as to the effect of §112 on the claims in this case.³¹

The Court decided against the applicants, rejecting their second contention for two reasons. First, after recognizing that the authorizing of means expressions was designed to introduce a greater amount of liberality in the use of functional expressions in the wake of *Halliburton*,³² it stated that "Congress did not intend, by incorporating the [last] paragraph into §112, to destroy certain basic precepts of patent law."³³ It then found that the second paragraph, by directing that the claims "particularly point out and distinctly claim the subject matter" sought to be patented, continued to require that the claims themselves literally define the invention, citing *Arbeit*.³⁴

Second, the court observed that patent applicants are free to present claims of varying breadth during prosecution.

It is at once obvious that appellant's intended construction of the phrase under consideration would eliminate the distinction between a combination claim whose elements are recited broadly as means for performing a specified function and a combination claim in which the same elements are recited in detail

since incorporating the corresponding structure described in the specification into the means expression would make the coverage afforded by these two claims effectively indistinguishable.³⁵

The Court then held that the literal language of the claims must support patentability "without limitations imported from the specification, whether such language is couched in terms of means plus function or consists of a detailed recitation of the inventive [claimed] matter."³⁶

Following these precedents, the PTO has developed a long line of decisions³⁷ that refuse to apply the statutory

31 244 F.2d at 547, 113 USPQ at 533.

32 See *Ex parte Ball*, 99 USPQ 146 (Pat. Off. Bd. App. 1953).

33 244 F.2d at 547, 113 USPQ at 534.

34 *Id.*

35 *Id.* at 548, 113 USPQ at 534.

36 *Id.*

37 See footnote 20, *supra*.

language. These cases often announce and apply the rule with little or no discussion of the merits of either side.

III.

FEDERAL CIRCUIT DECISIONS

As alluded to briefly at the beginning of this article, the continued viability of the PTO's approach to means expressions has been called into question by recent decisions of the Federal Circuit. These decisions reveal the Federal Circuit's uncertainty over what interpretive method should be used to ascertain the scope of means expressions during prosecution and validity determinations.

The first opinion of the Federal Circuit discussing this issue, *In re Mulder*³⁸ suggested that the PTO standard was incorrect. There, the Federal Circuit was faced with the question whether to affirm the PTO's rejection of a claimed invention as obvious over the prior art. The invention was a particular form of an integrated injection logic circuit. These circuits contain many logic gate circuits, each gate circuit comprising one NPN and one PNP-type transistor. Since the collector of each transistor in a particular gate circuit is connected with the base of the other, portions of the transistors can share common regions of the doped semiconductor material out of which they are formed. A principal object of the invention in *Mulder* was to arrange the semiconductor material in a manner that facilitated the use of computer-aided design techniques.

The applicants had chosen to formulate dependent claim 9 to include a recitation of "means to reduce the input series resistance of the gate circuits." The PTO asserted that the arrangement disclosed in one of the applied references comprised such means.

The Court paused to dwell on the rejection of this dependent claim and its means expression only briefly in its opinion. "With respect to claim 9, we note that it is drafted in 'means plus function' format, so that it is 'construed to cover the corresponding structure . . . described in the specification, and equivalents thereof.'"³⁹ This appears to be a

³⁸ 716 F.2d 1542, 219 USPQ 189 (Fed. Cir. 1983).

³⁹ *Id.* at 1549, 219 USPQ at 196.

strict application of the statutory language along the lines advocated in this article. No authority beyond the statute was cited for the position.

However, the Court found that the narrower scope assigned to the claim did not save it. "Appellants have neither asserted nor shown that the [prior art] structure is not the equivalent of the structure disclosed in their specification."⁴⁰ Consequently, the rejection was affirmed.

In its next opinion on the topic, the Federal Circuit expressly used the PTO's approach to determine the scope of a means expression. This was in *RCA Corp. v. Applied Digital Data Systems*,⁴¹ where the court reviewed a district court's determination that certain claims of an issued patent were anticipated by the prior art. The invention in *RCA* involved a system for making character spaces on a television screen display given characters in response to digital symbol codes representing a message. Each character space of the television screen was comprised of a dot matrix, the individual dots within each matrix being defined by positions along horizontal scan lines. By using "position counts" to specify the position of the dot being addressed, the electron scanning beam of the television was turned on and off at appropriate points, illuminating selected dots of the matrix to display the given character.

Claim 1 of the patent recited four means-plus-function elements, one of them being "means for generating position counts which occur successively during a scan along a scan-line through a character space."⁴²

The asserted prior art was also a system for generating characters on a cathode ray tube. In that system, the electron beam of the cathode ray tube was turned on and off by electrical signals from a yoke that physically traversed a line of cores in unison with the electron beam. By "reading" the electromagnetic pattern of the cores, a corresponding pattern was produced on the television screen.

⁴⁰ *Id.*

⁴¹ 730 F.2d 1440, 221 USPQ 385 (Fed. Cir.), *cert. dismissed*, 105 S.Ct. 32 (1984).

⁴² *Id.* at 1445, 221 USPQ at 387.

In deciding the issue of anticipation, the Court first described what it felt to be the correct legal standard to be applied by a district court determining validity. “[W]ith an element expressed in terms of a means plus function, ‘absent structure [in a prior art reference] which is capable of performing the functional limitation of the ‘means’, [the prior art reference] does not meet the claim.’”⁴³ This language is a reiteration of the PTO view, holding that only the literal language of the means expression is limiting when determining validity. As the Court stated in a footnote: “The claims have defined the invention in terms of several ‘means-plus-function’ elements. The limitations which must be met by an anticipating reference are those set forth in each statement of function.”⁴⁴

The Court then determined that the prior art device was not an anticipation. “The yokes do not keep track of the position of any counts. Most importantly, the yokes do not *generate* position counts as specifically required in claim 1.”⁴⁵ Therefore, the Court concluded, the yokes of the prior art device “do not meet the limitations of this means, since they do not function in substantially the same way as a position count generating means.”⁴⁶

The Federal Circuit’s next encounter with the PTO’s method of interpreting means expressions took place in the context of an appeal from a decision of the PTO’s Board of Appeals that had held certain claims in an application anticipated under 35 U.S.C. §102. The applicants in *In re Boersma*⁴⁷ had, after receiving a decision from the Board of Appeals giving their means expressions the traditional broad PTO interpretation, asked the Board to reconsider and clarify its affirmance of the examiner’s rejection, arguing that the language of the last paragraph of section 112 compelled the narrow, statutory interpretation, and that under such an interpretation the claims were patentable.

43 *Id.* at 1444, 221 USPQ at 388 (citing *In re Mott*, 557 F.2d 266, 269, 194 USPQ 305, 307 (CCPA 1977)) (insertions in original).

44 *Id.* at 1445, 221 USPQ 389, footnote 5.

45 *Id.* (emphasis in original).

46 *Id.*, 221 USPQ at 388 (footnote omitted).

47 No. 84-627 (May 4, 1984) (unpublished). See summary at 28 P.T.C.J. 83 (May 24, 1984).

The Board refused to change its decision, observing that “[the last paragraph] of Section 112 relates to matters of infringement, not the interpretation of claims during *ex parte* prosecution.”⁴⁸

Before the Federal Circuit, the applicants in *Boersma* continued to urge that the statutory language compelled a narrow interpretation of the means expressions.⁴⁹ The applicants admitted that *Lundberg* had squarely decided the question against them,⁵⁰ but contended that that case was wrong as a matter of law.

The Court affirmed the Board in an unpublished decision. It observed that *Lundberg* did indeed stand for the opposite rule of law urged by the applicants, and that “[t]he Court of Customs and Patent Appeals repeatedly followed and applied” that rule.⁵¹ It noted that the Federal Circuit had previously applied the PTO standard in *RCA*, and observed: “Appellants admitted at oral argument that *Lundberg* supports the Board’s decision in this case. They argued only that *Lundberg* is wrong. Be that as it may, *Lundberg* binds this panel.”⁵²

Perhaps the best example of the Federal Circuit’s uncertainty over this question is a fourth case, *Stewart-Warner Corp. v. City of Pontiac*⁵³ in which the Court was faced with an appeal from a district court judgment invalidating a patent as obvious in view of the prior art.

The litigation in *Stewart-Warner* has a relatively complex history. The case involved Stewart-Warner Corp.’s attempts to enforce two patents directed to stadium scoreboards. The accused infringer asserted that both patents were invalid based on a number of prior art grounds, including a public use or sale under 35 U.S.C. §102(b). In a first trial, limited to the issues of public use or sale, the district court found both inventions to be anticipated.⁵⁴

⁴⁸ *Id.*, slip op. at 3 (insertions in original).

⁴⁹ *Id.*

⁵⁰ *Id.*, slip op. at 4.

⁵¹ *Id.*

⁵² *Id.*, slip op. at 4–5.

⁵³ 767 F.2d 1563, 226 USPQ 676 (1985).

⁵⁴ *Stewart-Warner Corp. v. City of Pontiac*, 213 USPQ 453 (E.D. Mich. 1981).

Stewart-Warner's appeal from the judgment went to the Sixth Circuit Court of Appeals, that court not yet having been divested of jurisdiction over the case by the Federal Courts Improvement Act of 1982.⁵⁵ The Sixth Circuit affirmed the invalidity of one patent. Because of an admission by the patent owner, whether the second patent was also anticipated depended on whether the structures defined by the preamble and paragraph (h) of the broadest claim of the second patent were present in the art device. Paragraph (h) recited

clock means for operating [writing and applying functions] on a real time basis at a data transmission rate sufficiently greater than the frequency of the periodic power waveform that said applying means completely applies the decoded intensity level information to the selected display devices during the occurrence of each power waveform interval

The Sixth Circuit differed sharply with the district court over the proper scope to be assigned to paragraph h in reversing as to the second patent.⁵⁶

[T]he District Court's interpretation . . . reads element h of Claim 1 without regard to the specifications [sic]

It is proper to construe element h in light of the specification because to do so does not alter or expand what is claimed, but rather explains it. . . . The specifications explain the structure and materials used to provide the necessary means; they do not add a new element which is not found in the claims. Claims phrased in terms of "means" such as that used in the second patent are common, and could always be subject to a challenge for specificity if not construed to be limited to the structure recited in the specifications. Indeed, several courts have approved such a construction of "means" claims. See *Technitrol, Inc. v. Control Data Corp.*, 550 F.2d 992 [, 193 USPQ 257] (4th Cir. 1977); *Hale Fire Pump Co. v. Tokai Ltd.*, 614 F.2d 1278 [, 205 USPQ 114] (CCPA 1980).

⁵⁵ Pub. L. No. 97-164, Section 127(a), 96 Stat. 37-39 Apr. 2, 1982; *codified at* 28 U.S.C. Sec. 1295.

⁵⁶ *Stewart-Warner Corp. v. City of Pontiac*, 717 F.2d 269, 219 USPQ 1162 (1983).

When we consider element h in light of the specifications it is clear that the [prior art device] did not anticipate the invention disclosed by the [second] patent

Although the prior art system performed the same functions recited in paragraph (h), the court continued,

[t]he specifications make clear that the second patent uses a much different method . . . than the [prior art].⁵⁷

The Sixth Circuit's decision not to invalidate claim 1 despite the recognition that the function recited in the means expression did not differ from that of the prior art, along with its citations to the *Technitrol* and *Hale-Fire Pump* cases, clearly indicate that the court determined the scope of the means expression through a rigorous application of the statutory language along the lines advocated in this article.

On remand the district court in a second opinion again found the claim including element (h) invalid, this time as obvious over the prior device.

On appeal from this second district court decision, a divided Federal Circuit reversed the District Court, accusing it of "ignor[ing] the law of the case" by refusing to interpret the scope of paragraph (h) narrowly according to the statutory standard mandated by the Sixth Circuit. The district court's reuse of the broad interpretation it had used in the first decision, the Federal Circuit said, was

contrary to the decision of the Sixth Circuit, and cannot be sustained. The Sixth Circuit held that both the result achieved by the [second] patent, and the method of achieving it, differed from that of the [prior art] The prior appellate review and determination of certain issues, including claim construction, foreclosed the opportunity to re-determine those issues. Neither party has demonstrated that the evidence presented on remand was substantially different, or that manifest injustice required an exception to the law of the case doctrine.⁵⁸

The narrower scope of paragraph (h) was therefore reinstated, without further discussion of the legal merits of each

⁵⁷ *Id.* at 378, 219 USPQ at 1169.

⁵⁸ 767 F.2d at 1567-68, 226 USPQ at 678-79 (citations omitted).

method of interpretation, and the claim was held valid over the prior art.

The dissent stated:

I do not agree that this court is bound by the law of the case on the basis of the decision of the Sixth Circuit in *Stewart-Warner Corp. v. City of Pontiac*, 717 F.2d 269, 219 USPQ 1162 (1983) that the second patent is not invalid for anticipation. Although some deference must be given the Sixth Circuit, this should not be expanded to law of the case effect where the decision of the Sixth Circuit was clearly erroneous and would work manifest injustice.⁵⁹

The dissent went on to discuss the Sixth Circuit's interpretation of the preamble, arguing that that interpretation was clearly erroneous. It urged that the second patent be found anticipated by the prior art system.

It is clear from *Stewart-Warner* that the Federal Circuit assigned the means expression of element (h) a narrow scope in accordance with the statutory method of interpretation. Somewhat less clear, however, are the method and the exact reasons used by that court to arrive at the decision to follow that direction of the statutory language.

The majority of *Stewart-Warner* saw itself as bound under the law-of-the-case doctrine to the claim interpretation announced by the Sixth Circuit. However, as both they and the dissent recognized, prior Federal Circuit case law provides for exceptions to the binding effect of that doctrine. *Central Soya Co. v. Hormel & Co.*,⁶⁰ the leading case on the law-of-the-case doctrine in the Federal Circuit, also involved a challenge in that court to the binding effect of a prior decision of a regional circuit court of appeals. In rejecting that challenge as barred by the doctrine, the Federal Circuit noted that if the earlier decision "was clearly erroneous and would work a manifest injustice"⁶¹ the doctrine would not operate.

The legal reasoning of the Sixth Circuit, although sound, appears to be contrary to the clear weight of prior law in

⁵⁹ *Id.* at 1592, 226 USPQ at 682.

⁶⁰ 723 F.2d 1573, 220 USPQ 490 (1983).

⁶¹ *Id.* at 1580, 220 USPQ at 495 (quoting from *White v. Murtha*, 377 F.2d 428, 431 (5th Cir. 1967)).

this area. As discussed above,⁶² the use of the statutory method of interpretation to determine the scope of a means expression is contrary to a long line of cases in the CCPA dealing with prosecution proceedings, the authority of which continued to be controlling to the Court in *Boersma*. Assuming that no valid difference between the choice of interpretive methods in patentability and validity can be supported, these cases strongly suggest that the interpretation of the means expression in paragraph (h) made by the Sixth Circuit and given effect by the Federal Circuit in *Stewart-Warner* is contrary to the current rule. It is thus far from clear that the Sixth Circuit's claim interpretation was not clearly in error.

Furthermore, the district court's two successive invalidations of the claim when the means expression was interpreted according to the established PTO approach suggest a strong possibility that the choice of interpretive method determined the outcome of the validity challenge in *Stewart-Warner*. The failure to invalidate a claim due to a legally incorrect claim interpretation would seem to qualify as "manifest injustice." Under these circumstances, one would expect to encounter very serious doubts whether the ruling of the Sixth Circuit would be followed under the law-of-the-case doctrine.

Instead, the majority found this exception unavailable, devoting only a few brief remarks to the topic. The court did not cite any authority supporting the correctness of the Sixth Circuit's interpretation, and in fact did not even state that the interpretation was correct. Neither did it acknowledge the prior case law to the contrary.

Finally, in a very recent decision, the Federal Circuit explicitly adopted the statutory method of interpreting means expressions over an accused infringer's protestations. In *Polaroid Corp. v. Eastman Kodak Co.*,⁶³ the court addressed an appeal from a district court opinion holding seven of Polaroid's patents valid and infringed.

⁶² See footnote 20, *supra*, and accompanying text.

⁶³ No. 86-604 (April 25, 1986).

One of the patents contained a claim which included a recitation of a

first film-advancing means adapted to extend into [an] opening for engaging [the] foremost film unit at [the] second edge thereof and moving said foremost film unit, subsequent to exposure, through [the] exit.⁶⁴

The court described Kodak as arguing that “[t]he district court . . . improperly limited the element ‘first film-advancing means’ . . . to a preferred embodiment in the [patent] specification . . . , and permitted that ‘narrow’ construction to dominate its analysis of the prior art. Kodak says that was contrary to §112, which requires that means-plus-function claims be construed to encompass ‘equivalents’, citing *D.M.I., Inc. v. John Deere & Co.*, 755 F.2d 1570, 1573, 225 USPQ 236, 238 (Fed. Cir. 1985). It says prior art structures that perform the function of a ‘first film advancing means’ render obvious the inventions set forth in the claims”⁶⁵ Apparently, the Federal Circuit understood Kodak to argue that the means expression should be interpreted to include not only the corresponding structure in the specification of the patent, but also a range of equivalents wide enough to result in the traditional, broad interpretation that would be assigned under the PTO view, thus allowing the claim to be invalidated more easily.

The Federal Circuit disagreed with Kodak.

[A]s stated in *D.M.I.*, §112 requires “that the limitation *shall* be construed to cover the structure described in the specification *and* equivalents thereof.” 775 F.2d at 1574, 225 USPQ at 238 (emphasis in original). Here, as an initial matter, the district court properly construed “first film advancing means” in light of the structure described in the specification. . . . It went on to note, however, Polaroid’s statement to the PTO during prosecution that the claims were limited to a rear pick that engaged the film unit . . . only at the trailing ‘edge.’ . . . Kodak has not shown error in the district court’s finding that, in view of that prosecution history, it was compelled to read the claims as limited to a rear pick. . . . We will

⁶⁴ *Id.*, slip op. at 34.

⁶⁵ *Id.*, slip op. at 35.

not “undertake the speculative inquiry” into why the limitation was entered, or whether it was directed to one purpose Kodak alleges (i.e., “avoiding deflection of the leading end of the film unit out of alignment with the cassette’s exit slot”), but not to others. *Cf. Kinzenbaw v. John Deere & Co.*, 741 F.2d 383, 389, 222 USPQ 929, 933 (Fed. Cir. 1984), *cert. denied*, ___ U.S. ___, 105 S. Ct. 1357 (1985). Thus, whether applied in determining validity or infringement, the broad scope argued in Kodak’s brief would be inappropriate.⁶⁶

The court thus explicitly adopted the statutory method of interpreting the means expression, in what appears to be a considered decision not to use the urged PTO paradigm. In doing so, it applied a precedent, the *D.M.I.* decision, which dealt exclusively with the question of how means expressions are to be interpreted during *infringement*, not validity, determinations. In its opinion, the court did not even acknowledge the existence of the numerous contrary binding precedents on the question, let alone suggest reasons why they did not control the situation before the court.

The observations lead one to wonder just how influential the quoted portion of *Kodak* will become in the future. On the one hand, the decision does appear to be another instance in which the Federal Circuit has applied the statutory method of interpretation to a means expression in the context of patentability or validity. On the other hand, the opinion seems to evidence an unawareness of the near unanimity with which the court’s precedents have come to the opposite conclusion. Moreover, the self-professed inability of the Federal Circuit to overturn its precedents through decisions of three-judge panels,⁶⁷ such as that in *Kodak*, renders the ability of *Kodak* to overrule the precedential value of decisions such as *Arbeit* and *Lundberg* questionable.

⁶⁶ *Id.*, slip op. at 36 (citations to lower court decision omitted).

⁶⁷ *See, e.g., SRI International v. Matsushita Electric Corp.*, 775 F.2d 1107, 1125, 227 USPQ 577, 589 (Fed. Cir. 1985) (in banc action taken to overturn dicta in decision by prior three-judge panel).

IV.
ANALYSIS AND RECOMMENDATION

In view of the unsettled precedents from the Federal Circuit on this issue, and the meager discussion in those precedents of the policies involved, it is appropriate to examine in some detail the arguments supporting the use of both the PTO and statutory methods of interpretation. Such an examination is the only means by which a reasoned choice between the two alternatives can be made, and it is submitted that such a reasoned choice will select the statutory standard.

A. *The Statutory Standard*

There are essentially two major reasons to strictly apply the language of section 112's last paragraph to means expressions during prosecution. First, the statutory language itself compels a strict application. The sixth paragraph of section 112 directs what a claim including a means expression "shall be construed to cover." It does not expressly draw a distinction between the phases of prosecution and enforcement,⁶⁸ or between validity and infringement. The language facially includes a district court determining not only infringement, but validity as well, and also provides no basis for excluding the PTO from those who "shall" apply the statutory direction. In the absence of strong indications or policies to the contrary, the statute itself militates against the PTO's approach.

Second, applying the statutory language throughout the entire lifespan of a claim results in the claim being assigned a consistent scope. Under such an application, the boundaries of the subject matter defined by the claim are the same during the determination of both validity and infringement. Consequently, an apparatus that would have anticipated a claim, if it had been prior art, will infringe the claim after it issues.

⁶⁸ A discussion of the possible implications to be drawn from the presence of the word "cover" is reserved until later in this article. See text at notes 81-101, *infra*.

The PTO's approach does not produce such symmetry. Instead, the scope of a means expression during prosecution is radically different from its scope during infringement. To illustrate this, consider the following example. Assume that an applicant has initially presented a claim to the PTO incorporating a means expression that, if interpreted according to the statutory language, covers only novel and unobvious subject matter that he has enabled an ordinary artisan to make and use. Since there is no dispute as to the sixth paragraph's application in matters of infringement, if allowed his claim will enable him to exclude only those activities that patentees have traditionally held rights over. Let us further assume the not unreasonable existence of a prior art device which anticipates all the elements of the claim other than the disputed means expression, and is also capable of performing the function recited in the claim. However, this device does not meet one of the other two requirements of *Graver Tank*; either it does not perform the function in substantially the same way as the corresponding structure in our applicant's specification, or does not achieve the same result. The examiner properly performs his duty as interpreted by the PTO, and rejects the claim over the prior art, stating that he will not allow the claim as long as it continues to read on a function that the prior art device is capable of performing.

The applicant here is faced with an unpalatable decision. The examiner in most cases could be satisfied by a substitution of structural limitations not found in the reference for the offending means expression. However, this runs the risk of depriving the applicant of at least some of the equivalents he originally sought, both because he is no longer using a means expression with its statutorily defined scope, and because he has just set up an unpleasant issue of prosecution history estoppel precisely as to the element he sought to claim broadly.

Alternatively, the applicant could more specifically recite the function to the point where the applied device could no longer perform it. While he retains in this latter case the equivalents provided by the statutory language, in narrowing his function he has probably skewed the *Graver Tank* analysis to a point where he can no longer reach infringing

activities that he could have reached under his old claim language, either because the function now corresponds to a more elaborate structure in his specification than it did before, or because the elements in any accused device must now perform a more precise function.

In either case, the result is that the applicant, once he becomes a patentee, no longer has an exclusive right of the same scope originally sought. Opponents will point out that this happens every time a claim is narrowed to avoid the prior art, but in this case the claim was *already* narrow enough to avoid being infringed by any prior art or obvious combination of prior art.

The patent system generally reflects the policy decision that the public good will be advanced by granting an exclusive right to an inventor covering any eligible subject matter that is both novel and unobvious. It is difficult to see how the further restriction of his patent rights within these statutory boundaries in the above example furthers this policy in any way. To prevent an inventor from securing the full extent of the patent grant because of the unpatentability of subject matter he has not invented, and over which he is not seeking to obtain an exclusionary right, would seem to do violence to any orderly implementation of this policy.

B. *The PTO Standard*

Three arguments are usually brought forward to justify the PTO's liberal "reads on" test to means expressions.

1. The most compelling argument in favor of the PTO's method of interpretation is the long line of cases from the CCPA that have announced it and applied it since the '52 Act became effective.⁶⁹ Chief among these cases are the *Arbeit* and *Lundberg* decisions discussed above.

But the rationale of these cases is immediately troubling. The Court in *Lundberg* argued that an application of the last paragraph to means expressions during prosecution would destroy a distinction between broad and narrow claims.

⁶⁹ E.g., *In re Mott*, 557 F.2d 266, 194 USPQ 305 (1977); *In re Magaroli, et al.*, 318 F.2d 348, 138 USPQ 158 (1963); *In re Henatsch*, 244 F.2d 542, 113 USPQ 530 (1957); *In re Arbeit*, 206 F.2d 947, 99 USPQ 123 (1953).

In doing so, it ignored that paragraph's express direction that means expressions be construed to cover "the corresponding structure . . . and equivalents thereof." Assuming that the corresponding structure has equivalents of some sort, the breadth of a means expression interpreted in accordance with the statutory language will always be greater than that of a detailed recitation of the corresponding element. The dispute is not as to whether such an expression is any broader than a detailed recitation of the exact structure, but rather how much broader it is.

Courts faced with interpreting means expressions in infringement settings have been aware that that language affords a different, broader coverage as compared to structural recitations of the corresponding element.⁷⁰ Contrary to the Court's assertion in *Lundberg*, an application of the statutory language to means expressions during prosecution would give the same result.

More importantly, the court's observation in *Lundberg* and *Arbeit* that the claims themselves must define the invention without limitations imported from other sources begs the question to be answered. If the last paragraph of section 112 determines the meaning assigned to a means expression during prosecution, then that expression already includes the corresponding structure and its equivalents. They are not "limitations in the specification not included in the claim"; they are part of the claim by virtue of their inclusion in the specification and they do not need to be "imported" into the claim to impart patentability.

Conversely, if one initially decides that the sixth paragraph will not govern such expressions during prosecution, and therefore the scope of the claim will be limited only by its literal language, it follows necessarily that the corresponding structure and equivalents are not part of the claimed

⁷⁰ E.g., *Radio Steel & Mfg. Co. v. MTD Products*, *supra*, note 14; *Lockheed Aircraft v. United States*, 553 F.2d 69, 193 USPQ 560 (Ct. Cl. 1977); *Stearns v. Tinker & Razor*, *supra*, note 10; *Courtesy Communications Corp. v. C-Five, Inc.*, 455 F.Supp. 1183, 203 USPQ 276 (N.D. TX 1978); *Technicon Instruments Corp. v. Coleman Instruments, Inc.*, 255 F.Supp. 630, 150 USPQ 227 (N.D. Ill. 1966), *aff'd*, 385 F.2d 391, 155 USPQ 369 (7th Cir. 1967).

subject matter. But that is not a justification for making the decision in the first place. After all, changing the conclusion (the last paragraph does not apply) would erase the result relied on (the claim does not contain the needed limitations). Yet this is exactly what the Court used to justify its holding.

Further, the rationale of these cases appears to conflict with another, related CCPA precedent. In *In re Knowlton*,⁷¹ the CCPA was confronted with the PTO's rejection, under the first paragraph of section 112, of a claim drawn to a specifically programmed general purpose computer. The claim recited a series of means for performing the functions carried out by the particular program. In support of its rejection, the PTO stated that the claim would "preempt . . . every possible hardware configuration that would give the same result . . . notwithstanding the absence of an adequate teaching of any such hardware disclosure by [the] specification."⁷²

In its opinion, the Court embarked on a detailed discussion of section 112, and stated that the first paragraph requires, in part, a disclosure such that "the skilled artisan . . . sufficiently understand the manner of making and . . . using the invention The invention subject to scrutiny by the Patent Office . . . is the invention defined by the claims"

The Court then turned to a discussion of the last paragraph of section 112 and its authorization of means expressions. "If the applicant chooses to use such language, the statute instructs the . . . Patent Office . . . as to how such language shall be interpreted. It states that such language 'shall be construed to cover the corresponding structure . . . described in the specification and equivalents thereof.'⁷³ Because the specification disclosed an apparatus that complied with the claims, and the claims were in turn limited to covering that structure and its equivalents, the Court held that the disclosure was sufficiently enabling and reversed the rejection.

71 481 F.2d 1357, 178 USPQ 486 (1973).

72 *Id.* at 1362, 178 USPQ at 490.

73 *Id.* at 1366, 178 USPQ at 492 (original emphasis omitted).

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The continuing vitality of this view in the Federal Circuit was apparently reaffirmed by *In re Hyatt*,⁷⁴ in which the Court was faced with the rejection of a claim reciting only a single means. The Board of Appeals had affirmed the examiner's rejection under the second paragraph of section 112, asserting that because of its single-means format, the claim failed to particularly point out and distinctly claim the invention.

The Court disagreed with the Board's application of the statute.

The proper statutory rejection of a single means claim is the requirement of the first paragraph of section 112 that the enabling disclosure of the specification be commensurate in scope with the claim under consideration.

The long-recognized problem with a single means claim is that it covers every conceivable means for achieving the stated result, while the specification discloses at most only those means known to the inventor. Thus, the claim is properly rejected . . . based on the first paragraph of §112.⁷⁵

This language at first appears to run counter to the limited scope assigned to means expressions during enablement determinations in *Knowlton*. However, the court in *Hyatt* specifically limited its remarks.

The final paragraph of §112 saves *combination* claims drafted using means-plus-function format from this [enablement] problem by providing a construction of that format narrow enough to avoid the problem of undue breadth as forbidden by the first paragraph.⁷⁶

The court therefore squarely reiterated the standard of interpretation described in *Knowlton*, with the proviso that it be applied to combination claims.

It is very difficult to reconcile the reasoning applied in *Knowlton* and *Hyatt* with that of *Arbeit* and *Lundberg*. If the literal claim language defines the invention to be compared to the prior art, as both *Arbeit* and *Lundberg* hold, why not require that same invention to be accompanied by

⁷⁴ 708 F.2d 712, 218 USPQ 195 (1983).

⁷⁵ *Id.* at 714, 218 USPQ at 197 (footnote omitted).

⁷⁶ *Id.* at 715, 218 USPQ at 197 (emphasis in original).

an enabling disclosure? On the other hand, if, as *Knowlton* and *Hyatt* hold, the applicant's duty to enable is restricted to the invention defined by the claims construed in accordance with the last paragraph of section 112, what rationale could require the use of a different claimed invention for the purposes of applying sections 102 and 103? No reason is apparent, nor has any been suggested.

2. The second argument urges that the PTO position is consistent with the well settled rule of claim construction giving claims during prosecution their "broadest reasonable interpretation consistent with the specification."⁷⁷ The general reason behind this rule is that an applicant, within certain constraints, is able to amend his claim language as he pleases. Consequently, if he wishes to argue for a more restrictive interpretation of his claim language, his remedy is to so amend the claim and make the intended coverage explicit, rather than relying on nuance and disputed meanings.⁷⁸ Interpreting a means expression during prosecution to include all structures capable of performing the recited function, the argument continues, is simply to give the claim its broadest reasonable interpretation, in accordance with this time-tested rule.

There are problems with this justification as well. As an initial matter, accepting the "broadest reasonable interpretation" rule does not necessarily require acceptance of the PTO's interpretation of means expressions.

Instead, it would be entirely consistent with the policies behind that rule to use the broadest reasonable interpretation of the claim construed according to the statutory language. This would involve, for example, determining the broadest reasonable limits of the corresponding structure in the specification, whether the results achieved by the prior art can reasonably be considered the same as that achieved by the applicant's structure, and so on. The "broadest

⁷⁷ E.g., *In re Prater*, 415 F.2d 1393, 1404-05, 163 USPQ 541, 550 (CCPA 1969) and cases cited therein.

⁷⁸ E.g., *In re Reuter*, 651 F.2d 751, 756, 210 USPQ 249, 253-54 (CCPA 1981); *Prater* at 1405, 162 USPQ at 550.

reasonable interpretation” rule, while persuasively arguing that the normal rules of claim interpretation should be altered during prosecution, is not sufficient to compel their transformation into the PTO’s test. It is not at all clear that interpreting a claim during prosecution according to an analysis that will never again be even remotely applied to it after issuance is reasonable.

The support provided by this rationale falls short for another, more fundamental reason. Unlike the case where the “broadest reasonable interpretation” rule is applied to claims literally reciting the structure comprising the element claimed, the example discussed above⁷⁹ points out that the patent applicant using a means expression may not be free to amend his claim to the extent necessary to avoid the prior art applied under the PTO test. Forced to address prior art disclosures during prosecution having no proximity whatsoever to the boundaries of infringement, an applicant may be unable to avoid relinquishing valuable and deserved exclusive rights.

Finally, even if one were to accept the “broadest reasonable interpretation” rule as adequate support for the PTO’s approach to means expressions, it provides no support for the use of that approach when determining the validity of an already issued patent. Absent a reissue or reexamination proceeding, a patentee has no ability to alter his claim language to make his intended scope of protection clearer. Consequently, the basis for the rule disappears.

In fact, the Federal Circuit has on at least one occasion stated that issued claims are to be construed, if possible, so as to preserve their validity.⁸⁰ This view is in direct opposition to use of the “broadest reasonable interpretation” rule after issuance.

3. The third argument urges that the PTO’s interpretation more accurately reflects the intent behind the statute. In other words, the last paragraph of section 112 was not intended to apply to prosecution. As evidence of this, ref-

⁷⁹ Page 267.

⁸⁰ *Carman Industries, Inc. v. Wahl*, 724 F.2d 932, 937, 220 USPQ 481, 485 (Fed. Cir. 1984).

erence is usually made to a brief portion of P. J. Federico's commentary on the '52 Act, in which he states that the last paragraph of section 112

relates primarily to the construction of . . . claims for the purpose of determining when the claim is infringed (note the use of the word "cover"), and would not appear to have much, if any, applicability in determining the patentability of such claims over the prior art, that is, the Patent Office is not authorized to allow a claim which "reads on" the prior art.⁸¹

Since Mr. Federico was one of the primary authors of the '52 Act, this passage is argued to authoritatively reveal what was intended by that paragraph.

Again, serious problems appear in this argument. Generally, "the test most often declared by the courts" is "that the legislative will governs decisions on the construction of statutes."⁸² Questions of statutory construction are decided according to the criteria of what the legislature intended the language of the particular measure under scrutiny to mean.⁸³

Some cases use maxims of interpretation, such as the "plain meaning rule,"⁸⁴ or other formalistic approaches to this essentially factual inquiry. However, probably the most useful synthesis of the case law is one which views all the evidence available, including the language of the statute, its legislative history, and the policies behind it, in light of the degree to which each piece is probative of the legislature's actual intent and the strength with which each argues for a particular interpretation.⁸⁵

As argued above,⁸⁶ the language of the last paragraph of §112 appears clear on its face. That clarity argues strongly

⁸¹ *Commentary on the New Patent Act*, 35 U.S.C.A. 1, 26, (1954 ed.).

⁸² 2A Singer, *Sutherland Statutory Construction*, § 45.05 (4th ed. 1984).

⁸³ E.g., *Philbrook v. Glodgett*, 421 U.S. 707, 713 (1975); *National Railroad Passenger Corp. v. National Association of Railroad Passengers*, 414 U.S. 453, 458 (1974).

⁸⁴ See generally 2A *Sutherland*, § 46.01.

⁸⁵ E.g., *Detroit Edison Co. v. S.E.C.*, 119 F.2d 730, 738 (6th Cir.), cert. denied, 314 U.S. 618 (1941). See *U.S. v. National Marine Engineer's Beneficial Association*, 294 F.2d 385, 391 (2d Cir. 1961).

⁸⁶ Page 266.

that the legislature intended to enact a measure that would govern the interpretation of claims both during validity and infringement. Although Mr. Federico apparently would have had us believe otherwise, the word "cover" in common parlance is not associated solely with infringement determinations, as for example in the statement: "The claim is not patentable because it is broad enough to cover subject matter that would have been obvious to one of ordinary skill." Few would agree that the term "invention," as used in 35 U.S.C. §§102 and 103, means the invention "covered by the claim."⁸⁷

As also argued above, no rational policy behind the patent system is served by applying the PTO's interpretation to means expressions.

Among the other factors to be considered is the legislative history surrounding the '52 Act, including Mr. Federico's commentary, which has been argued by some to support the PTO's interpretation. However, a reasoned review of this material shows the support to be largely illusory.

As an initial matter, Mr. Federico's commentary is not part of the legislative history of the '52 Act. During the legislative activities leading to the Act's passage, Mr. Federico was a Patent Office employee working with the House Subcommittee on Patents, Trademarks, and Copyrights.⁸⁸ He was not an elected member of Congress, nor did he, in his function as commentator for West Publishing's United States Code Annotated, speak for any portion of the legislative branch.

As he states, his commentary was prepared "after the new patent act ['52 Act] was approved," and "is a consideration and revision of . . . transcriptions of address[es to]

⁸⁷ *In re Muchmore*, 433 F.2d 824, 826, 167 USPQ 681, 683 (CCPA 1970) (affirming rejection under 103). *E.g.*, *Julie Research Laboratories, Inc. v. Guideline Instruments, Inc.*, 501 F.2d 1131, 1135, 183 USPQ 1, 4 (2d Cir. 1974) (claim including means expression invalidated under 103); *Hughes Aircraft Co. v. U.S.*, 640 F.2d 1193, 1210, 205 USPQ 381, 392 (Ct. Cl. 1980) (claim invalidated under 102(b)).

⁸⁸ G. Rich, *Congressional Intent—Or Who Wrote the Patent Act of 1952?* reprinted in J. Witherspoon, *Nonobviousness—The Ultimate Condition of Patentability* 1:1, 3-5 (1978).

various patent groups.”⁸⁹ Its full text was therefore not even in existence when the legislature considered the measure, and can hardly be probative of the intent in the minds of legislators at that time. As stated by Professor Singer, no method of statutory interpretation “can be supported when [it] result[s] in a finding of legislative intent which did not in fact exist within the legislature.”⁹⁰

The mistaken authority given to Mr. Federico’s commentary seems to stem from a confusion between his status as a *textual* author of the ’52 Act’s provisions, and the legislator’s status as *legal* authors in voting on it. It is the intent of the legislators which is at issue in statutory interpretation, and Mr. Federico’s commentary, to the extent that it is more relevant than any other person’s views, must trace its authority to that source.

It has been often stated that the later views expressed by a legislator concerning the intent behind a statute are not sufficiently probative of legislative intent.⁹¹ The courts, including the CCPA, have recognized that, *a fortiori*, the post-enactment views expressed by “a draftsman of the legislation” are “of little value in the interpretation of [a] statute.”⁹²

⁸⁹ *Commentary*, 35 U.S.C.A. at 1-2.

⁹⁰ 2A Singer, *Sutherland Statutory Construction*, § 45.05 (4th ed. 1984).

⁹¹ *E.g.*, *Consumer Product Safety Commission v. GTE Sylvania*, 447 U.S. 102, n.13 (1980); *U.S. v. United Mine Workers*, 330 U.S. 258, 281-82 (1947); *Rogers v. Frito-Lay, Inc.*, 611 F.2d 1074, 1080 (5th Cir.), *cert. denied*, 449 U.S. 889 (1980); *Allyn v. U.S.*, 461 F.2d 810 (Ct. Cl. 1972); *U.S. School of Aeronautics v. U.S.*, 142 F.Supp. 933, 938 (Ct. Cl. 1956). *See Weinberger v. Rossi*, 456 U.S. 25, 35 (1982).

⁹² *Department of Energy v. Westland*, 565 F.2d 685, 690-91, 196 USPQ 3, 7 (CCPA 1977). *E.g.*, *Iowa State Research Foundation, Inc. v. Sperry Rand Corp.*, 444 F.2d 406, 170 USPQ 394 (4th Cir. 1970) (specific to Mr. Federico’s commentary); *Friedman v. U.S.*, 364 F. Supp. 484, 488 (S.D. Ga. 1973); *California Welfare Rights Organization v. Richardson*, 348 F.Supp. 491 (N.D. Calif. 1972); *Epstein v. Razor*, 296 F. Supp. 214, 216 (N. D. Calif. 1969); 2A *Sutherland*, § 48.12. “I believed the worst person to construe [a statute] is the person who is responsible for its drafting. He is very much disposed to confuse what he intended to do with the effect of the language which has in fact been employed. At the time he drafted the statute, at all events, he may have been under the impression that he had given full effect to what was intended, but he may be mistaken in construing it afterwards just because what was in his mind was what was intended, though, perhaps, it was not done.” *Hilder v. Dexter*, AC 474 (1902). *Cf. Consumer Product Safety Commission v. GTE Sylvania*, 447 U.S. 102 n.13 (1980); *Rogers v. Frito-Lay, Inc.*, 611 F.2d 1074, 1080 (5th Cir. 1980).

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Moreover, Mr. Federico adds the disclaimer:

In such an extended discussion it is obviously impossible to avoid expressions . . . of personal opinion and it should be understood that the paper [commentary] contains some opinions and views of the writer even though not always labelled as such.⁹³

We therefore cannot even be sure whether any given portion of his commentary represents his view of what the legislature intended, or instead is his personal opinion of what the particular language ought to mean.⁹⁴

On the other hand, the House Report discussing the bill⁹⁵ was drafted by Mr. Federico for that body and adopted by it. It can therefore be considered more highly probative of the legislature's intent. The text of the Report refers to Section 112 in only one sentence:

The next group of sections [Chapter 11] relates to the application for a patent.⁹⁶

The text does not specifically mention the last paragraph of §112 at all. Clearly, it enunciates no view of the paragraph's effect on prosecution corresponding to the PTO's reading of Mr. Federico's commentary.

The Senate Report⁹⁷ is nearly identical to that of the House, differing only in a matter not relevant to this discussion.⁹⁸

The Revision Notes accompanying the House Report, also written by Mr. Federico, do specifically mention the disputed paragraph. The entire passage reads: "A new paragraph relating to functional claims is added."⁹⁹

None of these "official" materials contains the slightest evidence of the intent supposedly referred to by Mr. Federico in his unofficial commentary. By failing to even men-

⁹³ *Commentary*, 35 U.S.C.A. at 2.

⁹⁴ It has even been intimated that no legislative intent adhered to much of the '52 Act. *Congressional Intent* at 1:12-13.

⁹⁵ H. Rep. No. 1923, 82nd Cong., 1st Sess., (1952), reprinted at 34 J.P.O.S. 549 (1952).

⁹⁶ 34 J.P.O.S. at 557.

⁹⁷ S. Rep. No. 1979, 92nd Cong., 1st Sess., (1952), reprinted in 1952 U.S. Code Cong. & Ad. News 2394.

⁹⁸ *Congressional Intent* at 1:10, n.16.

⁹⁹ 34 J.P.O.S. at 591.

tion the effect he asserts, they argue instead that Congress did not intend that the PTO interpretation result, and that that interpretation was made by Mr. Federico sometime after the bill's enactment.

This view finds further support from another of the statute's coauthors, C. J. Zinn, who also commented on the '52 Act.¹⁰⁰ He states that the paragraph

recognizes the validity of combination claims wherein the novelty is expressed in functional terms. It offsets the theory of the *Halliburton* case but does not go so far as to permit the use of single means claims.¹⁰¹

Mr. Zinn's commentary does not assert any difference between the paragraph's application to infringement and prosecution.

In short, Mr. Federico's commentary is the only source discussing the statutory language that even remotely suggests any validation of the PTO's interpretation. Its citation on this point is some evidence of the interpretation Mr. Federico thought the language should have had some time after the enactment of the paragraph. However, it is exceedingly thin evidence of Congress's intent in enacting that language.

Finally, the language of Mr. Federico's commentary is itself equivocal. He states that the paragraph relates "primarily" to infringement. Does this mean that, in spite of the seemingly express language of that paragraph, it relates only to infringement? Or does it instead indicate that the paragraph "secondarily" relates to matters before the PTO, reflecting Mr. Federico's view that overturning *Halliburton* is its most important, but not only, function?

He states that the paragraph "would not *appear* to have much applicability" to proceedings before the PTO (emphasis added), instead of stating that the paragraph definitely does not apply. Does this indicate that the statement is one of personal opinion rather than the intent he perceived to be behind the legislation? What is his authority for the assertion

100 *Commentary on New Title 35, U.S. Code "Patents"*, reprinted in 1952 U.S. Code Cong. & Ad. News 2509.

101 *Id.* at 2514.

that "the Patent Office is not authorized to allow a claim which 'reads on' the prior art?" Certainly that result does not stem from any language in the paragraph under discussion. If it finds a basis in some other portion of the statute, it is odd that the statement should appear at this point, without even a cross reference to the specific supporting language.

In sum, the reasons advanced in support of the PTO's method of interpreting means expressions do not appear to be well-grounded. They are based, in the case of the early decisions of *Arbeit* and *Lundberg*, on an incomplete and incoherent understanding of how the relevant statutory provisions function. In the case of arguments using the "broadest reasonable interpretation" or similar rules, they evidence an insufficient appreciation of the costs that are imposed on patent owners by the lack of symmetry inherent in the PTO's method. Mr. Federico's commentary fails to support the PTO's method for two reasons. First, it is not proper legislative history. Second, it does not even, by its own terms, assert that the legislative history of the '52 Act requires an application of the PTO method.

CONCLUSION

The foregoing discussion illustrates that the Federal Circuit has failed to come to grips with this problem adequately. As a result, even after reviewing the recent Federal Circuit decisions on the point, the patent bar is essentially unable to predict what method of interpretation that court will use to determine the scope of a means expression being compared against the prior art.

The lack of any discussion of the policies underlying this issue, and the failure of the court to confront its binding precedents in the published opinions, has created uncertainty whether the Federal Circuit is discarding the questionable precedents of *Arbeit* and *Lundberg*. *Arbeit* and *Lundberg* dealt with pre-grant patentability determinations, not the post-grant validity determinations in *RCA*, *Stewart-Warner* and *Kodak*. Do the treatments of the means expressions in *Stewart-Warner* and *Kodak* indicate that the Federal Circuit does not feel its earlier precedents extend to this area of its jurisdiction, and that the statutory rule of inter-

pretation should apply? Yet the adoption of such a fundamental difference in claim interpretation between validity and prosecution would seem to be both intellectually unsound and unprecedented. Or perhaps the language in *Mulder*, a case involving a pending application, indicates that the correctness of the early precedents is being called into question?

Patent practitioners will have to await an explicit treatment of the issue in a published opinion to determine whether the Federal Circuit will continue to use the strained, overly restrictive interpretation of the last paragraph of section 112 based on highly questionable precedents, or whether the court's increasing familiarity with the interpretation given means expressions in infringement determinations and the practical benefits of symmetrical claim interpretation will lead it to throw off the unwarranted vestiges of pre-1952 case law in this area.

EDITOR'S NOTE: Readers may wish to consider the impact, if any, of *In re Yamamoto*, 222 USPQ 934, 936 (Fed. 1984) on the author's discussion of the PTO position appearing at pp. 268-273 above. Following the *Prater* and *Reuter* decisions there mentioned, the Federal Circuit rejected appellant's argument which would require the PTO to apply a rule of claim construction adopted by the federal courts when the validity of an issued patent is in question. Instead, the Court affirmed "the board's decision to give claims their broadest reasonable interpretation, consistent with the specification, in reexamination proceedings."