

11-1-1992

At the Boundaries of Law and Equity: The Court of Appeals for the Federal Circuit and the Doctrine of Equivalents

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Suggested Citation

Paul C. Craane, Comment, At the Boundaries of Law and Equity: The Court of Appeals for the Federal Circuit and the Doctrine of Equivalents, 13 N. Ill. U. L. Rev. 105 (1992).

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At the Boundaries of Law and Equity: The Court of Appeals for the Federal Circuit and the Doctrine of Equivalents

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Perfection eludes us all . . . and no human institution is totally perfect. In some areas, the Federal Circuit has had to "feel its way" toward a definitive statement of the law. Examples are inequitable conduct and the doctrine of equivalents in the field of patents Such case-by-case development of the law is normal and will doubtless continue. An occasional misstep may require correction . . . but the Federal Circuit's established procedures have kept such aberrations to an absolute minimum.¹

— Former Chief Judge Howard T. Markey

I. INTRODUCTION

Since its inception in 1982,² the Court of Appeals for the Federal Circuit ("Federal Circuit") has brought a new level of certainty to patent litigation and patent prosecution. Before the creation of the Federal Circuit, the federal appellate courts were split on thirteen separate fundamental issues involving the field of patent law.³ After being granted special and sole jurisdiction over appeals involving patent litigation and prosecution, the Federal Circuit resolved all of these conflicts within the first three years of its existence.⁴

However, the Federal Circuit has not brought absolute certainty to the field of patent law. At the boundary of what is ascertainable from the opinions of the court lies a concept at the heart of many patent infringement cases, the doctrine of equivalents. A troublesome area for judge and practitioner alike, a uniform doctrine of equivalents has remained elusive, despite the valiant attempts of the Federal Circuit, both as panels and *en banc*.⁵

In all fairness to former Chief Judge Markey, the "occasional missteps" in this area of patent law have not been "aberrations."

1. Howard T. Markey, *The Federal Circuit and Congressional Intent*, 41 AM. U. L. REV. 577, 579 (1992) (Former Chief Judge, Court of Appeals for the Federal Circuit, 1982-92).

2. The Court of Appeals for the Federal Circuit was created by the Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, 96 Stat. 25. For a full discussion of the creation of the Court of Appeals for the Federal Circuit, see *infra* notes 13-23 and accompanying text.

3. Markey, *supra* note 1, at 577.

4. *See id.*

5. *En banc*, or *in banc*, "refers to a session where the entire membership of the court will participate in the decision rather than the regular quorum." BLACK'S LAW DICTIONARY 526-27 (6th ed. 1990). An *en banc* hearing ordinarily will only be ordered when "consideration by the full court is necessary to secure or maintain uniformity of its decisions" or "the proceeding involves a question of exceptional importance." FED. R. APP. P. 35(a).

With every succeeding opinion, the Federal Circuit's attempts to reduce the doctrine to a uniform statement have resulted in increased confusion for the practitioner. The court has not only succeeded in complicating the procedure and substance involved in application of the doctrine, but, as a result of their pursuit of a uniform rule, the court has altered allied doctrines in an unnecessary manner.

The doctrine of equivalents was created as an equitable doctrine to assist the patentee at a time when the patent was structured much differently than it is today. Times have changed, and the Patent Act has developed and matured. While the changes in patent structure and prosecution procedure do not rule out further application of the doctrine of equivalents, they suggest a new approach to the application of the doctrine should be taken to end the ceaseless complication of the doctrine in the pursuit of a more certain application at trial.

This article outlines the conflicts involved in the Federal Circuit's attempts to create certainty in the doctrine of equivalents and proposes a new role for the doctrine to allow it to return to a simpler state. Section II outlines and details the conflict between the theoretical positions of the Federal Circuit and the doctrine of equivalents. Section III explores the conflict as illustrated in two of the Federal Circuit's doctrine of equivalents opinions: *Pennwalt Corp. v. Durand-Wayland, Inc.*⁶ and *Wilson Sporting Goods Co. v. David Geoffrey and Associates*.⁷ Section IV outlines the complications these opinions have created in the areas of patent litigation and practice. In response, sections V and VI present a new focus for the doctrine, utilizing some of the legislative solutions already in existence in the Patent Act to allow the doctrine to return to the original analysis envisioned for the doctrine by the Supreme Court in *Graver Tank & Manufacturing Co. v. Linde Air Products Co.*⁸

II. THE THEORETICAL CONFLICT WITHIN THE FEDERAL CIRCUIT OVER THE CORRECT APPLICATION OF THE DOCTRINE OF EQUIVALENTS

At the heart the confusion surrounding the doctrine of equivalents is a theoretical divergence between the goals protected under the doctrine of equivalents and those protected by the Federal Circuit. Patent law is itself based on a tension between two competing interests. First, the patent has value to the inventor as a guarantee of protection, an exclusive right granted by the

6. 833 F.2d 931 (Fed. Cir. 1987).

7. 904 F.2d 677 (Fed. Cir. 1990).

8. 339 U.S. 605 (1950).

government⁹ to stimulate inventors to add to the sum of human

9. The Constitution authorizes Congress "[t]o promote the Progress of . . . useful Arts, by securing for limited Times to . . . Inventors the exclusive Right to their . . . Discoveries." U.S. CONST. art. I., § 8, cl. 8. This exclusive right of inventors to their "Discoveries" is protected under the Patent Act of 1952, administered by the United States Patent and Trademark Office ("Patent Office") as Title 35 of the United States Code. The patent grant gives the inventor an exclusive right to his device for a period of seventeen years from the date of issuance. 35 U.S.C. § 154 (1988).

Although some authors term the patent grant a "monopoly," see 1 PETER D. ROSENBERG, *PATENT LAW FUNDAMENTALS* (perm. ed. rev. vol. 1991); Martin Adelman, *The Doctrine of Equivalents in Patent Law: Questions That Pennwalt Did Not Answer*, 137 U. PA. L. REV. 673, 674 (1989) [hereinafter Adelman, *Doctrine*], this use of terminology is unfortunate, because of the antitrust meaning commonly associated with "monopoly."

A monopoly is generally considered to be a negative use of available social resources; a monopoly "takes something from the people." *United States v. Dubilier Condenser Corp.*, 289 U.S. 11 178, 186 (1933). However, the patent grant does not deprive the public of something already in the public domain. ROBERT L. HARMON, *PATENTS AND THE FEDERAL CIRCUIT* § 1.3, at 10 (2d ed. 1991); 1 ROSENBERG, *supra*, § 1.03, at 1-9 to 1-10. Rather, the inventor "gives something of value to the community by adding to the sum of human knowledge." *Dubilier Condenser*, 289 U.S. at 186. Therefore, even at this fundamental level, the patent "monopoly" can be seen to be different from the normal, socially unacceptable, meaning of the word. 1 ROSENBERG, *supra*, § 1.03, at 1-9 to 1-10.

Furthermore, the patent grant does not guarantee the patentee "market power." *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 875 n.9 (Fed. Cir. 1985) (quoting *USM Corp. v. SPS Technologies, Inc.*, 694 F.2d 505, 511 (7th Cir. 1982), *cert. denied*, 462 U.S. 1107 (1983)). A true monopoly, using the antitrust sense of the word, requires "monopoly power" (or "market power"), the "economic control over price and production." WILLIAM C. HOLMES, *INTELLECTUAL PROPERTY AND ANTITRUST LAW* § 1.02, at 1-3 (perm. ed. rev. vol. 1991); see *id.* § 6.02[2], at 6-9. As "competing products are readily available," the patent holder will generally lack control over the price and production of the patented invention. HOLMES, *supra*, § 1.02, at 1-3; see also *Nickola v. Peterson*, 580 F.2d 898, 914 n.25 (6th Cir. 1978) (Markey, J.) ("A patented product rarely enjoys a dominant share in the relevant market. . . . 'Of course it is common knowledge that a patent does not always confer a monopoly over a particular commodity. Often the patent is limited to a unique form or improvement of the product and the economic power resulting from the patent privileges is slight.'"); 1 IRVING KAYTON, *PATENT PRACTICE* 1-32 to 1-33 (4th ed. 1989). *Contra* 1 ROSENBERG, *supra*, § 1.03, at 1-9. Rather the patentee is given the exclusive right to *exclude* others from using the patented device, 35 U.S.C. § 154 (1988), which is the essence of property. *Nickola*, 580 F.2d at 914 n.25 (Markey, J.) ("The patent right, solely that of excluding others, is the fundamental element of all human rights called 'property.' The statutory, and therefore proper, characterization is not 'patent monopoly,' but 'patent property.');" 1 KAYTON, *supra*, at 1-24 ("The single, critical, necessary condition that distinguishes property with respect to a res from other things of value is that the owner of the res has the right to exclude the rest of the world from enjoyment of and dominion over [it].") (original emphasis).

knowledge.¹⁰ Second, the patent also is of value to the public because the inventor must disclose his invention to the public to obtain the exclusive right.¹¹ This disclosure will hopefully stimulate others to add to the sum of human knowledge through the creation of other inventions utilizing the lessons learned by the patentee.¹² The theoretical problem in the present interpretation of the doctrine of equivalents arises from the fact that the doctrine and the Federal Circuit each represent one of the opposite extreme goals of patent law.

In 1982, Congress created a new federal circuit court of appeals to unify the field of patent law. Prior to the creation of the Federal Circuit, appellate opinions touching on questions of patent validity and infringement were decided by every federal appellate court in the United States. The Court of Appeals for the District of Columbia and the Court of Custom and Patent Appeals decided the appeals taken from decisions of the Patent and Trademark Office ("Patent Office").¹³ Patent infringement decisions, which could be decided in any federal district court¹⁴ and which also often touched on matters of patent

10. *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 480-81 (1974); *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607 (1950).

11. As part of the requirements for a valid patent application, the applicant must disclose the proper use and/or manufacture of the patentable invention as well as the scope of the subject matter which the inventor feels the invention encompasses. Disclosure of the proper use and/or manufacture of the invention is included in the specification. See 35 U.S.C. § 112, ¶ 1 (1988) (requiring a written explanation in "full, clear, concise, and exact terms," understandable by "any person skilled in the art," and presented in the "best mode contemplated" by the inventor). The disclosure of the scope of the invention is presented in the claims of the application. See 35 U.S.C. § 112, ¶ 2 (1988) ("The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.").

12. *Graver Tank*, 339 U.S. at 607; see *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 146 (1989) ("From their inception, the federal patent laws have embodied a careful balance between the need to promote innovation and the recognition that imitation and refinement through imitation are both necessary to invention itself and the very life blood of a competitive economy."); HARMON, *supra* note 9, § 1.3, at 9.

13. If the appeal was taken directly from the Patent Office Board of Patent Appeals and Interferences, the United States Court of Custom and Patent Appeals had appellate jurisdiction. 35 U.S.C. § 141 (1986). If a civil action was brought to obtain a patent by court order, this action had to be filed in the District Court for the District of Columbia, 35 U.S.C. § 145 (1986), with appellate jurisdiction then being to the Court of Appeals for the District of Columbia, 28 U.S.C. § 1291 (1986).

For background on the Court of Custom and Patent Appeals, see generally, 3 DONALD S. CHISUM, *PATENTS* § 11.06[3][b] (perm. ed. rev. vol. 1992).

14. 28 U.S.C. § 1338 (1988) ("The district courts shall have original jurisdiction of any civil action arising under any Act of Congress relating to patents . . .").

validity,¹⁵ were appealed to the appropriate circuit corresponding to that federal district court.¹⁶

Congress decided that the situation was becoming intolerable. Congress feared that the diversity in opinions from the different appellate jurisdictions was leading to forum-shopping, which "demeans the entire judicial process and the patent system as well."¹⁷ In addition, Congress also perceived that the diversity in opinions was defeating important business interests by preventing reliance on the patent system and thereby stifling innovation in the marketplace.¹⁸ Lastly, dissatisfied with the apparent anti-patent bias of the Supreme Court, Congress may have also reasoned that a decrease in the diversity of opinions would remove the influence of the Court over the field of patent law by eliminating a major source of possible certiorari jurisdiction.¹⁹

In the Federal Courts Improvement Act of 1982,²⁰ Congress merged the Court of Custom and Patent Appeals with the Court of Claims and replaced them with the Court of Appeals for the Federal Circuit.²¹ Congress gave the Federal Circuit nationwide appellate jurisdiction over all matters involving the validity of patents and the infringement of patent rights to improve the certainty of the patent system for the public and for industry.²² The Federal Circuit has consistently viewed this assignment from Congress as their prime directive.²³

15. Patent validity is a defense at law to the infringement action. 35 U.S.C. § 282 (1988).

The following shall be defenses in any action involving the . . . infringement of a patent and shall be pleaded: . . . (2) Invalidity of the patent . . . on any ground specified in part II of this title as a condition for patentability, (3) Invalidity of the patent . . . for failure to comply with and requirement of sections 112 or 251 of this title

Id. If the patent is invalid, then infringer cannot be liable for infringement.

16. 28 U.S.C. § 1291 (1988) ("The courts of appeals . . . shall have jurisdiction of appeals from all final decisions of the district courts of the United States . . .").

17. S. REP. No. 275, 97th. Cong., 2d Sess. 2-7 (1982), *reprinted in* 1982 U.S.C.C.A.N. 11, 15.

18. S. REP. No. 275, 97th. Cong., 2d Sess. 2-7 (1982), *reprinted in* 1982 U.S.C.C.A.N. 11, 15-16.

19. Martin J. Adelman, *The New World of Patents Created by the Court of Appeals for the Federal Circuit*, 20 U. MICH. J.L. REF. 979, 984-87 (1987) [hereinafter Adelman, *New World*].

20. Pub. L. No. 97-164, 96 Stat. 25.

21. S. REP. No. 275, 97th. Cong., 2d Sess. 2-7 (1982), *reprinted in* 1982 U.S.C.C.A.N. 11, 15-16. The Congress also instituted a new Article I court, the United States Claims Court, to replace the former Court of Claims and to assume its trial jurisdiction. Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, 96 Stat. 25, 27; S. REP. No. 275, 97th. Cong., 2d Sess. 2-7 (1982), *reprinted in* 1982 U.S.C.C.A.N. 11, 12.

22. The United States Court of Appeals for the Federal Circuit shall have

On the other hand, the doctrine of equivalents has always been viewed by the courts as a protection for the patentee against the “unscrupulous copyist” and the like.²⁴ While recognizing some certainty must exist for the public, the Court has recognized that, in the absence of the doctrine, the patentee would be deprived of the benefit of the invention.²⁵

So while the Federal Circuit was created to favor certainty for the public and business interests, the doctrine of equivalents was

exclusive jurisdiction —

(1) of an appeal from a final decision of a district court of the United States . . . if the jurisdiction of that court was based, in whole or in part, on section 1338 [giving exclusive jurisdiction over patent cases to the federal district courts] of this title . . .

(4) of an appeal from a decision of— (A) the Board of Patent Appeals and Interferences of the Patent and Trademark Office . . . (B) the Commissioner of Patents and Trademarks . . . or (C) a district court to which a case was directed pursuant to section 145 or 146 of title 35 [civil action to obtain a patent or in case of an interference].

28 U.S.C. § 1295(a) (1988); *see also* Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, 96 Stat. 25; *Christianson v. Colt. Indus. Operation Corp.*, 486 U.S. 800, 807-13 (1988) (outlining the jurisdiction of the Federal Circuit).

23. *See* Helen W. Nies, *The Federal Circuit: A Court for the Future*, 41 AM. U. L. REV. 571, 571-72 (1991) (Present Chief Judge, Court of Appeals for the Federal Circuit) (stating that the judges of the Federal Circuit are “all dedicated to building a uniform, stable body of precedent as was the mandate of the Federal Circuit”).

Some commentators have praised the actions of the Federal Circuit. Gerald Sobel, *The Court of Appeals for the Federal Circuit: A Fifth Anniversary Look at Its Impact on Patent Law and Litigation*, 37 AM. U. L. REV. 1087, 1091-92 (1988). Others caution that the court may be trying to do too much too quickly, handing down various forms of confusing dicta and straying from the issues involved in the specific case before the court. *Atari, Inc. v. JS & A Group, Inc.*, 747 F.2d 1422, 1441 (Fed. Cir. 1984) (Davis, J., concurring); *Weiner v. Rollform, Inc.*, 744 F.2d 797, 811-12 (Fed. Cir. 1984) (Nichols, J., concurring).

Generally the Supreme Court has left the Federal Circuit to deal with the area of patent law without its constant supervision. Adelman, *New World*, *supra* note 19, at 986. Since 1982, only a very limited number of cases have been taken up on certiorari by the Supreme Court from the Federal Circuit. Those cases which the Court has chosen to deal with have primarily concerned issues of procedure rather than substantive patent law. *Eli Lilly and Co. v. Medtronic, Inc.*, 496 U.S. 661 (1990) (issue: infringement exemption for pharmaceuticals under 35 U.S.C. § 271(e)(1)); *Christianson v. Colt Indus. Operation Corp.*, 486 U.S. 800 (1988) (issue: appellate jurisdiction of the Federal Circuit under 28 U.S.C. §§ 1331, 1338); *Dennison Mfg. v. Panduit Corp.*, 475 U.S. 809 (1986) (issue: standard of review according to FED. R. CRV. P. 52(a) for obviousness under 35 U.S.C. § 103).

24. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607 (1950).

25. *Id.*

created to favor the interests of the patentee. When these two forces, the doctrine of equivalents and the Federal Circuit, collided, there was bound to be some excitement.

III. ILLUSTRATIONS OF THE CONFLICT: THE EVOLUTION OR DEVOLUTION OF THE DOCTRINE OF EQUIVALENTS?

Presently, the patent holder, or patentee, has two possible ways of showing that the accused device infringes the patented device, providing the basis for damages or an injunction, or both. The first way in which the patentee can prove infringement is known as literal infringement.²⁶ Literal infringement is a two-step process.²⁷ First, the court must ascertain the patented device from the claims of the patent.²⁸ Secondly, the accused device is compared against the patented

26. See generally 4 CHISUM, *supra* note 13, ch.16; HARMON, *supra* note 9, § 6.2; RONALD HILDRETH, PATENT LAW: A PRACTITIONER'S GUIDE, chs. 9, 10 (1988); 1 KAYTON, *supra* note 9, at 2-13 to 2-20.

27. E.g., *Palumbo v. Don-Joy Co.*, 762 F.2d 969, 974 (Fed. Cir. 1985); HARMON, *supra* note 9, § 6.2, at 159.

28. E.g., *Mannesmann Demag Corp. v. Engineered Metal Prods. Co.*, 793 F.2d 1279, 1282 (Fed. Cir. 1986); HARMON, *supra* note 9, § 6.2(a)(i), at 159-60. This is a question of law. *Mannesmann*, 793 F.2d at 1282.

The modern claiming system is a peripheral definition system, where the claims are the boundaries of the patent, serving the same purpose as "metes and bounds" serve for grants of real property. *Thomas & Betts Corp. v. Litton Systems, Inc.*, 720 F.2d 1572, 1579 (Fed. Cir. 1983); see also *General Elec. Co. v. Wabash Appliance Corp.*, 304 U.S. 364, 369 (1938) ("The claims 'measure the invention'.") (citing *Continental Paper Bag Co. v. Eastern Paper Bag Co.*, 210 U.S. 405, 419 (1908)). While the patent application can hardly be complete 'without a specification to support the matter claimed, the changes in the claiming system have elevated the position of the claim in ascertaining the boundaries of the patent claim. Therefore, the claims of the application are emphasized and the specifics of the specification are omitted as beyond the scope of this paper.

Under the Patent Act of 1952, the patent application must contain a specification and "one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." Patent Act of 1952, Pub. L. No. 82-593, § 112, 66 Stat. 792, 798. Each claim is then divided into subparts known as elements. The basic claiming structure can best be further explained with reference to a series of illustration claims:

1. A chair that comprises a seat, a back angularly disposed to said seat, and four legs beneath and supporting said seat.

...

2. A chair that comprises a seat, a resilient cushion on said seat, a back angularly disposed to said seat, and four legs beneath and supporting said seat.

...

3. A chair that comprises a seat, a resilient cushion on said seat, a back

device to see if the claims cover the accused device. Only if "every limitation set forth in a claim [is] found in an accused product or process exactly" does the claim cover the accused device.²⁹ If the claims cover the accused device, the claims are said to "read on" the device, generally resulting in literal infringement.³⁰

However, if the court cannot find literal infringement, then the court may resort to a comparison under the doctrine of equivalents.³¹

angularly disposed to said seat, a resilient cushion on the face of said back adjacent to said seat, and four legs beneath and supporting said seat.

ARTHUR SEIDEL, *WHAT THE GENERAL PRACTITIONER SHOULD KNOW ABOUT PATENT LAW AND PRACTICE* § 5.02, at 60 (4th ed. 1984).

Each of the claims listed above claims the invention of a chair with four legs and cushions on the back and seat. The first claim contains three elements (seat, back, and legs), the second contains four elements (seat, back, legs, and seat cushion), and the third contains five elements (seat, back, legs, seat cushion, and back cushion).

In general, the peripheral claiming system operates under a concept known as domination. Under domination, broader claims are said to dominate, or encompass the subject matter of, more narrowly tailored claims. HARMON, *supra* note 9, § 1.1(b), at 5. Furthermore, a broader claim possesses fewer elements than a more narrowly drawn claim as each element represents a limitation placed on the claim. SEIDEL, *supra*, § 5.02, at 60. Therefore, in the illustration claims given above, claim one dominates claim two, and both claims one and two dominate claim three.

Broader claims will encompass narrower claims in the fashion described when open-ended language is used in drafting the patent claims. Generally, there are three types of language which can be used in a claim: open ("compromising"), closed ("consisting of"), and partially closed ("consisting essentially of"). *See generally* 2 CHISUM, *supra* note 13, § 8.06[1][b], at 8-99 to 8-104; 1 KAYTON, *supra* note 9, at 2-13 to 2-17. The latter two types of language are only rarely used, and then only with chemical compounds. 1 KAYTON, *supra* note 9, at 2-16 to 2-17. The closed language can only be encompassed by a claim with identically the same elements as the drafted claim, *Id.* at 2-16, partially closed only by a claim where the additional elements do not interfere with the interaction of the element in the partially closed drafted claim. *Id.* at 2-17.

29. *E.g.*, Johnston v. IVAC Corp., 885 F.2d 1574, 1577 (Fed. Cir. 1989); Stewart-Warner Corp. v. City of Pontiac, 767 F.2d 1563, 1570 (Fed. Cir. 1985); HARMON, *supra* note 9, §§ 6.2(a)(i), 6.2(a)(ii).

30. Generally, when the accused device falls within the literal meaning of the claim of the patent, literal infringement occurs. However, as the doctrine of equivalents is an equitable doctrine, and is used to eliminate any injustice in patent infringement cases, the doctrine of equivalents can be applied to prevent injustice either when literal infringement does not occur but equitably infringement should occur or when literal infringement *does* occur and equitably it should not. Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 339 U.S. 605, 608-09 (1950). When the doctrine is applied to prevent literal infringement, the doctrine is called by another name: the doctrine of reverse equivalents. The doctrine of reverse equivalents applies when the accused product performs the function of the claimed product in a substantially different way. *See, e.g., id.*; SRI Int'l v. Matusushita Elec. Corp. of Am., 775 F.2d 1107, 1123 (Fed. Cir. 1985).

31. Hughes Aircraft Co. v. United States, 717 F.2d 1351, 1361 (Fed. Cir. 1983).

A. PENNWALT CORP. V. DURAND-WAYLAND, INC.: ELEMENT-BY-ELEMENT OR AS-A-WHOLE?

While it did not do much to unify the divided panels, the *en banc* decision of *Pennwalt Corp. v. Durand-Wayland, Inc.*³² is a perhaps one of the best illustrations of how the charge of Congress to create certainty permeates the decisions of the Federal Circuit with respect to the doctrine of equivalents. *Pennwalt* is also a good example of how the search for certainty has only resulted in further confusion of the doctrine of equivalents.

1. *Prelude to the storm*

The modern formulation of the doctrine of equivalents traces its origins to the decision of *Graver Tank & Manufacturing Co. v. Linde Air Products Co.*³³ In *Graver Tank*, an infringement action was

32. 833 F.2d 931 (Fed. Cir. 1987).

33. 339 U.S. 605 (1950). *Graver Tank* varied very little from the opinion that originally gave rise to the doctrine of equivalents, *Winans v. Denmead*, 56 U.S. 330 (1853).

Winans dealt with a patent which claimed the invention of a railroad car in the shape of an inverted conic frustrum topped with a cylinder. *Id.* at 339. The shape of the car was used to equalize the transfer of the load of the material transported, usually coal, to the walls of the railroad car, thereby allowing, among other improvements, an improvement in the ratio of material carried to railroad car weight. *Id.* at 339-40. The accused infringer manufactured a railroad car in the shape of an inverted octagonal frustrum topped with an octagonal box, which showed a similar performance improvement. *Id.* at 340.

The majority of the Court, favoring a liberal interpretation of the claim language, easily found the claimed invention and the manufacture equivalent, although not using these exact terms.

Now, while it is undoubtedly true, that the patentee may so restrict his claim as to cover less than what he invented, or may limit it to one particular form of machine, excluding all other forms, though they also embody his invention, yet such an interpretation should not be put upon his claim . . .

Because specifications are to be construed liberally . . .

Id. at 341 (note the reliance in the central definition system on the specification rather than the claims). The "equivalency test" was given by the majority as "substantially . . . embody the patentee's operation, and thereby obtain the same kind of result as was reached by [the] invention." *Id.* at 344. The test was stated only slightly differently by the dissent, as "substantially on the same principle and in the same mode of operation, accomplish the same result." *Id.* at 346 (Campbell, J., dissenting).

But not only did the precedent call for liberal interpretation of the patent's language, argued the Court, but so did common sense. It was a practical impossibility, concluded the majority, that a perfect conical frustrum could ever be manufactured. *Id.* at 343. Therefore, the patent implicitly also covered reasonable approximations to the conic frustrum, or the patent would be meaningless. *See id.* at 344.

brought by the manufacturer of an electric welding flux. The Graver Tank patent claimed a flux combination of an alkaline earth metal silicate and calcium fluoride.³⁴ Specifically, the Graver Tank flux contained silicates of two earth metals, calcium and magnesium.³⁵ The infringer substituted manganese, which is not an alkaline earth metal, for magnesium.³⁶

While the substitution avoided the question of a literal infringement of the Graver Tank patent,³⁷ the district court and the Supreme Court found enough similarities between the two elements' behavior to justify the holding that the two elements were equivalents of each other.³⁸ The Court started the opinion with a strongly worded paragraph denouncing the piracy which might occur in the absence of such a result.³⁹ The Court noted that without the doctrine, the incentive to disclose, provided by the protection given to the patentee by the patent grant, would be rendered void and concealment would be the norm.⁴⁰

The Court then uttered the oft quoted words: "[A] patentee may invoke [the doctrine of equivalents] to proceed against the producer of a device 'if it performs substantially the same function in substantially the same way to obtain the same result.'"⁴¹ This test for equivalence has become known as the function-way-result test.⁴²

While the application of such a test appeared facially simple, in practice this was not always true. One of the major questions which arose with respect to the doctrine was if the doctrine would be applied element-by-element or to the device as-a-whole. As a result, when the Federal Circuit approached the question, two different camps formed as to the correct method of application.⁴³ Although, according to the

34. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 610 (1950).

35. *Id.*

36. *Id.*

37. *Id.* at 612.

38. *Id.* at 611-12.

39. *Id.* at 607.

40. *Id.*

41. *Id.* at 608 (citing *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30, 42 (1929)).

42. Adelman, *New World*, *supra* note 19, at 996.

43. *Compare Texas Instruments, Inc. v. United States Int'l Trade Comm'n*, 805 F.2d 1558 (Fed. Cir. 1986) (as-a-whole); *Hughes Aircraft Co. v. United States*, 717 F.2d 1351 (Fed. Cir. 1983) (as-a-whole) with *Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d 1528 (Fed. Cir. 1987) (element-by-element); *Lemelson v. United States*, 752 F.2d 1538 (Fed. Cir. 1985) (element-by-element).

rules of procedure in effect in the Federal Circuit, the first decision should have been precedential as to all subsequent panels,⁴⁴ the two lines coexisted for quite some time.

The earlier line of cases, using an as-a-whole analysis, traced its origins to *Hughes Aircraft Co. v. United States*.⁴⁵ In *Hughes*, the federal government was defending a judgement of non-infringement involving a patent held by Hughes claiming a process for stabilizing satellites and unmanned spacecraft.⁴⁶ Under the Hughes patent, the satellite required interactive feedback with a ground station to control velocity and orientation.⁴⁷ The government satellite, while utilizing the same means for velocity and orientation control, did not require feedback with a ground control station.⁴⁸ Rather, the government satellite processed the information internally.⁴⁹

While the court was unable to find literal infringement because the Hughes patent was not written to cover a situation where the control was handled internally,⁵⁰ the court went on to find infringement under the doctrine of equivalents.⁵¹ After citing the *Graver Tank* function-way-result test,⁵² the court determined the critical question would be the way prong of the analysis.⁵³ Noting that *Graver Tank* specified nothing more than "obvious and exact equivalents," the court stated: "The failure to apply the doctrine of equivalents to the

44. Nies, *supra* note 23, at 572.

45. 717 F.2d 1351 (Fed. Cir. 1983).

46. *Hughes Aircraft Co. v. United States*, 717 F.2d 1351, 1352 (Fed. Cir. 1983).

47. *Id.* at 1360.

48. *Id.* at 1360-61.

49. *Id.*

50. *Id.* at 1361.

51. In deciding to apply the doctrine, the court first addressed the pioneer-non-pioneer status of the invention. *Id.* at 1362. The pioneer-non-pioneer status of the patent can effect the range of equivalents assigned to a claim by the court, and is decided before proceeding on with the analysis. Pioneer status is given to those inventions which are "wholly novel." *Boyd-Brake Co. v. Westinghouse*, 170 U.S. 537, 569 (1898). An invention given pioneer status is afforded a greater range of equivalents, while inventions in a crowded art, at the other end of the spectrum, are allowed a lesser range. *Thomas & Betts Corp. v. Litton Systems, Inc.*, 720 F.2d 1572, 1580 (Fed. Cir. 1983); *Hughes*, 717 F.2d at 1362. Some courts and authors have questioned the applicability of this limitation on the modern doctrine of equivalents. *Autogiro Co. of Am. v. United States*, 384 F.2d 391, 401 (Ct. Cl. 1967); 4 CHISUM, *supra* note 13, § 18.04[2](c), at 18-111 to 18-112 n.20.

52. *Hughes*, 717 F.2d at 1361.

53. *Id.* at 1364. In practice, most doctrine of equivalents analyses revolve around the way prong of the analysis. See Adelman, *New World*, *supra* note 19, at 996.

claimed invention as a whole, and the accompanying demand for 'obvious and exact' equivalents of two elements the presence of which would have effectively produced literal infringement, was error."⁵⁴ Because of several overall striking similarities in the way in which the patented device and the accused device operated, the court found equivalency as-a-whole.⁵⁵

This analysis was also followed by the court in *Texas Instruments, Inc. v. United States International Trade Commission*.⁵⁶ Texas Instruments was seeking to prevent certain imported portable calculators from entering the country because the devices allegedly infringed one of Texas Instruments' patents.⁵⁷ Specifically, the calculators allegedly infringed several claims, written in means-plus-function language,⁵⁸ covering the processing and storage of arithmetic functions by the computer.⁵⁹

In recognizing the difference between equivalency as part of the literal infringement analysis under 35 U.S.C. § 112 and the doctrine of equivalents, the court stated:

In the case of literal infringement of a claim containing a "means" clause in terms of section 112 paragraph 6, the accused structure, composition, or process is compared with that described in the specification for performing the claimed function. In the case of infringement under the doctrine of equivalents, the accused structure, composition, or process is compared with the claimed invention as a whole.⁶⁰

54. *Hughes*, 717 F.2d at 1364.

55. *Id.* at 1364-66.

56. 805 F.2d 1558 (Fed. Cir. 1986).

57. *Texas Instruments, Inc. v. United States Int'l Trade Comm'n*, 805 F.2d 1558, 1560-61 (Fed. Cir. 1986).

58. A slightly more sophisticated claiming structure used in the peripheral claiming system, often arising in doctrine of equivalents cases, is the means-plus-function claim. Again, the best way to describe the claiming structure is through the use of illustration claims:

1a. A chair that comprises a seat, a back angularly disposed to said seat, four legs beneath said seat, and screws securing each leg to the seat.

1b. A chair that comprises a seat, a back angularly disposed to said seat, four legs beneath said seat, and a means for securing each legs to the seat.

The first and second claims differ only in the language describing the type of attachment used. However, while the first claim only claims attachment through the use of screws, the second claim claims any equivalent form of attachment (e.g. screws, glue, nails, welding, etc.).

59. *Texas Instruments*, 805 F.2d at 1561.

60. *Id.* at 1571.

At the same time the as-a-whole analysis was evolving in *Hughes* and *Texas Instruments*, a second line of cases began to use an element-by-element approach to the doctrine of equivalents. The seminal case for the element-by-element analysis was *Lemelson v. United States*.⁶¹ In *Lemelson*, an appeal was taken from the dismissal of a cause of action for infringement and a second judgement of non-infringement.⁶² All of the patents involved coordinate measuring machines used in conjunction with automated programmable machine tools.⁶³

Although the court cited *Hughes* for the general proposition that equivalency is a question of fact,⁶⁴ the court adopted a position contrary to the as-a-whole approach adopted in *Hughes*. The court stated: "It is also well settled that each element of a claim is material and essential, and that in order for a court to find infringement, the plaintiff must show the presence of every element or its substantial equivalent in the accused device."⁶⁵ Because the court was unable to find a substantial equivalent for the manipulation means in the accused device, infringement under the doctrine of equivalents was avoided.⁶⁶

The next major step in the evolution of the element-by-element analysis prior to *Pennwalt* came in *Perkin-Elmer Corp. v. Westinghouse Electric Corp.*⁶⁷ While adopting the element-by-element approach set out in *Lemelson*,⁶⁸ this case significantly clarified the element-by-element approach. In *Perkin-Elmer*, the trial court had found that the plaintiff's patent for an electrodeless discharge lamp was not infringed by the accused device under the doctrine of equivalents.⁶⁹ While the plaintiff's patent called for tap coupling, the Westinghouse patent called for loop coupling between the central coil and the power source.⁷⁰

To begin the analysis, *Perkin-Elmer* court interpreted *Hughes* in accordance with the element-by-element analysis used by the court in *Lemelson*. *Perkin-Elmer* read *Hughes* to state that when examining each element of the device, the element must be viewed in the context

61. 752 F.2d 1538 (Fed. Cir. 1985).

62. *Lemelson v. United States*, 752 F.2d 1538, 1541 (Fed. Cir. 1985).

63. *Id.*

64. *Id.* at 1550.

65. *Id.* at 1551.

66. *Id.*

67. 822 F.2d 1528 (Fed. Cir. 1987).

68. *Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d 1528, 1533 (Fed. Cir. 1987).

69. *Id.* at 1529.

70. *Id.* at 1531-32.

of the entire claim.⁷¹ The rule remained, however, that each element is material and essential, and a substantial equivalent of the element must be found in the accused device for equivalency to occur.⁷²

The court also explained specifically what it meant when referring to an "element." Rather than referring to a physical element of the device, the term element was to be read as referring to an element of the claim.⁷³ Therefore, in reality, the court was referring to the limitations contained in the claims, which could refer to physical elements, but could also include descriptive terms.⁷⁴

With two divergent views on the correct application of the doctrine, the clouds gathered for the "final" and definitive word on the matter by the court *en banc*.

2. *The storm breaks*⁷⁵

At issue in *Pennwalt*⁷⁶ were two fruit sorting devices. The patentee's device sorted the fruit by color, or weight, or a combination of the two.⁷⁷ The sorter first weighed the fruit and then produced an electronic signal proportional to the weight of the item.⁷⁸ This electronic signal could then either be compared to a reference signal or combined with a signal produced by the device when the fruit passed through the optical scanner and then the combined signal would be

71. *Id.* at 1532-33. This interpretation is particularly troublesome in light of the remarks made by Judge Davis in the dissent to *Hughes Aircraft Co. v. United States*, 717 F.2d 1351, 1366-68 (Fed. Cir. 1983) (Davis, J., dissenting). Judge Davis specifically found fault with the majority opinion for not giving proper regard to the specific claims of the patent, but instead viewing the patented invention as an entirety. *Id.* at 1366.

72. *Perkin-Elmer*, 822 F.2d at 1533.

73. *Id.* at 1533 n.9.

74. *Id.*

75. See generally ARNOLD, WHITE & DURKEE, 1988-89 PATENT LAW HANDBOOK § 4.02 (1988); 4 CHISUM, *supra* note 13, § 18.04[1], at 18-89 to 18-100; 1 KAYTON, *supra* note 9, at 2-23 to 2-27; Adelman, *New World*, *supra* note 19; Gregory J. Smith, *The Federal Circuit's Modern Doctrine of Equivalents in Patent Infringement*, 29 SANTA CLARA L. REV. 901 (1989); Sobel, *supra* note 23; William E. Eshelman, Comment, *The Doctrine of Equivalents in Patent Law: Post-Pennwalt Developments*, 65 TUL. L. REV. 883 (1991); Emily Lau, Note, *The Test for Patent Infringement Under the Doctrine of Equivalents After Pennwalt v. Durand-Wayland*, 22 IND. L. REV. 849 (1989); Frank S. Molinaro, Note, *Pennwalt Corp. v. Durand-Wayland, Inc. — The Federal Circuit Redefines the Doctrine of Equivalents*, 38 DEPAUL L. REV. 787 (1989).

76. *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931 (Fed. Cir. 1987).

77. *Id.* at 933.

78. *Id.*

compared to a reference signal.⁷⁹ After comparison, a separate signal would be sent to discharge the fruit at the correct time into the correct container.⁸⁰ All of the operations were carried out by "hard-wired" circuitry,⁸¹ including the determination of location, which was done through the use of shift registers.⁸²

The Durand-Wayland devices also sorted the fruit on the basis of weight, or color, or a combination of both.⁸³ The Durand-Wayland devices, however, used software to perform the comparisons of weight and color data stored in the microprocessor⁸⁴ and to track fruit, not by location, but by the position of the fruit's data in the data queues.⁸⁵

The majority used what they termed an element-by-element analysis to find that the Durand-Wayland device did not infringe on the *Pennwalt* patent.⁸⁶ The court quoted from *Lemelson* that "each

79. *Id.*

80. *Id.*

81. Theoretically, all computer designs can be implemented either as hardware, or software, or as a hybrid of hardware and software known as firmware. Pamuela Samuelson, *CONTU Revisited: The Case Against Copyright Protection for Computer Programs in Machine-Readable Form*, 1984 DUKE L.J. 663, 677.

Given a precise definition of a computer, it is always possible to realize the computer in hardware, that is, to construct a hardware device whose machine language is precisely that of the defined computer. . . . In suggesting this possibility we are appealing to the important basic principle behind computer design: Any precisely defined algorithm or data structure may be realized in hardware. Because a computer is simply a collection of algorithms and data structures, we may assume that its hardware realization is possibility, regardless of the complexity of the computer or its associated machine language.

THOMAS PRATT, *PROGRAMMING LANGUAGES: DESIGN AND IMPLEMENTATION* 19 (2d ed. 1984).

Hardware applications often are said to be "hard-wired." This designation is a recognition of the basic difference in implementation of the computer design. Hardware implementations use digital logic circuits connected by wires to produce the desired logic while software implementations exist only as volatile binary information. Duncan Davidson, *Reverse Engineering Software Under Copyright Law: The IBM PC BIOS*, in *OWNING SCIENTIFIC AND TECHNICAL INFORMATION* 147, 147 (Vivian Weil & John Snapper eds., 1989).

82. *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 935 (Fed. Cir. 1987) (indicating means).

83. *Id.* at 933. Durand-Wayland produced two separate devices, which together performed the sorting of the single Pennwalt device. The "Microsizer" only sorted by weight, while the "Microsorter" only sorted by color. *Id.* The two devices could be combined, using the appropriate software, to sort by both color and weight. *Id.*

84. *Id.*

85. *Id.* at 935-36.

86. *Id.* at 935.

element of a claim is material and essential. . . [so that for infringement to occur] the plaintiff must show the presence of every element or its substantial equivalent.’⁸⁷ After majority affirmed the district court’s decision that there was no literal infringement,⁸⁸ the majority compared each of the elements of the patented device to the elements of the Durand-Wayland device and found that several of the patented device or equivalents thereof were missing or “substantially different” than elements in the Durand-Wayland device.⁸⁹ Specifically, the court found that the indicating means were not present in the Durand-Wayland device, and that the data queues were not a substantial equivalent for those means. Therefore, the Durand-Wayland device failed to infringe on the Pennwalt sorter patent.

The dissent, in favor of the as-a-whole analysis,⁹⁰ attacked the majority opinion on two separate grounds. The dissent argued that the majority opinion effectively overruled *sub silentio* the *Graver Tank* opinion, which the Federal Circuit did not have the power to do as an inferior court.⁹¹ In addition, the dissent argued that the majority opinion effectively but erroneously overruled prior Federal Circuit precedent.⁹² The dissent described the new analytic framework constructed by the majority as being nothing more than a rework of

87. *Id.*

88. *Id.* at 934

89. *Id.* at 935-36.

90. *Id.* at 939 (Bennett, J., dissenting).

91. *Id.* (Bennett, J., dissenting).

92. *Id.* (Bennett, J., dissenting).

Although the dissenters in *Pennwalt* were convinced that *Hughes* was in fact an as-a-whole application, this interpretation does not necessarily follow. In *Perkin-Elmer*, Chief Justice Markey, who authored the *Hughes* opinion, stated that under *Hughes* the court may use an element-by-element analysis as long as each element is viewed in context with the entire claim. *Perkin-Elmer Corp. v. Westinghouse Elec. Co.*, 822 F.2d 1528, 1532-35 nn.3-5 (Fed. Cir. 1987); Smith, *supra* note 75, at 901.

In addition, the second case in the line relied upon by the *Pennwalt* dissent, *Texas Instruments*, was criticized at the time of the decision as introducing a totally new analysis into the doctrine of equivalents. See William Nieman, *The Federal Circuit Resolves Ambiguities in the Doctrine of Equivalents*, 70 J. PAT. OFF. SOC’Y 153, 154-55 (1988).

The *Texas Instruments* opinion was greeted by a firestorm of criticism from the patent bar The [American Intellectual Property Law Association] interpreted the *Texas Instruments* opinion as signalling a rejection of an element-by-element infringement analysis under Section 112(6), or the doctrine of equivalents in favor of viewing the claimed invention ‘as a whole’ divorced from adherence to claim language.

Id. Alternatively, some authors have suggested that implicit in *Texas Instruments* is an element-by-element analysis. Lau, *supra* note 75, at 868.

the literal infringement analysis already rejected by the court prior to reaching the doctrine of equivalents analysis.⁹³ The dissent also was at odds with what it described as a return to the viewpoint of the dissent of *Graver Tank*, a favoring of the protection of the public over the interests of the inventor.⁹⁴

3. "[F]ull of sound and fury, signifying nothing."⁹⁵

The element-by-element approach of the majority in *Pennwalt* added certainty of procedure for the court and certainty of claims for the public. On its face, it would appear that the absence of any element in the accused device which was claimed in the patent would avoid the doctrine of equivalents. In fact, the court has been quick to re-emphasize this point: "It is now settled that each element of the claim is material and essential and, in order to find infringement, the patent owner must show the presence of every element or its substantial equivalent in the accused device."⁹⁶

But, as is the case with many of the analytical solutions proposed to restrict the doctrine of equivalents, the element-by-element analysis itself has been limited in its effectiveness by the taint of equity arising from the origins of the doctrine.⁹⁷ This taint has expressed itself not only in slight ameliorations of the strict element-by-element framework,⁹⁸ but also in open opposition to the applicability of the *Pennwalt* analysis.⁹⁹

93. *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 940 (Fed. Cir. 1987) (Bennett, J., dissenting).

94. *Id.* at 945-48 (Bennett, J., dissenting).

95. WILLIAM SHAKESPEARE, *HAMLET* act V, sc. 5.

96. *Texas Instruments, Inc. v. United States Int'l Trade Comm'n*, 846 F.2d 1369, 1372 (Fed. Cir. 1988) (Nies, J., dissenting).

97. Maxim H. Waldbaum & David Sipiara, *Pennwalt Redux: Certainty v. Procrustean Bed*, 19 AM. INTEL. PROP. L. ASSOC. Q.J. 237, 239 (1991).

Reacting to what may have been perceived to be an excessively flexible application of the doctrine of equivalents in prior Federal Circuit decisions, the *Pennwalt* majority eschewed flexibility in favor of certainty. Ironically, however, the consequence has been an *increase* rather than a decrease in the uncertainty attendant to the application of the doctrine of equivalents

Id.

98. *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251 (Fed. Cir. 1989).

99. *See Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 939 F.2d 1540, 1544 (Fed. Cir. 1991) ("Moreover, the district court's opinion does not indicate that it failed to consider the operation of the invention and the accused deflector as a whole."); *Allied Corp. v. United States Int'l Trade Comm'n*, 850 F.2d 1573, 1581 (Fed. Cir.

One of the more unusual ameliorations of the *Pennwalt* analysis came in *Corning Glass Works v. Sumitomo Electric U.S.A., Inc.*¹⁰⁰ The trial court had found that the Sumitomo optical waveguide fibers infringed Corning Glass' patent under the doctrine of equivalents.¹⁰¹ The Corning Glass patent claimed a positively doped core to provide a difference in the index of refraction between the core and the cladding layer.¹⁰² The Sumitomo fibers used a negative dopant in the cladding to vary the index.¹⁰³

Although the court restated the element-by-element analysis,¹⁰⁴ the court did not mechanically follow the expected analysis. The expected analysis would require every element to be represented by a substantial equivalent in the accused device. If an element, or limitation, is missing, equivalence cannot be found. In fact, Sumitomo argued that the lack of an equivalent to the positive dopant in the core of the fiber prevented a finding of equivalence.¹⁰⁵

While the court agreed that an element could be interpreted either as a limitation or series of limitations, the court disagreed that the important element in the Corning Glass patent was "missing."¹⁰⁶ To be "missing" the limitation did not necessarily have to be found in

1988) ("ITC's opinion evidences that it considered the effect of the lone difference between the HML and VAC processes and the patented process on the working of those processes as wholes. . . . That was not error."); *Andrew Corp. v. Gabriel Elec., Inc.*, 847 F.2d 819, 825 (Fed. Cir. 1988) ("Relying on the totality of similarities between the accused device and the claimed structure . . . the district court found that the accused antennas perform the same function in substantially the same way to achieve substantially the same result . . . No clear error having been shown, the district court's finding of infringement is affirmed."). *But see, e.g.*, *Becton Dickinson & Co. v. C.R. Bard, Inc.*, 922 F.2d 792, 798 (Fed. Cir. 1990) ("But whether necessary or not, after issuance, all limitations in a claim are material and must be met exactly or equivalently in an accused device to find the accused device works in the same way."); *Labounty Mfg., Inc. v. United States Int'l Trade Comm'n*, 867 F.2d 1572, 1577 (Fed. Cir. 1989) ("On this point our precedent instructs that substantially the same way is shown if every limitation of a claim is satisfied either exactly or by a substantial equivalent in the accused device.").

100. 868 F.2d 1251 (Fed. Cir. 1989); *see also Intel Corp. v. United States Int'l Trade Comm'n*, 946 F.2d 821, 832 (Fed. Cir. 1991) (holding one-to-one correspondence not necessary as function not performed by corresponding component existing "somewhere in the device").

101. *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1253 (Fed. Cir. 1989).

102. *Id.* at 1256.

103. *Id.* at 1259.

104. *Id.*

105. *Id.*

106. *Id.*

the corresponding component, but rather "somewhere in the accused device."¹⁰⁷

This "enlightened" version of the element-by-element analysis finds some support in other decisions of the court. However, these decisions do not mince words and merely ameliorate the analytical approach. One example is *Sun Studs, Inc. v. ATA Equipment Leasing, Inc.*¹⁰⁸ In *Sun Studs*, the court again stated that "[o]ne-to-one correspondence of components is not required."¹⁰⁹ However, instead of stating that the analysis applied should be considered as element-by-element, the court clearly stated that under this analysis: "The claimed and accused devices must be viewed and evaluated as a whole."¹¹⁰

Furthermore, the court in *Sun Studs* is not alone. Several panels of the court have taken the opportunity to return to the as-a-whole analysis when dealing with patent infringement under the doctrine of equivalents.¹¹¹ While some of the opinions can possibly be reconciled with *Pennwalt* by interpreting the as-a-whole language as referring to taking the limitation in context of the claim, other decisions rely exclusively on a totality of the similarities between the accused and patented devices.

The resistance of members of the court to the *en banc* decision of the court in *Pennwalt* is merely indicative of the greater problem of the court creating confusion through their attempts to create certainty in doctrine of equivalents.¹¹² While the *Pennwalt* analysis

107. *Id.*

108. 872 F.2d 978 (Fed. Cir. 1989).

109. *Sun Studs, Inc. v. ATA Equipment Leasing, Inc.*, 872 F.2d 978, 989 (Fed. Cir. 1989).

110. *Id.*

111. See, e.g., *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 939 F.2d 1540, 1544 (Fed. Cir. 1991) ("Moreover, the district court's opinion does not indicate that it failed to consider the operation of the invention and the accused deflector as a whole."); *Allied Corp. v. United States Int'l Trade Comm'n*, 850 F.2d 1573, 1581 (Fed. Cir. 1988) ("ITC's [International Trade Commission] opinion evidences that it considered the effect of the lone difference between the HML and VAC processes and the patented process on the working of those processes as wholes."); *Andrew Corp. v. Gabriel Elec., Inc.*, 847 F.2d 819, 825 (Fed. Cir. 1988) ("Relying on the totality of similarities between the accused device and the claimed structure . . . the district court found that the accused antennas perform the same function in substantially the same way to achieve substantially the same result No clear error having been shown, the district court's finding of infringement is affirmed.').

112. In fact, some authors have advocated presenting both analyses to the court to be certain of meeting the burden of persuasion. See *Lau, supra* note 75, at 874-78.

provides one illustration of the problem, it is by no means the only illustration.

B. *WILSON SPORTING GOODS AND THE HYPOTHETICAL CLAIM*¹¹³

*Wilson Sporting Goods Co. v. David Geoffrey & Associates*¹¹⁴ involved the design of golf balls. As the United States Golf Association strictly controls many of the other parameters of the golf ball, manufacturers have done a great deal of research on correct dimple placement to improve the golf ball's performance (height and distance).¹¹⁵ Wilson's researcher divided the golf ball's surface into an imaginary "icosahedron," composed of twenty equilateral triangles.¹¹⁶ These triangles were further divided by six circles which encompass the ball and were known as "great circles."¹¹⁷ The Wilson patent claimed an arrangement where the dimples were placed so that none touched a great circle.¹¹⁸

Dunlop, a competing manufacturer, produced a golf ball with a slightly different placement of dimples such that the great circles were not entirely dimple free.¹¹⁹ Dunlop suggested that if the doctrine of equivalents was used to find infringement on the Wilson patent, then the doctrine would be limited by prior art, in the form of a United States patent assigned to Uniroyal, another golf ball manufacturer, and a British patent issued to Pugh, a private inventor.¹²⁰

Judge Rich, part of the majority in *Pennwalt*, introduced in *Wilson* a new analysis for analyzing prior art as a limitation on the doctrine of equivalents. Under the "hypothetical claim" analysis, the

113. See generally PATRICIA BRANTLEY, 1991-92 PATENT LAW HANDBOOK § 4.03[1] (1991); 4 CHISUM, *supra* note 13, § 18.04[2][d]; HARMON, *supra* note 9, § 6.3(a)(iii); Timothy Malloy, Infringement Analysis: Claims Dependent on Non-infringed Claims (Apr. 4, 1991) (written for the IPLAC Doctrine of Equivalents Seminar); Henrik D. Parker, *Doctrine of Equivalents Analysis After Wilson Sporting Goods: The Hypothetical Claim Hydra*, 18 AM. INTEL. PROP. L. ASSOC. Q.J. 262 (1990); Lewis Steadman, *Doctrine of Equivalents Boundary Line* (Apr. 4, 1991) (written for the IPLAC Doctrine of Equivalents Seminar); John Witherspoon, *Wilson Sporting Goods: Clarification or Confusion*, 42 PAT. TRADEMARK COPYRIGHT J. 217 (1991).

114. 904 F.2d 677 (Fed. Cir. 1990).

115. *Wilson Sporting Goods Co. v. David Geoffery & Assoc.*, 904 F.2d 677, 678-79 (Fed. Cir. 1990).

116. *Id.* at 679.

117. *Id.*

118. *Id.*

119. *Id.* at 681.

120. *Id.* at 680-81.

patentee is to present to the court a "hypothetical claim" which literally covers the accused device.¹²¹ The plaintiff-patentee then has the burden of proving the validity of the hypothetical claim to the court.¹²² The hypothetical claim does not get the benefit of a presumption of the validity which is normally given to the previously prosecuted claim because the claim is treated as if the claim was being submitted to the Patent Office.¹²³ If the hypothetical claim would not be allowed by the Patent Office, in the court's opinion, then the prior art acts as a bar to the doctrine of equivalents; if the claim would be allowed, then the prior art does not act as a bar to the doctrine of equivalents.¹²⁴

At the outset, *Wilson* would seem to provide a concrete framework for handling a prior art limitation under the doctrine of equivalents, improving the certainty of the doctrine overall by improving the certainty of this limitation. However, as was the case after *Pennwalt*, the Federal Circuit has modified the hypothetical claim analysis in several ways which merely add confusion to the doctrine. The Federal Circuit has attempted, in varying degrees of clarity, to explain the limitations, if any, on the patentability rules applicable to the hypothetical claim. In addition, the Federal Circuit has made statements which intimate that the "hypothetical claim" analysis may not be mandatory in every doctrine of equivalents application.

Although *Wilson* stated that the "hypothetical claim" analysis would allow the "use of traditional patentability rules," the court failed to be more specific as to which rules were to be included as "traditional" (e.g. obviousness, utility, novelty, statutory bars).¹²⁵ In *Key Manufacturing Group, Inc. v. Microdot, Inc.*,¹²⁶ the court explained that the *Wilson* hypothetical claim analysis "does not envision application of a full blown patentability analysis."¹²⁷ While "full-blown patentability analysis" does not seem to limit the allowable rules any more significantly than *Wilson*, some direction may be

121. *Id.* at 684.

122. *Id.* at 685.

123. *Id.*

124. *Id.* at 684.

125. *Id.*

126. 925 F.2d 1444 (Fed. Cir. 1991). Both Key and Microdot manufactured capped wheel nuts. *Key Mfg. Group, Inc. v. Microdot, Inc.*, 925 F.2d 1444, 1445 (Fed. Cir. 1991). The top of the Microdot wheel nut had a fifteen degree tapered surface, while the Key wheel nut had no taper on its top surface. *Id.* at 1447. There were also differences in the amount of contact between the decorative cap and the nut. *Id.*

127. *Id.* at 1449.

gleaned from the fact that *Key Manufacturing Group* only used the obviousness test¹²⁸ to show the "hypothetical claim" was barred by the prior art.¹²⁹

The court applied a slightly different set of rules in *We Care, Inc. v. Ultra-Mark Int'l Corp.*¹³⁰ In *We Care*, the court specifically referred to anticipation¹³¹ as well as obviousness as applicable to the

128. 35 U.S.C. § 103 (1988).

The requirement of non-obviousness as a condition for patentability is contained in 35 U.S.C. § 103. The test adopted by both the Patent Office and the Federal Circuit, see 1 KAYTON, *supra* note 9, at 5-16 to 5-25, was handed down by the Supreme Court in *Graham v. John Deere Co.*, 383 U.S. 1 (1966). Basically, there are four factual inquiries to the *Graham* non-obviousness test:

[T]he scope of the prior art and the content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved . . . Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origins of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries have relevancy.

Id. at 17-18.

A complete discussion of nonobviousness is beyond the scope of this paper, but one aspect of the Federal Circuit's formulation should be addressed. Of the four factual findings required by the court, the last finding on secondary considerations has grown to be the most important item of evidence for the resolution of the question of nonobviousness. See, e.g., *Simons Fastener Corp. v. Illinois Tool Works*, 739 F.2d 1573, 1575 (Fed. Cir. 1984). In addition to the three types of secondary evidence mentioned by the Court in *Graham*, other types include: licenses, copies of invention by others, unexpected results, skepticism, and independent development. HARMON, *supra* note 9, § 4.6(c), at 102-06; 1 KAYTON, *supra* note 9, at 5-17 to 5-18.

129. *Key Manufacturing Group*, 925 F.2d at 1449; see *Insta-Foam Prods. v. Universal Foam Sys.*, 906 F.2d 698, 704 (Fed. Cir. 1990).

130. 930 F.2d 1567 (Fed. Cir. 1990). *We Care* involved electrical outlet safety devices which limited access to the outlet when not in use. The *We Care* device used an outlet cover designed in two plates with spring-loaded doors in the back of the front plate to prevent access when not in use. *We Care Inc. v. Ultra-Mark Int'l Corp.*, 930 F.2d 1567, 1568 (Fed. Cir. 1990). Soon after negotiations to license the device to Ultra-Mark were terminated, *We Care, Inc. v. Ultra-Mark Int'l Corp.*, 741 F. Supp. 743, 746 (D. Minn. 1989), *We Care* found that Ultra-Mark had begun to sell a device very similar to the *We Care* device, designed with two plates and spring-loaded doors in the front of the back plate. 741 F. Supp. at 748.

131. Novelty and the statutory bars are closely-related, anticipation-based concepts found in 35 U.S.C. § 102 (1988). Both novelty and the statutory bars only apply if the invention exists in one of the forms listed (publication, patent, use, or on sale). That is, the reference form must be exactly the invention claimed. 1 KAYTON, *supra* note 9, at 5-1. This identical reference is referred to as an "anticipatory" reference. HARMON, *supra* note 9, § 3.2, at 43-44 ("Under modern decisions,

prior art limitation analysis.¹³²

Furthermore, the court also added some interesting language to two of its post-*Wilson* opinions which seemed to question the applicability of the "hypothetical claim" analysis in all cases. In *Key Manufacturing Group*, the court stated that the hypothetical claim is "not obligatory in every doctrine of equivalents determination."¹³³ However, the court then proceeded to apply the hypothetical claim analysis and never specified criteria when the doctrine would and would not be applicable. Later, in *Jurgens v. McKasy*,¹³⁴ the court

anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference."); 1 KAYTON, *supra* note 9, at 5-1. These objections to the validity of claims are rather rare. HARMON, *supra* note 9, § 3.2, at 43.

Novelty prevents the issuance of a patent to the inventor if the invention has been published, patented, or used prior to the date of invention. Section 102(a) reads: [T]he invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent

35 U.S.C. § 102(a) (1988).

The statutory bars prevent the issuance of a patent if the invention has been published, patented, used or sold by the inventor more than one year prior to the effective filing date. Section 102(b) reads:

[T]he invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States

35 U.S.C. § 102(b) (1988). The group of statutory bars in section 102 are often referred to as "loss of right."

Also included under the heading of statutory bar by some authors are the bars contained in § 102(c) and § 102(d). See 1 CHISUM, *supra* note 13, § 3.01, at 3-5; HARMON, *supra* note 9, § 3.5, at 70-71. Section 102(c) bars the issuance of the patent if the inventor has abandoned the application. 35 U.S.C. § 102(c) (1988). The applicant can abandon the application expressly, see 3 CHISUM, *supra* note 13, § 11.03[2][b], at 11-67, through failure to respond to the Patent Office in a timely fashion, see 3 CHISUM, *supra* note 13, § 11.03[2][b], at 11-59, or by failing to claim the subject matter disclosed in the specification. See HILDRETH, *supra* note 26, at 63; 1 KAYTON, *supra* note 9, at 4-20 to 4-22. Section 102(d) bars the issuance of a patent if the inventor obtains a patent in a foreign country. 35 U.S.C. § 102(d) (1988).

The remaining sections of 102 are additional miscellaneous reasons for denying the application, including: invention disclosed in United States patent of another, 35 U.S.C. § 102(e) (1988); only inventor can patent invention, 35 U.S.C. § 102(f) (1988); and no one may patent the invention of another, 35 U.S.C. § 102(g) (1988).

If any of the elements are missing in the reference, the reference cannot be used under § 102, but may be used under § 103. HARMON, *supra* note 9, § 3.2, at 43.

132. *We Care*, 930 F.2d at 1571. Although this case cites *Wilson Sporting Goods* as precedent, the opinion does not mention the hypothetical claim analysis.

133. *Key Mfg. Group, Inc. v. Microdot, Inc.*, 925 F.2d 1444, 1449 (Fed. Cir. 1991).

134. 927 F.2d 1552 (Fed. Cir. 1991). *Jurgens* licensed a patent for a windsock

suggested "it may be helpful to 'conceptualize' the prior art limitation on the doctrine of equivalents by envisioning a hypothetical claim. . . ." ¹³⁵ But again, as in *Key Manufacturing Group*, the court proceeded to apply the hypothetical claim analysis as in *Jurgens* as if it were mandatory. ¹³⁶

IV. HOW THE JUDICIAL RESOLUTION HAS FAILED

Although each of the previously discussed changes to the doctrine of equivalents will have profound effects on the application and understanding of the doctrine, perhaps the most interesting changes to discuss are the changes which may come about in the wake of *Wilson*. These effects can be generally divided into changes in patent trial procedure and patent practice. Furthermore, no discussion of the changes caused by doctrine would be complete without mentioning how altering the doctrine has unnecessarily altered allied patent law doctrines in general.

A. COMPLICATION OF PATENT PRACTICE

If the court finds in a given case that the alleged infringement was willful, then the damages awarded to the patentee can be tripled ¹³⁷ and reasonable attorney fees can be awarded. ¹³⁸ To avoid willful infringement, the court must find that, under all the circumstances, "a

duck decoy, which consisted of a goose head, stake and windsock body bag, from the inventor Shjeflo. *Jurgens v. McKasy*, 927 F.2d 1552, 1555 (Fed. Cir. 1991). McKasy was a distributor of a similar windsock duck decoy. *Id.* at 1556. The design of the later duck decoy was created by tracing the body bag of the *Jurgens* decoy, obtained at a trade fair, and making modifications to the shape of the bag. *Id.*

135. *Id.* at 1561 (emphasis added).

136. *Id.*; *Key Mfg. Group, Inc. v. Microdot, Inc.*, 925 F.2d 1444, 1449 (Fed. Cir. 1991).

137. 35 U.S.C. § 284, ¶ 2 (1988) ("In either event the court may increase the damages up to three times the amount found or assessed").

138. 35 U.S.C. § 285 (1988) ("The court in exceptional cases may award reasonable attorney fees to the prevailing party."). Willful infringement qualifies the case as an "exceptional" case. *Kloster Speedsteel AB v. Crucible, Inc.*, 793 F.2d 1565, 1580 (Fed. Cir. 1986).

In a patent infringement case, the attorneys fees can be quite substantial. Patent attorneys characteristically charge from 150 to 300 dollars an hour. It is not uncommon to spend one or two hundred thousand dollars on attorneys fees for one day of trial work. See 1 L.J. KUTTEN, *COMPUTER SOFTWARE* 3-47 to 3-48 (1992) ("Patent litigation incurs substantially higher attorney fees than other types of litigation. . . . As a result, even a small case can generate more than \$200,000 in attorney fees.").

reasonable person would prudently conduct himself with any confidence that a court might hold the patent invalid" or not infringed.¹³⁹

One way to satisfy this standard is to obtain an attorney's opinion on the possibility of infringement, although this is "not dispositive."¹⁴⁰ Nevertheless, prior to the use or manufacture of a new process or product, an infringement opinion is usually sought to protect the new user or infringer from charges of willful infringement at trial.¹⁴¹

If the *Wilson* hypothetical claim analysis is viewed as mandatory, the patent attorney is placed in a difficult position. It is necessary to investigate the hypothetical claim analysis prior to use or production to protect the client from charges of willful infringement.¹⁴² As it is presently unclear what limitations are placed on the hypothetical claim other than it must encompass the infringer's product or process,¹⁴³ the attorney is under a considerable burden. Perhaps Judge Learned Hand expressed the dilemma the best when he said, "[I]t would result in an intolerable burden on the public, which would be charged not only with a knowledge of the prior art at the time of the application and often earlier, but with a right conclusion as to how much room was left for invention, seldom an easy question."¹⁴⁴

B. COMPLICATION OF PATENT TRIAL PROCEDURE

Normally, the trial procedure involved in patent litigation is a very complicated affair. The complex nature of the procedure is caused in part by the complex series of presumptions and burdens of proof present at trial.

As in any case, the plaintiff has the option of presenting evidence first. However, the patent, on which the entire case is based, is presumed valid¹⁴⁵ unless the alleged infringer can prove otherwise by

139. *Central Soya Co. v. Geo. A. Hormel & Co.*, 723 F.2d 1573, 1576-77 (1983).

140. *Id.* at 1577.

141. *Underwater Devices, Inc. v. Morrison-Knudsen Co.*, 717 F.2d 1380, 1390 (Fed. Cir. 1983).

142. *STEADMAN*, *supra* note 103, at 113. However, if the hypothetical claim is only a device, a tool, for use at trial to help the trier of fact on the issue of equivalents encompassing the prior art, then the attorney does not have to include the claim analysis in the opinion as a boundary on infringement and can avoid this dilemma.

143. *Wilson Sporting Goods Co. v. David Geoffrey & Assoc.*, 904 F.2d 677, 684 (Fed. Cir. 1990).

144. *Claude Neon Lights v. E. Machietti & Son*, 36 F.2d 574, 576 (2d Cir. 1929).

145. 35 U.S.C. § 282 (1988) ("A patent shall be presumed valid.").

a "clear and convincing" showing of evidence.¹⁴⁶ Nonetheless, the patentee often presents evidence showing the validity of the patent during the patentee's case-in-chief. This showing is made at the same time the patentee is attempting to prove infringement, which must be shown by the patentee according to a "preponderance of the evidence."¹⁴⁷ As a result, the trier of fact often becomes confused as to who must carry the burden of proving validity and what the correct standard for proving validity should be.¹⁴⁸

With the addition of a "hypothetical claim," further complications may arise in the procedure of a patent infringement case. Unlike the claims of the patent, which are afforded the presumption of validity, the hypothetical claims are not afforded a presumption of validity and the burden of proof is placed on the patentee as part of his showing of infringement.¹⁴⁹ If the attorney did not have a sufficiently difficult responsibility in instructing the trier of fact to correctly distinguish the burdens and presumptions as to validity previously, the addition of these other "claims," which may draw in large part from the claims of the patent, may make a fair trial impossible.¹⁵⁰

C. COMPLICATION OF ALLIED PATENT DOCTRINES

Furthermore, the Federal Circuit's attempts to restrict the application of the doctrine of equivalents have not only complicated the application of the doctrine of equivalents, but the restrictions have also complicated the related doctrine of prosecution history, or file wrapper,¹⁵¹ estoppel. Prosecution history estoppel can act as a limit on the doctrine of equivalents by preventing the patentee from asserting certain equivalents as a result of the patentee's actions during

146. *E.g.*, *Avia Group Int'l Inc. v. L.A. Gear California Inc.*, 853 F.2d 1557, 1562 (Fed. Cir. 1988).

147. *Mannesmann Demag Corp. v. Engineered Metal Prods. Co.*, 793 F.2d 1279, 1282 (Fed. Cir. 1986).

148. *See Orthokinetics, Inc. v. Safety Travel Chair, Inc.*, 806 F.2d 1565, 1571 (Fed. Cir. 1986) ("The resulting erroneous but clear impression that patentees bear a burden of 'proving validity' has frequently resulted in cluttered records, irrelevant detours, undue burdens on the judicial process, and unnecessary work for the trial court."). Validity and infringement are two separate questions for the trier of fact and should be treated separately. *See generally* Witherspoon, *supra* note 113.

149. *Wilson Sporting Goods Co. v. David Geoffrey & Assoc.*, 904 F.2d 677, 685 (Fed. Cir. 1990).

150. *Parker*, *supra* note 113, at 276-78.

151. As the prosecution history is contained in the file wrapper, the estoppel is often referred to as file wrapper estoppel. For an example of a file wrapper, see SEIDEL, *supra* note 28, Appendix A.

the prosecution of the patent.¹⁵² In general, once the patentee concedes a certain claim or amends the claim to circumvent the limitation on the patent grant posed by the prior art cited by the Examiner, the patentee is estopped from asserting that an equivalent reading on the original claim is valid under the doctrine of equivalents.¹⁵³ Using equity to limit equity,¹⁵⁴ the Federal Circuit's application of prosecution history estoppel has become ensnared and confused in the Federal Circuit's attempts to limit the doctrine of equivalents.¹⁵⁵

Although the Federal Circuit would like as broad an application of this doctrine as possible, the Federal Circuit has been less than clear as to whether the estoppel applies to all amendments and remarks equally. In *Hughes*, the Federal Circuit took a liberal attitude towards the level of estoppel, stating: "Amendments may be of different types and may serve different functions. Depending on the nature and purpose of an amendment, it may have a limiting effect within a spectrum ranging from great to small to zero."¹⁵⁶ Furthermore, as the court explained in a later case, "In cases where a patentee's amendments were not required in a response to an examiner's rejection or critical to the allowance of the claims, no estoppel has been found. . . . Similarly, estoppel is not necessarily created by an amendment designed only to remove a § 112 indefiniteness rejection."¹⁵⁷

Other Federal Circuit cases have not evidenced the same liberal attitude towards the application of this limitation. On one occasion, the Federal Circuit specifically declined to undertake "speculative inquiries" into matters beyond the file wrapper in deciding for or against estoppel.¹⁵⁸ However, the Federal Circuit later explained that this hesitancy to go beyond the scope of the file wrapper is "performed

152. *Hughes Aircraft Co. v. United States*, 717 F.2d 1351, 1362 (Fed. Cir. 1983).

153. *Id.* ("The estoppel applies to claim amendments . . . and to arguments submitted to obtain the patent . . .").

154. *Charles Greiner & Co. v. Mari-Med Mfg., Inc.*, 962 F.2d 1031, 1036 (Fed. Cir. 1992) ("As early as 1880, the Supreme Court enunciated this estoppel rule to limit the scope of the doctrine of equivalents . . . This rule, as well as careful confinement of the doctrine of equivalents to its proper equitable role, promotes certainty and clarity in determining the scope of patent rights.").

155. See *Adelman, New World*, *supra* note 19, at 998 ("This formalistic approach to prosecution history estoppel limits the use of equivalents, but does so in a random, unfocused manner.").

156. *Hughes*, 717 F.2d at 1363.

157. *Mannesmann Demag Corp. v. Engineered Metal Prod.*, 793 F.2d 1279, 1285 (Fed. Cir. 1986).

158. *Kitzenbaum v. Deere & Co.*, 741 F.2d 383, 389 (Fed. Cir. 1984), *cert. denied*, 470 U.S. 1004 (1985).

as a legal matter on a case-by-case basis," thus limiting these holdings to the facts of the particular cases.¹⁵⁹

V. LEGISLATIVE RESOLUTION OF THE PROBLEM: THE REISSUE PROCESS¹⁶⁰

While the debate in the Federal Circuit rages on, the proponents of certainty would appear to be nibbling away at the scope of the doctrine with each successive opinion, subject only to the additional confusion caused by the somewhat contradictory opinions produced by different panels of the Federal Circuit. Despite the confusion, the actions of the Federal Circuit do exhibit a central truth, that the time has come to eliminate the expansive role sought for the doctrine of equivalents as presented in *Graver Tank*.

As the times change, so does the law. The patent claiming structures which existed when the doctrine was first created no longer exist. The old central claiming system, so intricately interwoven and reliant on judicial interpretation for its very vitality,¹⁶¹ has given way

159. *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 871 n.7 (Fed. Cir. 1985). *But see* Smith, *supra* note 75, at 924-25 (reasoning the differences in decisions is not so much the facts of the cases, but the pioneer-non-pioneer status of the patents involved).

160. *See generally* 4 CHISUM, *supra* note 13, ch.15; HARMON, *supra* note 9, § 13.3; 5 KAYTON, *supra* note 9, at 22-37 to 22-97.

161. Prior to 1836, the United States patent system was administered without any form of examination by the government. WILLIAM ROBINSON, *THE LAW OF PATENTS* 81 (1890). *See generally* 2 CHISUM, *supra* note 13, § 8.02, at 8-5; Molinaro, *supra* note 75, at 791 n.34 (containing a brief historical summary of the patent Acts from 1790 to the present). The original Patent Act only required the applicant to submit a specification. Act of 1790, ch. 7, 1 Stat. 109, 109-110 (1848). In the specification, the applicant was required to describe and explain the invention in sufficient detail as to distinguish the invention from things in existence and use prior to the invention and to enable one skilled in the art to construct and use the invention. *Id.* The patent, as a form of intellectual property, was substantially valueless as the validity of the grant could only be ascertained through a "tedious, expensive, and uncertain . . . private inquiry." *Id.*

The Patent Act of 1836, ch. 357, 5 Stat. 117 (1856), brought about a dramatic change in the patent system. A tribunal, the Patent and Trademark Office, was created to examine all applications submitted to the Patent Office for "new and useful discoveries, inventions, and improvements . . ." *Id.* at 117-18. This change increased the value of the patents as their validity was ascertainable through public rather than private inquiry, ROBINSON, *supra*, at 82, but the changes did little to increase the definiteness of the borders of the patent grant.

However, the Patent Act of 1836, unlike the Patent Act of 1952, Pub. L. No. 82-593, 66 Stat. 792, did not contain a requirement that the patent application

to a new peripheral claiming system. Unlike central claiming, Congress has sought through peripheral claiming to put the responsibility on the inventor to protect the invention through well-prepared legal representation outside of the judicial system and within the Patent Office.

The idea of change for the doctrine of equivalents is not new. The dissent in *Winans* strongly disagreed with the majority's liberal view towards infringement by equivalence. The dissent, like the later dissent in *Graver Tank*, felt that to interpret the language of the patent to include equivalents would undermine the claiming system

contain, "one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." *Id.* § 112, at 798 (compared with "[H]e shall particularly specify and point out the part, improvement or combination, which he claims as his own invention or discovery." Patent Act of 1836, ch. 357, 5 Stat. 117, 119 (1856).). Rather, claims were first viewed as guides which could be used to help ascertain the patentee's invention, detailed in the specification. 2 CHISUM, *supra* note 13, § 8.02[2], at 8-7; Steadman, *supra* note 113, at 1-2. This claiming method, where the claims were written as guides to the interpretation of the limiting specification rather than boundaries in and of themselves, was known as the central definition system.

The reliance on the specification in the claims was indicated through the use of the phrase "as herein described." Examples of central definition system claims are:

What I claim as my invention, and desire to secure by letter patent, is the application to steam boilers of a fusible alloy, which will melt at a given temperature, and allow the steam to escape, as herein described; using for that purpose any metallic compound which will produce the intended effect.

Steadman, *supra* note 113, at 2 n.1 (copied from the Patent Office form book of 1839).

What I claim as my invention, and desire to secure by letters-patent, is making the body of a car for the transportation of coal, &c., in the form of a frustrum of a cone, substantially as herein described, whereby the force exerted by the weight of the load presses equally in all directions, and does not tend to change the form thereof, so that every part resists in equal proportion, and by which, also, the lower part is so reduced as to pass down within the truck frame and between the axles, to lower the centre [sic] of gravity of the load without diminishing the capacity of the car as described.

Winans v. Denmead, 56 U.S. 330, 342 (1853).

Society implicitly relied on the courts to liberally interpret the unknown boundary of the grant. Not all members of the judiciary were satisfied with the liberal interpretation of the Act of 1836. *See Winans v. Denmead*, 56 U.S. 330, 347 (1853) (Campbell, J., dissenting) ("[T]he invention shall particularly 'specify and point' out what he claims as his invention. Fulness [sic], clearness, exactness, preciseness, and particularity . . . will alone fulfil [sic] the demands of Congress or the wants of the country."); Molinaro, *supra* note 75, at 792 n.34.

and destroy the public's ability to rely on the patent claiming system to mark the boundaries granted to the patentee.¹⁶²

In their vocal dissent in *Graver Tank*, Justices Black and Douglas also found no need for the doctrine of equivalents whatsoever.¹⁶³ The doctrine was said to work the evil of treating the claims "like a nose of wax which may be turned and twisted in any direction . . . so as to make it something more than, or something different from, what its words express"¹⁶⁴ For the dissenters, the protection of the boundary incentive of the patent system outweighed any damage the disclosure incentive may sustain as a result of this "infringement."¹⁶⁵ The dissent suggested patentees who suffer from "infringement" beyond the literal scope of the claims of their patent should avail themselves of the reissue process.¹⁶⁶

Interestingly enough, the opinion in *Wilson* could also be viewed as a call for change in the doctrine of equivalents analysis via a reissue process, just like the dissent in *Graver Tank*. The problem exists that the "reissue" process talked about in *Wilson* amounts to nothing more than a judicial, rather than a statutory, reissue process.

Although the opinion never calls doctrine of equivalents with the "hypothetical claim" analysis a reissue process, the similarities in process and final effect between the doctrine with a "hypothetical claim" analysis and the reissue process are striking.¹⁶⁷ Both procedures can involve a broadening of protection over areas of subject matter

162. Will this be the limit to that claim? Who can tell the bounds within which the mechanical industry of the country may freely exert itself? . . .

. . . Fulness [sic], clearness, exactness, preciseness, and particularity, in the description of the invention, its principle, and the matter claimed to be invented, will alone fulfil [sic] the demands of Congress or the wants of the country. Nothing, in the administration of this law, will be more mischievous, more productive of oppressive and costly litigation, of exorbitant and unjust pretensions and vexatious demands, more injurious to labor, than a relaxation of these wise and salutary requisitions of the act of Congress. In my judgement, the principles of legal interpretation, as well as the public interest, require, that this language of this statute shall have its full significance and import.

56 U.S. at 347 (Campbell, J., dissenting).

163. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 612-13 (1950) (Black, J., dissenting).

164. *Id.* at 614 (Black, J., dissenting) (citing *White v. Dunbar*, 119 U.S. 47, 51 (1886)).

165. *Id.* at 607.

166. *Id.* at 615 (Black, J., dissenting).

167. See Parker, *supra* note 113, at 286.

not previously claimed but also not new to the patent.¹⁶⁸ Although the Federal Circuit and numerous authors resist the description of the doctrine of equivalents as an expansion of the claims,¹⁶⁹ the results would be similar if the decision was available for use as persuasive precedent by the patentee in later infringement cases brought under the same patent.¹⁷⁰ Furthermore, both procedures would require the use of "traditional patentability rules"¹⁷¹ in the examination of the broadening of the patent.

Unfortunately, the similarities between the two devices stop here. None of the statutorily mandated protections for the public are contained in the "hypothetical claim" analysis/reissue process. The judicial reissue process contains no mention of a two-year limitation¹⁷² on the use of the doctrine and the defendant infringer does not obtain the protection of "intervening rights."¹⁷³ But the complications created by the "hypothetical claim" consist of more than just safeguards

168. The idea of the "hypothetical claim" analysis is to draft a new claim which will encompass the infringer's device as none of the claims in the patent can do so as presently drafted. *Wilson Sporting Goods Co. v. David Geoffrey & Assoc.*, 904 F.2d 677, 684 (Fed. Cir. 1990).

169. E.g., HARMON, *supra* note 9, § 1.3, at 12.

170. A finding of patent invalidity can be used by an alleged infringer as collateral estoppel against a patentee involved in subsequent patent infringement litigation. *Blonder-Tongue Labs., Inc. v. University of Illinois Found.*, 402 U.S. 313, 350 (1971); see BLACK'S LAW DICTIONARY 261-62 (6th ed. 1990) (stating collateral estoppel "prevents relitigation by plaintiff of issues previously lost against another defendant"). However, the Court specifically avoided addressing the question of offensive use of prior judgments by the patentee against an alleged infringer. *Blonder-Tongue*, 402 U.S. at 329-30.

In answer to the question left open by *Blonder-Tongue*, the Federal Circuit has found that offensive use of prior judgements is not allowable. *Stevenson v. Sears, Roebuck & Co.*, 713 F.2d 705, 710-11 (Fed. Cir. 1983). Offensive use is not allowable because the courts do not find patents valid, but that the defendants have failed to meet their burden of proof. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1429 n.3 (Fed. Cir. 1988). However, the prior judgement of validity may have some persuasive effect. *Stevenson*, 713 F.2d at 711 ("As we have indicated, the decision serves only as a 'red flag warning' to the district court to apply the full and fair criteria very carefully . . .").

By analogy, a finding of "validity" as to a "hypothetical claim," while not binding on future courts, could be viewed as persuasive, yielding a similar benefit to the patentee as in the reissue process.

171. Compare the language of *Wilson*, "traditional patentability rules," with the language of the statute, "provisions of this title relating to applications for patent," 35 U.S.C. § 251, ¶ 3 (1988).

172. See *infra* note 189 and accompanying text.

173. See *infra* notes 190-92 and accompanying text.

denied, for the complications have been shown to include new problems created in practice and at trial.

The Patent Act allows the patentee, with some limitations, to change the patent through a process known as reissue.¹⁷⁴ To qualify for reissue, the patent must be “wholly or partly inoperative or invalid,”¹⁷⁵ the defect must arise “through error without any deceptive intent,”¹⁷⁶ the reissue application cannot introduce “new matter,” and the application must meet all the normal requirements of patentability.¹⁷⁷

Two possible defects will satisfy the requirement of inoperativeness or invalidity. The first defect is a “defective specification or drawing.”¹⁷⁸ The second defect is a defect in the claims. A sufficient defect in the claims occurs when “the patentee [claims] more or less than he had a right to claim in the patent.”¹⁷⁹ Although either underclaiming or overclaiming is a sufficient defect, broadening reissues, where the patentee claims more in the reissue than was previously claimed, are subject to statutory procedural limitations.¹⁸⁰

The error which occurred can be one of fact, or law, or judgment,¹⁸¹ but the error must be without deceptive intent.¹⁸² While the courts generally read this requirement liberally,¹⁸³ brazen abuses of the Patent Office do not meet with approval. The doctrine of recapture was created to deal with this specific abuse of the Patent Office: applicants who surrender subject matter before the Patent Office while prosecuting the patent in order to get the patent and then attempt to “recapture” the same subject matter through the reissue process.¹⁸⁴

174. Patent Act of 1952, Pub. L. No. 82-593, 66 Stat. 792.

175. 35 U.S.C. § 251, ¶ 1 (1988).

176. *Id.*

177. The provisions of this title relating to applications for patent shall be applicable to applications for reissue of a patent, except that application for reissue may be made and sworn to by the assignee of the entire interest if the application does not seek to enlarge the scope of the claims of the original patent.

35 U.S.C. § 251, ¶ 3 (1988).

178. 35 U.S.C. § 251, ¶ 1 (1988).

179. *Id.*

180. There is a two year limitation on broadening reissue patents. 35 U.S.C. § 251, ¶ 4 (1988) (“No reissued patent shall be granted enlarging the scope of the claims of the original patent unless applied for within two years from the grant of the original patent.”).

181. See generally 4 CHISUM, *supra* note 13, § 15.03[2][b], at 15-66 to 15-73.

182. 35 U.S.C. § 251, ¶ 1 (1988) (“[W]ithout any deceptive intention . . .”).

183. 4 CHISUM, *supra* note 13, § 15.03[2], at 15-63.

184. See generally 4 CHISUM, *supra* note 13, § 15.03[2][e], at 15-74 to 15-80.

The applicant also cannot introduce new matter over the subject matter disclosed in the specification in the old patent¹⁸⁵ or violate the rules of patentability in the new application.¹⁸⁶ The Patent Office does not stop rigorous enforcement of the patentability requirements during the reissue process merely because the applicant has a previously granted patent.

In addition to the requirements for reissue mentioned above, there are two major limitations on the reissue process: the two-year limitation on broadening patents¹⁸⁷ and the concept of "intervening rights."¹⁸⁸ The two-year limitation prevents patentees from filing for broadening reissue patents after two years from the grant of the patent.¹⁸⁹ The concept of "intervening rights" also can be invoked for two different reasons to limit the reissued patent. A manufacturer or user may use or sell a "specific thing" after reissue as long as the action was not an infringement against the original patent, even if the action infringes the reissued patent.¹⁹⁰ In the second instance, the court has the discretion to allow continued manufacturing, use, or sale of a thing if the thing was made, used or purchased prior to reissue or substantial preparation for manufacture, use, or sale was conducted.¹⁹¹ In either instance, the court can equitably decide the terms of the manufacture, use, and sale required to protect the actions made prior to the reissue patent by the "infringer."¹⁹²

185. 35 U.S.C. § 251, ¶ 1 (1988) ("No new matter shall be introduced into the application for reissue.").

186. 35 U.S.C. § 251, ¶ 3 (1988).

187. 35 U.S.C. § 251, ¶ 4 (1988).

188. No reissued patent shall abridge or affect the right of any person or his successors in business who made, purchased or used prior to the grant of a reissue anything patented by the reissued patent, to continue the use of, or to sell to others to be used or sold, the specific thing so made, purchased or used, unless the making, using or selling of such thing infringes a valid claim of the reissued patent which was in the original patent. The court before which such matter is in question may provide for the continued manufacture, use or sale of the thing made, purchased or used as specified, or for the manufacture, use or sale of which substantial preparation was made before the grant of the reissue, and it may also provide for the continued practice of any process patented by the reissue, practice, or for the practice of which substantial preparation was made, prior to the grant of the reissue, to the extent and under such terms as the court deems equitable for the protection of investments made or business commenced before the grant of the reissue.

35 U.S.C. § 252, ¶ 2 (1988).

189. 35 U.S.C. § 251, ¶ 4 (1988).

190. 35 U.S.C. § 252, ¶ 2 (1988).

191. *Id.*

192. *Id.*

Unfortunately, the reissue process appears to be only a limited possible solution to the doctrine of equivalents. The major problem with use of the reissue process as a substitute for judicial intervention via the doctrine of equivalents is the fragile state of the Patent Office. While the number and complexity of patents has steadily increased over the years,¹⁹³ the Patent Office has remained fundamentally unchanged. Had the technology of procedures in the Patent Office increased at the same rate as technology increased in general, the discrepancy in numbers might not have been so crippling. However, the examination procedure and the prior art search conducted for these patent applications has remained fundamentally the same since the nineteenth century.¹⁹⁴

Another particularly distressing statistic to note is the high turnover rate among skilled Patent Examiners. In some of the most

193. Over one hundred and twenty years passed between the first patent issued and the one millionth patent issued, but the last one million patents have issued in less than a quarter of that time. William G. Conger, *Patent Reexamination Re-examined*, 1986 DET. C. L. REV. 523, 531. In fact, over 174,000 patent applications were received by the Patent Office in 1990, allowing for only eighty hours to be spent per patent during examination. David C. Churbuck & Gary Slutsker, *Whose Invention Is It Anyway?*, FORBES, Aug. 19, 1991, at 114, 116; see also David L. Wilson, *New Inventions in the United States*, NAT. J., Mar. 2, 1991, at 533, 533 (number of patent applications growing at an annual rate of 7.5 percent from fiscal 1984-89).

194. Unlike the European and Japanese Patent Offices, which use computerized systems to track applications and patents, the Patent Office relies predominantly on a system of manual searches during the examination of a patent, a procedure fundamentally unchanged since the office first started examining patents over two centuries ago. Michele Galen, et al., *Is It Time to Reinvent the Patent System?*, BUS. WK., Dec. 2, 1991, at 110, 113. The few computers that do exist in the Patent Office exist because of the personal initiative of the individual Patent Examiners. Churbuck & Slutsker, *supra* note 193, at 116. This lack of computer capability has had a negative effect on the pendency of a patent application. Currently, the average duration of a patent examination is in the neighborhood of eighteen months. Churbuck & Slutsker, *supra* note 193, at 115; see also SEIDEL, *supra* note 28, § 5.03, at 66 (one to three years). In some new technologies, such as biotechnology, the duration is much closer to two years. Wilson, *supra* note 193, at 533 (26.3 months per biotechnology patent application).

The system of manual searches has other drawbacks, beside the obvious time inefficiencies created. The procedure is only as good as the database from which the information is drawn from, a database quickly falling behind the state of the art in many of the important new technologies, such as computer science and biotechnology. See Conger, *supra* note 193, at 531; Churbuck & Slutsker, *supra* note 193, at 116. In addition, unlike in a computerized database, the examiner must deal with items which have been either lost or stolen over the years. Churbuck & Slutsker, *supra* note 193, at 116 (stating over 2 million of the 27 million U.S. and foreign patents on file are "missing — in use, lost, or stolen").

important high-technology areas, the turnover rate is in excess of 50 percent.¹⁹⁵ Low pay and high stress are two of the primary causes of the enormous demand for new Examiners each year.¹⁹⁶

To think that the reissue process will provide a simple and absolute answer to the problems with the doctrine of equivalents oversimplifies the problems, of requiring the Patent Office to assume primary jurisdiction over the area. A further burden on this tenuously balanced system could result in more uncertainty in the field of patent law as a result of poorly handled prosecutions and reissues than any number of conflicting Federal Circuit decisions. However, to totally ignore the possibility of the reissue process as one element in a program of revitalization for the patent system would be taking the limitations of the Patent Office too far in the opposite direction.

VI. A MORE RESPECTFUL ROLE FOR THE DOCTRINE OF EQUIVALENTS

The doctrine of equivalents made perfect sense in the context of a central definition claiming system which had very poorly defined boundaries.¹⁹⁷ It made sense to talk in terms of, "not only the precise forms [the patentee] has described, but all other forms which embody his invention."¹⁹⁸ The judiciary was considered an essential partner in the continued viability of such a claiming scheme by most.¹⁹⁹

With the new claiming system, requiring peripheral claiming,²⁰⁰ the courts do not need to bring such a high level of additional meaning to the words of the patent claims. The job of correctly ascertaining the proper boundaries of the grant has been left by Congress, as is their constitutional right,²⁰¹ fundamentally to the Patent Office and the representatives of the inventor.²⁰² Before the *Graver Tank* decision, some in the legal community had suggested that this change in the

195. Churbuck & Slutsker, *supra* note 193, at 115 (noting that this high turnover rate, when combined with the long pendency of some applications, may result in a greater number of applications being allowed as examiners leave the Patent Office).

196. The starting pay for a Patent Examiner is anywhere from \$22,000 to \$30,000. Churbuck & Slutsker, *supra* note 193, at 116. The pressure to produce is great for those wishing to advance as promotion and merit pay are both directly related to the efficiency of the examiner's examination methods. Conger, *supra* note 193, at 530 n.32.

197. See *supra* note 161.

198. *Winans v. Denmead*, 56 U.S. 330, 342 (1853).

199. See *supra* note 161.

200. See *supra* note 28 and accompanying text.

201. U.S. CONST. art. I, § 8, cl. 8.

202. See Adelman, *Doctrine*, *supra* note 9, at 676.

manner of claiming would be the eventual death knell of the doctrine of equivalents.²⁰³

Unfortunately, the Patent Office is unable, for a number of reasons, to assume sole responsibility for ascertaining the boundaries of the patent grant. Perhaps the best solution, therefore, is a partnership between the judiciary and the Patent Office, combined with an increased emphasis on placing more of the responsibility on the patentee for protection of the invention.

For to accompany the stagnation of the United States economy, a stagnation of inventive genius is also being played out across the United States. Foreign companies consistently obtain more American patents than their domestic counterparts.²⁰⁴ Rather than spending money on research, some companies have resorted to increased litigation over a steadily aging portfolio of patents to provide a steady income for investors and officers.²⁰⁵

To curb this kind of activity and renew interest in systematic and scientific growth, the Federal Circuit's restriction of the doctrine of equivalents certainly is a step in right direction with respect to the limitation on patent litigation which it represents. However, the confused state of the law still provides too much uncertainty to rely on it solely to discourage the corporate world intent on using patent litigation as a source of quick wealth in place of substantial investment in research and development.

203. See Timothy L. Tilton, *The Doctrine of Equivalents in Patent Cases*, 32 J. PAT. OFF. SOC'Y 861 (1950).

204. See *PTO, Statistics*, 40 PAT. TRADEMARK COPYRIGHT J. 167 (1985) (stating only four of top ten companies holding U.S. patents are U.S. companies: General Electric Co., U.S. Phillips Corp., IBM Corp., and Eastman Kodak Co.).

205. One of the best-known offenders is Texas Instruments. Texas Instruments has generated over \$911 million in royalties from 1986 to 1991. Galen, *supra* note 194, at 112. In fact, in 1989 and 1990, Texas Instruments generated more profit from the enforcement of its patent rights than from its basic business operations. *Id.*

Texas Instruments has been able to achieve these results through tenacious and aggressive litigation policies. See Andrew Pollack, *The New High-Tech Battleground*, N.Y. TIMES, July 3, 1988, § 3, at 1. Some in the industry have criticized Texas Instruments' methods. See, e.g., Galen, *supra* note 194, at 113 ("TI [Texas Instruments] would be better off spending its energies fixing their product line," says Wilfred J. Corrigan, CEO of LSI Logic Corp. . . . one of five semiconductor makers sued by TI for infringement."). Texas Instruments, however, remains unmoved. "We have had an asset that we have been underutilizing' . . ." Pollack, *supra*, § 3, at 1 (from conversation with Richard J. Agnich, general counsel, Texas Instruments).

These actions have not gone unnoticed in the legal community. Ronald Laurie, a California attorney with a practice focused on computer law, stated, "If you have good patents, litigation is a better way of making money than selling products." *Id.*

The doctrine of equivalents should be restricted to two special situations so that some incentive is created to be at the edge of advancing technologies once again. To begin with, the doctrine of equivalents should be applied to combat the open piracy of inventions.²⁰⁶ The *Graver Tank* majority was correct in decrying the unscrupulous copyist who in essence steals the invention from the patentee through minor modifications calculated to circumvent the literal language of the patent.

The doctrine of equivalents should also be applied in those cases, like *Hughes*, where the technology of the application advances beyond what could be reasonably foreseen at the time of the application.²⁰⁷ In this situation, it would be unfair not to protect a novel invention where the only fault is an inability of the drafter and inventor to see into and predict the future.²⁰⁸

For the majority of inventions, however, the patent will be afforded no more than what is literally allowable according to the scope of the patent. This application would encourage companies to get to the forefront of the technology once again as only at the edge will the drafter have the opportunity to obtain wide boundaries for the inventor's discovery. It is true that this would put the inventor at the mercy of the draftsman, but perhaps it is once again time emphasize prospective thinking into the patent system.

To some extent, the Federal Circuit has already shown their willingness to move in this direction in *London v. Carson Pirie Scott & Co.*²⁰⁹ *London* involved infringement litigation over the design of clamps used in travel garment bags.²¹⁰ The *London* patents claimed two different designs of clamp, one for a horizontal clamp and the other for a vertical clamp.²¹¹ Both of the clamps consisted of two C-shaped metal channels, lined with a resilient material, pinned at one end with a hinge pin, and connected at the other end by a latching device.²¹² The horizontal clamp attached to the shank portion of the

206. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607 (1950).

207. Adelman, *New World*, *supra* note 19, at 997 ("One possible approach would be to limit the use of the doctrine to situations where the accused product or process uses technology that was not in existence at the time of the patent grant")

208. Adelman, *Doctrine*, *supra* note 9, at 726-27.

209. 946 F.2d 1534 (Fed. Cir. 1991).

210. *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1535 (Fed. Cir. 1991).

211. *Id.* at 1535-36.

212. *Id.*

hanger below the hook, which extended outside of the garment bag.²¹³ The vertical clamp attached directly to the hook portion of the hanger.²¹⁴

The garment bag, distributed by Carson Pirie Scott, Marshall Field, and other stores, also consisted of a metal C-shaped channel lined with a resilient material and joined at one end to an upper channel with a hinge pin.²¹⁵ However, the design differed in that the bottom channel was riveted to the internal structure of the garment bag.²¹⁶ The two channels were closed by pushing the channels together with the use of a camming device.²¹⁷

The court wasted little time getting to the heart of the matter. The court recognized that the patent system is a balance between two competing concerns: certainty for the public and protection for the patentee.²¹⁸ The court also recognized that the doctrine of equivalents was originally designed to prevent insubstantial changes made to pirate the invention claimed in the original patent.²¹⁹ Recognizing this fact, the court still concluded:

Application of the doctrine of equivalents is the exception, however, not the rule, for if the public comes to believe (or fear) that the language of the patent claims can never be relied on, and that the doctrine of equivalents is simply the second prong of every infringement charge, regularly available to extend protection beyond the scope of the claims, then claims will cease to serve their intended purpose. Competitors will never know whether their action infringe a granted patent.²²⁰

VII. CONCLUSION

The doctrine of equivalents was created during a time when Congress gave the judiciary an active role in defining the bounds of the patent grant. With the advent of legislation providing a more certain grant of protection to the patentee, the recession of the judiciary as a powerful influence over the scope of the patent has appeared imminent, but has remained elusive.

213. *Id.* at 1536.

214. *Id.*

215. *Id.* at 1537.

216. *Id.*

217. *Id.*

218. *Id.* at 1538.

219. *Id.*

220. *Id.*

With the creation of the Federal Circuit, a powerful new metamorphosis has occurred within the doctrine itself which promised to reduce the influence of the judiciary through the strict regimentation of what was formerly an open equitable doctrine. However, the change in the doctrine has not provided what it promised. The original rulings of the Federal Circuit and the indecision which followed have proceeded to limit the doctrine in only the most sporadic of fashions.

Now is the time for the Federal Circuit to renew the usefulness of the doctrine of equivalents by decreasing the scope of its application. By limiting the application of the doctrine only to those cases where a showing of "piracy" is made or the defect in claiming was caused by an advance in technology, the doctrine can remain as a viable tool for the patentee while eliminating the need for piecemeal restriction of the doctrine. This restriction may also have the added effect of inducing research into new areas of technology by eliminating the advantage of sitting on one's laurels and obtaining the advantages of invention through litigation rather than through the marketplace.

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