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# How Modern Treatment of 35 U.S.C. § 112(6) Has Caused Confusion: Hilton Davis v. Warner-Jenkinson and the Right to a Jury on the Issue of Patent Infringement Under the "Equitable" Doctrine of Equivalents

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# How Modern Treatment of 35 U.S.C. § 112(6) Has Caused Confusion: *Hilton Davis v. Warner-Jenkinson* and the Right to a Jury on the Issue of Patent Infringement Under the “Equitable” Doctrine of Equivalents

## I. INTRODUCTION

In a modern patent infringement action, a plaintiff may allege both literal infringement and infringement under the doctrine of equivalents. Literal infringement is found when the literal language of one of a patent’s claims “reads on” the accused device.<sup>1</sup> Literal infringement is based on strict liability; intent is relevant only in determining whether to mitigate damages.<sup>2</sup> In general, the doctrine of equivalents is applied as a matter of course when no literal infringement is found.<sup>3</sup> Under this doctrine, infringement may be found if the accused device contains every element of the claim or its equivalent.<sup>4</sup> Both literal infringement and infringement under the doctrine of equivalents are questions routinely submitted to juries. In recent years, however, the doctrine of equivalents has been criticized as unpredictable<sup>5</sup> and unworkable.<sup>6</sup> Moreover,

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1. *E.g.*, *Baxter Healthcare Corp. v. Spectramed, Inc.*, 49 F.3d 1575, 1683 (Fed. Cir.) (“Literal infringement exists if each of the limitations of the asserted claim(s) read on, that is, are found in, the accused device.”), *cert. denied*, 116 S. Ct. 272 (1995).

2. *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1519, 1523, 1527 (Fed. Cir. 1995) (en banc), *cert. granted*, 64 U.S.L.W. 3574 (U.S. Feb 26, 1996) (No. 95-728). For a discussion of the petition, see *infra* note 178.

3. Gregory J. Smith, *The Federal Circuit’s Modern Doctrine of Equivalents in Patent Infringement*, 29 SANTA CLARA L. REV. 901, 908 n.38 (1989) (“The practice today is to . . . apply the doctrine of equivalents routinely after finding no literal infringement.”).

4. See *infra* part II.A for a more detailed explanation of infringement under the doctrine of equivalents.

5. *Hilton Davis*, 62 F.3d at 1538 (Plager, J., dissenting) (The patent system and its policies “all are thrown into disarray by this unpredictable aspect of current patent litigation.”); 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, 996 (1987) (“[T]here is no way to determine with reliability prior to suit whether or not one is infringing another’s patent.”); Rudolph P. Hofmann, Jr., *The Doctrine of*

the Federal Circuit's<sup>7</sup> application of the doctrine has been inconsistent and confusing.<sup>8</sup> At the same time, as the use of juries in patent cases has increased dramatically,<sup>9</sup> there has been intense debate over their proper role in the patent system. Some have concluded that the use of juries should be significantly curtailed or even eliminated, especially in resolving the issue of infringement under the doctrine of equivalents.<sup>10</sup>

Recently, several panels of the Federal Circuit have labeled the doctrine of equivalents an "equitable" doctrine.<sup>11</sup> Opinions

*Equivalents: Twelve Years of Federal Circuit Precedent Still Leaves Practitioners Wondering*, 20 WM. MITCHELL L. REV. 1033, 1060 (1994) ("Unfortunately, uncertainty remains in every issue of the doctrine of equivalents as currently applied. Furthermore, Federal Circuit judges themselves do not agree on the application of the doctrine.")

6. *Hilton Davis*, 62 F.3d at 1537 (Plager, J., dissenting) ("Is something broke that needs fixing? The short answer is yes."); see also *id.* at 1529 (Newman, J., concurring) ("I have . . . come to doubt that the doctrine of equivalents is the best way to achieve the result for which it arose . . .").

7. In 1982, Congress created the Court of Appeals for the Federal Circuit, granting it exclusive jurisdiction to hear patent appeals. See Federal Courts Improvement Act of 1982, 28 U.S.C. § 1295(a) (1994). Notwithstanding *Hilton Davis*, the U.S. Supreme Court rarely grants certiorari in patent cases, hence the Federal Circuit is "effectively the court of last resort." Hofmann, *supra* note 5, at 1034 n.4.

8. *E.g.*, Roy Collins, III, *The Doctrine of Equivalents: Rethinking the Balance Between Equity and Predictability*, 22 GOLDEN GATE U. L. REV. 285, 286 (1992) ("In its current application, the doctrine of equivalents . . . is subject to inconsistent standards and rationales."); Smith, *supra* note 3, at 902 ("The Federal Circuit is presently unable to express a coherent view on the doctrine of equivalents."); 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, 107 (1992) ("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.")

Even some judges on the Federal Circuit have admitted that their decisions have been inconsistent. See, *e.g.*, *Hilton Davis*, 62 F.3d at 1529 (Newman, J., concurring) ("There has . . . been a good deal of speculation flowing from the inconsistency of our decisions.")

9. *Hilton Davis*, 62 F.3d at 1567 n.19 (Nies, J., dissenting) (stating that from 1968-1970, only 13 of 382 patent cases going to trial were jury trials, whereas from 1992-1994, 163 of 274 patent trials were tried to a jury).

10. The use of juries in patent cases generally is currently a controversial subject. *E.g.*, Adelman, *supra* note 5, at 1004 (discussing why "there is little room for juries in patent cases"); see also *Markman v. Westview Inst., Inc.*, 52 F.3d 967 (Fed. Cir.) (holding that interpretation of patent claims is a question of law for the judge, not the jury), *cert. granted*, 116 S. Ct. 40 (1995) (No. 95-26). The use of juries to decide the issue of infringement under the doctrine of equivalents is equally controversial. See *Hilton Davis*, 62 F.3d at 1538 (Plager, J., dissenting) ("[T]he reality is that the doctrine of equivalents is a virtually uncontrolled and unreviewable license to juries to find infringement if they so choose.")

11. See, *e.g.*, 4 DONALD S. CHISUM, PATENTS § 18.04(1)(c) & n.36 (perm. ed.

have suggested that, consequently, the doctrine of equivalents should not be applied unless the equities of the case dictate.<sup>12</sup> One District Court judge took the implications of the "equitable" label one step further, refusing to allow a jury trial in a patent infringement action in which only the issue of infringement under the doctrine of equivalents remained. The judge held that the issue was a matter of equity and that no Seventh Amendment right attached.<sup>13</sup>

At this point, an interjection is warranted for purposes of clarification. There is a difference between whether an issue is one for the jury and whether there is a right to a jury trial on the issue. In an action for damages for breach of contract, for example, there is a right to a jury trial on all issues pertinent to the breach of contract claim because the remedy sought is legal, not equitable. Yet, interpretation of the contract is not an issue for the jury but is allocated to the judge because it is a question of law. Thus, a jury trial right might attach to a claim, but a particular issue relevant to the claim might not be for the jury. However, the two concepts are related: if there is no right to a jury trial on an issue, it cannot be a question for

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rev. vol. 1995) (listing dozens of Federal Circuit cases that have labeled it an "equitable doctrine"). Only a few pre-Federal Circuit opinions labeled the doctrine as an "equitable" one. See *Mastini v. American Tel. & Tel. Co.*, 236 F. Supp. 310, 317 (S.D.N.Y. 1964) ("A Court may employ this equitable doctrine where . . ."), *aff'd*, 360 F.2d 378 (2d Cir. 1966), *cert. denied*, 387 U.S. 933 (1967); *Royal Typewriter Co. v. L.C. Smith & Corona Typewriters, Inc.*, 76 F. Supp. 190, 193 (D. Conn. 1947) (challenging the "equitable doctrine of equivalents" as inapplicable in face of inequitable conduct).

12. See *American Home Prods. Co. v. Johnson & Johnson*, 1992 WL 280382, at \*3 (Fed. Cir. 1992) (unpublished opinion) ("[T]he doctrine of equivalents is not an automatic second prong to every infringement charge. It is an equitable remedy available only upon a suitable showing."); *Charles Greiner & Co. v. Mari-Med Mfg., Inc.*, 962 F.2d 1031, 1036 (Fed. Cir. 1992) ("[C]areful confinement of the doctrine of equivalents to its proper equitable role, promotes certainty and clarity in determining the scope of patent rights."); *Illinois Tool Works, Inc. v. Rawlplug Co., Inc.*, 1992 WL 154025, at \*2 (Fed. Cir. 1992) (unpublished opinion) ("We would add that [patentee] has also presented no evidence showing an equitable basis for invoking the doctrine of equivalents in this case."); *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538 (Fed. Cir. 1991) ("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 patent claims can never be relied on, and that the doctrine of equivalents is simply the second prong of every infringement charge, . . . then claims will cease to serve their intended purpose. Competitors will never know whether their actions infringe a granted patent.")

13. *Transmatic, Inc. v. Gulton Indus., Inc.*, 835 F. Supp. 1026, 1028 (E.D. Mich. 1993), *vacated as moot and aff'd on other grounds*, 53 F.3d 1270 (Fed. Cir. 1995).

the jury. For example, in an action seeking specific performance for breach of contract, there is no right to a jury trial. Thus, the issue of breach of contract, though a question of fact, is one for the judge. Thus a question cannot be one for the jury unless a jury trial right also attaches to the issue. This Note addresses whether there is a right to a jury trial on the issue of infringement under the doctrine of equivalents in order to ultimately answer whether the question is one for the jury.

Before the merger of law and equity in 1938, the answer to whether the doctrine of equivalents was a question for the jury was clear. When a plaintiff sought damages only, the action was brought in a court of law and submitted to a jury. When the plaintiff requested damages and an injunction, the injunction invoked the jurisdiction of the courts of equity, and the parties had no right to a jury trial.<sup>14</sup> Significantly, the doctrine of equivalents did not itself invoke a law or equity court's jurisdiction, but was merely applied in both law and equity as a question of fact relevant to the infringement analysis. Thus, the question of whether a jury trial right attached to the issue of infringement under the doctrine of equivalents would have been nonsense.

The jury's role today is muddled for several reasons. The modern doctrine of equivalents as used today is different than originally developed.<sup>15</sup> Thus, the authority for its exercise now arguably lies in a court's equity powers due to the doctrine's nature.<sup>16</sup> To determine whether an action is legal or equitable in nature, and consequently, whether a jury-trial right attaches, the Seventh Amendment requires identification of the most analogous "18th-century action[] brought . . . prior to the merger of the courts of law and equity."<sup>17</sup> Moreover, the Supreme Court's post-merger Seventh Amendment jurisprudence has established that "the right to a trial by jury now extends to particular issues rather than to an entire action,"<sup>18</sup> and that the jury trial right "depends on the *nature* of the issue."<sup>19</sup> Thus, due to the historical changes in the doctrine of equivalents, there is no strong historical antecedent

14. See *infra* notes 49-51 and accompanying text.

15. See *infra* parts IV.A-B.

16. See *infra* part IV.C.

17. *Tull v. United States*, 481 U.S. 412, 417 (1986).

18. 9 CHARLES A. WRIGHT & ARTHUR R. MILLER, *FEDERAL PRACTICE AND PROCEDURE* § 2337 (2d ed. 1994).

19. *Ross v. Bernhard*, 396 U.S. 531, 538 (1970) (*emphasis added*).

that mandates a particular role for the jury under the doctrine of equivalents; furthermore, there is a legitimate question as to whether a jury-trial right attaches to the issue.<sup>20</sup> Some argue that the modern doctrine of equivalents is more analogous to the equitable remedy of "reformation of contract" than to the original doctrine and that, therefore, no jury trial right exists on the issue.<sup>21</sup>

In *Hilton Davis Chemical Co. v. Warner-Jenkinson Co.*,<sup>22</sup> the Federal Circuit addressed whether application of the doctrine of equivalents is a question for the jury. The defendant argued that because the doctrine of equivalents is an equitable remedy, it is a question for the court, not the jury.<sup>23</sup> The *Hilton Davis* majority held otherwise, basing its analysis on the history of the doctrine. However, the majority failed to distinguish between the modern doctrine of equivalents and the original doctrine upon which it based its historical arguments.

This Note examines whether infringement under the doctrine of equivalents is properly an issue for the jury. Part II explains the modern doctrine of equivalents and outlines its history. Part III presents the facts of the *Hilton Davis* case and summarizes the majority's reasoning. Part IV.A examines the history of the doctrine of equivalents, concluding that of all the historical changes to the doctrine, its modern treatment by the Federal Circuit has most significantly altered the nature of the doctrine. Part IV.B of this Note examines how modern changes in the doctrine of equivalents support the claim that the authority for exercising the doctrine of equivalents now derives from a court's equity powers. Part IV.C continues by showing how the modern doctrine might plausibly be characterized as an equitable remedy in a Seventh Amendment jury-trial-right analysis. Nevertheless, Part IV.D proposes avoiding these difficult questions altogether by returning the doctrine to its historical roots, thus making it clear that the question of

20. See *infra* part IV.A.

21. See *infra* part IV.C.

22. 62 F.3d 1512 (Fed. Cir. 1995) (en banc).

23. *Id.* at 1523. Note that the defendant did not raise this issue at trial, but the Federal Circuit raised it when it granted en banc review. At trial, Warner-Jenkinson had raised another issue based on the same premise. It claimed that because the doctrine is a matter of equity, a judge has discretion, whether, based on a "balancing of the equities," the doctrine should be given to the jury at all. Warner-Jenkinson showed that it had independently developed its process and had not willfully infringed and therefore claimed that the doctrine should not have been applied. *Id.* at 1522-23.

infringement under the doctrine of equivalents is a question for the jury.

## II. BACKGROUND

### A. *The Modern Doctrine of Equivalents*

Patent law seeks to foster technological innovation by granting exclusive rights to an inventor in return for a full and public disclosure of how his invention works.<sup>24</sup> According to modern patent statutes, a patent application must contain a "specification" that includes "a written description of the invention . . . in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains . . . to make and use [it]."<sup>25</sup> In addition, "[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention."<sup>26</sup> Once a patent is issued, the patentee can exclude anyone from making, using, or selling the invention within the United States by bringing a patent infringement action in a U.S. District Court.<sup>27</sup>

In infringement actions, the issue is rarely whether the defendant is "making, using, or selling," but whether the device that the defendant is "making, using, or selling" is indeed the patentee's invention. When this issue arises, courts compare the accused device with the patent's claim language to determine if it falls within "the subject matter which the applicant regards as his invention."<sup>28</sup> If the claims of the patent were not drafted adequately, a defendant may avoid liability for infringement by making insubstantial changes that avoid the

24. See, e.g., 1 PETER D. ROSENBERG, PATENT LAW FUNDAMENTALS § 1.02 (2d ed. rev. vol. 1994).

25. 35 U.S.C. § 112 (1994). The specification must also disclose "the best mode contemplated by the inventor of carrying out his invention." *Id.*

26. *Id.* The claims of a patent are commonly compared to "metes and bounds" descriptions for real property. *E.g.*, *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538 (Fed. Cir. 1991).

27. 35 U.S.C. § 154(a)(1). Original jurisdiction is given to U.S. District Courts by 28 U.S.C. § 1338(a). If the invention is a process, a patentee can also "exclude others from using . . . or selling throughout the United States, or importing into the United States, products made by that process." 35 U.S.C. § 154(a)(1). Remedies include damages, § 284, and/or an injunction, § 283. In some circumstances, damages may be trebled, § 284, and may also, in exceptional cases, include attorney fees, § 285. For applications filed after June 8, 1995, a patentee's rights extend for 20 years from the date the patent application was filed. § 154(a)(1).

28. 35 U.S.C. § 112.

literal language of the claims. However, drafting a claim that truly describes the invention and that anticipates similar designs is difficult.<sup>29</sup>

The extent to which patent protection should be expanded beyond the patent's literal language involves a balance between two competing policies. On one hand, a patent should adequately protect a patentee's invention, thus encouraging disclosure and further innovation. On the other hand, the public should be able to rely on a patent's claims as notice of the scope of the subject matter claimed by an inventor and as a guide to avoiding liability for patent infringement.<sup>30</sup>

The "doctrine of equivalents" attempts to balance these two policies. Under this doctrine, infringement may be found if the accused device contains every element of the claim<sup>31</sup> or its equivalent.<sup>32</sup> An equivalent element is one which "performs

29. DONALD S. CHISUM & MICHAEL A. JACOBS, UNDERSTANDING INTELLECTUAL PROPERTY LAW § 2F(2)(b)(i) n.100 (1992) ("It is not a matter of negligence or incompetence on the part of claim drafters. Drafting appropriate claims is extremely difficult."); see also Adelman, *supra* note 5, at 994-95.

Increasingly sophisticated technology compounds the problem: "The technical arts are becoming increasingly more complex. Our language, never perfect for succinct definitions, is improving far too slowly. . . . [T]herefore . . . the statutory requirement for distinct claiming should result in cases where the burden upon the patentee is so inequitable as to merit some form of extraordinary relief." D.C. Roylance & L.T. Steadman, Note, *The Doctrine of Equivalents Revalued*, 19 GEO. WASH. L. REV. 491, 492 (1951).

A further difficulty arises because patent language cannot adequately claim elements of the invention for which future (and yet unknown) technology might be substituted. Martin J. Adelman & Gary L. Francione, *The Doctrine of Equivalents in Patent Law: Questions That Pennwalt Did Not Answer*, 137 U. PA. L. REV. 673, 712-14 (1989) (examining the modern example of *Hughes Aircraft Co. v. United States*, 717 F.2d 1351 (Fed. Cir. 1983), in which later-developed computer technology on board a satellite replaced and infringed means for sending information to and receiving instructions from a ground crew as part of a patented method for velocity and orientation control). Some commentators argue that the yet-unknown-technology situation is the only one in which an exception is warranted. *Id.*; Adelman, *supra* note 5, at 994 & n.57.

30. Hofmann, *supra* note 5, at 1042-43.

31. "Claims in patents are typically drafted in the form of a preamble, transition and one or more elements. Each element constitutes a limitation or narrowing of the scope of the claim." 4 CHISUM, *supra* note 11, § 18.03(4). In a doctrine of equivalents analysis, "[e]lement' may be used to mean a single limitation, but it has also been used to mean a series of limitations which, taken together, make up a component of the claimed invention." *Corning Glass Works v. Sumitomo Elec. U.S.A. Inc.*, 868 F.2d 1261, 1259 (Fed. Cir. 1989). "A patentee is, for example, free to frame the issue of equivalency, if it chooses, as equivalency to a combination of limitations." *Id.* at 1259 n.6.

32. "It is . . . 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



substantially the same function in substantially the same way to achieve substantially the same result" as a corresponding element of the claimed invention.<sup>33</sup> Thus, even if an accused device or process is not literally described by a claim, the doctrine of equivalents may operate to find infringement.<sup>34</sup>

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the presence of every element or its substantial equivalent in the accused device." *Lemelson v. United States*, 752 F.2d 1538, 1551 (Fed. Cir. 1985).

Nevertheless, it would be inaccurate to say that infringement is *always* found when the accused device contains every element of the claim or its equivalent. For a finding of infringement, the Federal Circuit has also required that the accused device be substantially similar to the claimed invention as a whole. In *Hughes Aircraft Co. v. United States*, 717 F.2d 1351, 1364 (Fed. Cir. 1983), it was held to be legal error not to "apply the doctrine of equivalents to the claimed invention as a whole." Subsequent decisions have cast doubt on the analysis in *Hughes* but have still seemed to require an "as-a-whole" analysis:

In order to prove infringement under the doctrine of equivalents, a patentee must show that the accused device performs substantially the same function in substantially the same way to achieve substantially the same result as the claimed device. The "substantially the same way" prong of this test may be met if an equivalent of a recited limitation has been substituted in the accused device.

*Malta v. Schulmerich Carillons, Inc.*, 952 F.2d 1320, 1325 (Fed. Cir. 1991) (citations omitted), *cert. denied*, 504 U.S. 974 (1992). Thus, the explanation in *Malta* is that only one of the three prongs of the overall "as-a-whole" test is satisfied by the "element-by-element" test given above.

However, given the fact that a patentee may "frame the issue . . . as equivalency to a combination of limitations," *Corning Glass*, 868 F.2d at 1259 n.6, there is an argument to be made that the overall "as-a-whole" analysis is subsumed by the "element-by-element" analysis. Since all the limitations of a claim can be combined into a single "element" for purposes of equivalency, the "element-by-element" analysis encompasses the "as-a-whole" analysis.

Moreover, *Hilton Davis* held that the function-way-result test is no longer the only permissible inquiry. The required inquiry, a more general one, rests on an assessment of the "substantiality of the differences." *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1518 (Fed. Cir. 1995).

33. *Wolverine World Wide, Inc. v. Nike, Inc.*, 38 F.3d 1192, 1196 (Fed. Cir. 1994). The inquiry is not limited to the "function-way-result" test. *Malta*, 952 F.2d at 1326 ("[W]hile comparison of function/way/result is an acceptable way of showing that structure in an accused device is the 'substantial equivalent' of a claim limitation, it is not the only way to do so . . . ."); *Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d 1528, 1533 (Fed. Cir. 1987) ("To be a 'substantial equivalent,' the element substituted in the accused device for the element set forth in the claim must not be such as would substantially change the way in which the function of the claimed invention is performed."); see also *Hilton Davis*, 62 F.3d at 1518 ("As technology becomes more sophisticated, and the innovative process more complex, the function-way-result test may not invariably suffice to show the substantiality of the differences.").

34. In addition, the range of equivalents is limited by both prosecution history estoppel and the prior art. Simply put, a patentee cannot use a narrow term in a claim in order to satisfy the patent examiner of its patentability and then later claim that the term should be construed broadly to include equivalents. Moreover, if the substitution of an equivalent would render the claim unpatentable over the

### B. History of the Doctrine

Understanding the history of the doctrine of equivalents is essential to understanding how it has changed, and thus why there is even an issue as to the jury's role in its application. In general, infringement under the doctrine of equivalents has evolved in step with the claiming requirements of the patent statutes. The Patent Acts of 1790 and 1793 did not require the inventor to specifically claim what parts of the invention were protected by the patent; infringement was determined by simply comparing an accused device with the description of the invention contained in the patent.<sup>35</sup> The first patent infringement case to reach the Supreme Court was *Evans v. Eaton*, in which instructions to the jury were that "if the two machines be substantially the same, and operate in the same manner, to produce the same result, though they may differ in form, proportions, and utility, they are the same in principle."<sup>36</sup>

#### 1. The doctrine of equivalents under central claiming

The Patent Act of 1836 was the first to contain a requirement to "particularly specify and point out the part, improvement, or combination, which [the inventor] claims as his own invention or discovery."<sup>37</sup> The method of claim drafting that developed under the Act of 1836 is commonly referred to as "central" claiming, since the claims "included only the prominent features of the invention."<sup>38</sup> It was up to the courts in infringement actions to ensure that all principles essential to the invention were gleaned from the patent.<sup>39</sup> During this time, the Supreme Court decided *Winans v. Denmead*,<sup>40</sup> which built on the *Evans* doctrine, despite the new statutory claiming requirement.<sup>41</sup>

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prior art, that equivalent is ineligible for purposes of the doctrine of equivalents. E.g., *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 870 (Fed. Cir. 1985).

35. *Hilton Davis*, 62 F.3d at 1563 (Nies, J., dissenting); Ronald D. Hantman, *Doctrine of Equivalents*, 70 J. PAT. & TRADEMARK OFF. SOC'Y 511, 516 (1988).

36. *Evans v. Eaton*, 20 U.S. (7 Wheat.) 356, 361 (1822).

37. Patent Act of 1836, ch. 357, § 6, 5 Stat. 117 (1836) (repealed 1870).

38. Hantman, *supra* note 35, at 519.

39. *Hilton Davis*, 62 F.3d at 1565 (Nies, J., dissenting).

40. 56 U.S. (15 How.) 330 (1853).

41. The dissent in *Winans* argued that the literal language of the claim should control, based on the notion that this was a necessary implication of Congress' requiring claims. *Id.* at 347 (Taney, J., dissenting).

[W]hen a patentee describes a machine, and then claims it as described, . . . he is understood to intend to claim, and does by law actually cover, not only the precise forms he has described, but all other forms which embody his invention; it being a familiar rule that, to copy the principle or mode of operation described, is an infringement, although such copy should be totally unlike the original in form or proportions.<sup>42</sup>

Four years later, the Supreme Court applied the *Winans* reasoning in *McCormick v. Talcott*, referring to it for the first time as the “doctrine of equivalents.”<sup>43</sup> The doctrine “allowed the courts to include all structures equivalent to the structures disclosed *in the specification* as infringing the patent.”<sup>44</sup> The doctrine of equivalents was not a secondary rule for infringement; it was the only rule,<sup>45</sup> and infringement “was almost universally treated as a question of fact to be decided by the jury.”<sup>46</sup>

## 2. *The doctrine of equivalents under peripheral claiming*

The advent of the peripheral claiming system, still used today, coincided generally with the enactment of the Patent Act of 1870.<sup>47</sup> Peripheral claiming depends on the use of broad—usually functional<sup>48</sup>—language to claim not just one embodiment of an invention but all possible embodiments. Thus, claims in the peripheral system define the “metes and bounds” of the patent grant.

The Patent Act of 1870 made two important changes in patent law. First, it gave equity courts power to award common law damages in patent infringement actions.<sup>49</sup> Therefore, “eq-

42. *Id.* at 342.

43. 61 U.S. (20 How.) 402, 407 (1857).

44. Hantman, *supra* note 85, at 519 (emphasis added).

45. Roylance & Steadman, *supra* note 29, at 492.

46. Karl B. Lutz, *Evolution of the Claims of U.S. Patents* (pt. 1), 20 J. PAT. OFF. SOC'Y 134, 147 (1938).

47. Ch. 230, 16 Stat. 198 (1870) (repealed 1952).

48. For an explanation of functional claim language, see *infra* note 57.

49. See Patent Act of 1870, ch. 230, § 55, 16 Stat. 206 (1870) (repealed 1952).

One might question how this could have been done without violating the Seventh Amendment. Today, a plaintiff seeking both damages and an injunction has a right to a jury trial on all issues of fact relevant to the claim for damages and thus on all issues common to both claims. *Beacon Theaters, Inc. v. Westover*, 359 U.S. 500, 510-11 (1959). In the pre-merger era, the Seventh Amendment case law held that if an injunction was the primary remedy sought, and damages were only incidentally sought, then the injunction sustained the jurisdiction of the court of equity.

uity court[s] became the forum of choice," and jury trials were infrequent.<sup>50</sup> In the few jury trials that occurred, however, the doctrine of equivalents was applied.<sup>51</sup>

Second, the Act added an additional phrase to the claiming requirement: the inventor "shall particularly point out *and distinctly claim* the part, improvement, or combination which he claims as his invention or discovery."<sup>52</sup> Whether because of this change in wording<sup>53</sup> or as a result of a trend that had already begun,<sup>54</sup> subsequent Supreme Court cases placed more emphasis on the claims as the sole definition of the patented invention.<sup>55</sup> Nevertheless, by virtue of the doctrine of equiva-

In other words, a right to a jury trial existed only if the plaintiff was not seeking an injunction. See 9 WRIGHT & MILLER, *supra* note 18, § 2312. Also see *Root v. Railway*, 105 U.S. 189 (1881), in which an infringement action was dismissed from equity because there was no independent basis (an injunction) to invoke equity jurisdiction. The plaintiff could not seek an injunction because the term of the patent had expired.

50. *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1567 (Fed. Cir. 1995) (Nies, J., dissenting); see also Karl B. Lutz, *Evolution of the Claims of U.S. Patents* (pt. 3), 20 J. PAT. OFF. SOC'Y 457, 470 (1938).

51. *E.g.*, *Finkelstein v. S.H. Kress & Co.*, 113 F.2d 431, 434 (2d Cir. 1940) ("[T]here was certainly no error in the trial for the judge left the question of infringement to the jury under instructions to find infringement if it determined that the defendant's device did 'the same work in substantially the same way and accomplished substantially the same result.'"); *Sherman-Clay & Co. v. Searchlight Horn Co.*, 214 F. 86, 97 (9th Cir. 1914) (quoting jury instructions that included the doctrine of equivalents); *Henney v. New York Cent. & H.R.R.*, 200 F. 960, 961 (S.D.N.Y. 1912) ("The jury was told they must find every element of that claim, or its allowable equivalent, present in one or more of the units of defendant's apparatus . . ."); see also *Machine Co. v. Murphy*, 97 U.S. 120, 125 (1877) (stating that infringement under the familiar function-way-result test should be found by "the court or jury, as the case may be").

52. Patent Act of 1870, ch. 230, § 26, 16 Stat. 201 (1870) (emphasis added) (repealed 1952).

53. Hantman, *supra* note 35, at 521.

54. 4 CHISUM, *supra* note 11, § 18.02[2]; Hantman, *supra* note 35, at 522; see also Lutz, *supra* note 50, at 470. This is probably the more likely explanation. One factor encouraging this trend was the Patent Office's examination procedure. Since the establishment of the Patent Office in 1836, claims had increasingly become the focus of the Patent Office's scrutiny. *Id.* at 462-66. This led to claims being recognized by the judiciary as the measure of the patent grant. See, e.g., *Burns v. Meyer*, 100 U.S. 671, 672 (1879) ("It is well known that the terms of the claims in letters-patent are carefully scrutinized in the Patent Office. . . . The courts, therefore, should be careful not to enlarge, by construction, the claim which the Patent Office has admitted . . .").

55. See *McClain v. Ortmayer*, 141 U.S. 419, 423-24 (1891) ("Nothing is better settled in the law of patents than that the patentee may claim the whole or only a part of his invention, and that if he only describe and claim a part, he is presumed to have abandoned the residue to the public."); *Keystone Bridge Co. v. Phoenix Iron Co.*, 95 U.S. 274, 278 (1877) ("When the terms of a claim . . . are

lents, the literal language of claims did not absolutely limit the scope of patent protection.<sup>56</sup>

The language of patent claims evolved correspondingly. Patentees attempted to describe their invention as broadly as possible, defining its "metes and bounds," and thus evolved the concept of "peripheral" claiming. The use of the broad, functional language<sup>57</sup> that implemented peripheral claims proliferated,

clear and distinct (as they always should be), the patentee, in a suit brought upon the patent, is bound by it. He can claim nothing beyond it." (citation omitted).

Some commentators interpret statements like those above as holding that the literal language of the claims absolutely limited the scope of patent protection. See, e.g., Hantman, *supra* note 35, at 523-25 ("A patentee could still allege as an infringement any structure whose elements were equivalent to the elements of the invention as described in the specification if the accused structure also fell within a literal reading of the claims."); cf. RIDSDALE ELLIS, PATENT CLAIMS §§ 49-50 (1949) (titled a section of his treatise, "The General Rule Is That Claims Cannot Be Extended by Court Interpretation Beyond Their Literal Terms by the Application of the Doctrine of Equivalents," but recognizing "Exceptions to the General Rule"). In fact, Justice Black's dissent in *Graver Tank*, see *infra* part II.B.3, seems to take this position. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 614 (1950) (Black, J., dissenting) (stating that the majority's decision "tacitly reject[ed]" prior case law).

The better interpretation of statements like those above is that the courts were not limiting absolute protection of the patent to the literal claim language, but were refusing to search the description portion of the specification to extract the essential elements of the invention—as they once had done, see *supra* text accompanying note 39—and were instead accepting the claim as the measure of the invention. Thus, courts began to "include all structures equivalent to the structures disclosed in the [claim] as infringing the patent." Compare with Hantman, *supra* note 35, at 519 (emphasis added) (as quoted in text accompanying *supra* note 44).

Most importantly, the cases show that the literal language of the claim did not absolutely limit the scope of patent protection. See *infra* note 56 and accompanying text.

56. There are several Supreme Court cases in which "a charge of infringement [was] made out, though the letter of the claims [was] avoided." *Westinghouse v. Boyden Power Brake Co.*, 170 U.S. 537, 568 (1898) (citing six Supreme Court cases in support of this proposition). It is true that, later, between 1895 and 1950, only one Supreme Court case, *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30 (1929), found infringement despite literal claim language. However, the lower courts were consistently applying the doctrine of equivalents and finding infringement despite literal claim language. Arthur H. Swanson, *A Discussion of the Application of the Doctrine of Equivalents in the Graver v. Linde Case*, 33 J. PAT. OFF. SOC'Y 19, 31 n.60 (1951) (citing 11 courts of appeals cases in support of this proposition). Also see the commentary on *Graver Tank*, an influential 1950 Supreme Court case, finding its holding consistent with established law. See *infra* note 69.

57. As used in this Note, a structural element is one which literally names the structure used in an embodiment of the invention. This was, almost exclusively, the kind of language used in "central" claims. See ELLIS, *supra* note 55, §§ 4-5. A functional element is one which identifies a particular element by its function. This is the kind of language used frequently in "peripheral" claims. See *id.* §§ 8-10. For example, a "roller press" is structural language, whereas a "means for compressing" is functional language. See *id.* § 10.

and the use of structural language in which claims had previously been drafted declined.<sup>58</sup>

In infringement actions, a two-part analysis developed. First, the accused device was compared to the literal language of the claim. Second, the doctrine of equivalents was applied.<sup>59</sup> For structural, "central" language in the claim, the doctrine of equivalents was applied as it had been previously (to expand protection beyond a term's literal meaning), except that it was applied to the structures recited in the claim rather than to those described in the rest of the specification.<sup>60</sup> Functional terms in claims were construed as if structural language had been used instead and thus, under the doctrine of equivalents, included equivalents of those structures.<sup>61</sup> The effect of application of the doctrine of equivalents to functional claim language, then, was to restrict the scope of protection to something less than the claim's broad literal language.<sup>62</sup> Today,

58. Hantman, *supra* note 35, at 522 ("In order to enlarge [a claim] as much as possible, patentees expanded their use of functional language. Functional language such as 'means for' and 'adapted to' followed by the function of a structural element replaced the structural element itself in the claims.")

59. "[F]or a decree of infringement under the peripheral system there are two prerequisites: (1) The claim must read in terms on the alleged infringing structure. (2) The alleged infringing structure must be the equivalent of that disclosed by the patentee." ELLIS, *supra* note 55, § 10.

60. See cases cited *infra* note 148. Some commentators either have not recognized this trend or do not agree with this view. For example, Hantman seems to believe that under the peripheral system the analysis for structural language was the same as for functional language—at least he makes no distinction when describing the analysis. See Hantman, *supra* note 35, at 522. This Note advocates that the doctrine of equivalents as applied to any particular structural term continued essentially as it had developed under the "central" claiming system, and the advent of peripheral claiming simply required courts to develop a comparable doctrine of equivalents analysis for the growing use of functional language that characterized the new system. See *infra* part IV.B.1 for further discussion of structural and functional equivalents.

61. Cf. ELLIS, *supra* note 55, § 10 ("[F]or a decree of infringement under the peripheral system there are two prerequisites: (1) The claim must read in terms on the alleged infringing structure. (2) The alleged infringing structure must be the equivalent of that disclosed by the patentee.") (emphasis added); Hantman, *supra* note 35, at 522 ("A patentee could still allege as an infringement any structure whose elements were equivalent to the elements of the invention as described in the specification [but only] if the accused structure also fell within a literal reading of the claims.") (emphasis added). This is how functional language is construed today by virtue of 35 U.S.C. § 112(6). See *infra* text accompanying note 73.

62. ELLIS, *supra* note 55, § 10. For example, a claim reciting the functional language "means for compressing" would probably not be construed to cover all possible "means for compressing," but only the roller press used in the disclosed embodiment of the invention and its equivalents. *Id.*

application of the doctrine of equivalents in this limiting way is commonly known as the "reverse doctrine of equivalents."<sup>63</sup> This had an interesting effect on claim language. If an accused device did not fall within the literal language of claims written in functional language, there was generally no infringement. Thus, peripheral claims served to limit the scope of patent protection and thus to notify the public as to what the inventor claimed as his invention.<sup>64</sup>

### 3. Graver Tank

In 1950, the U.S. Supreme Court decided *Graver Tank & Manufacturing Co. v. Linde Air Products Co.*<sup>65</sup> Although almost half a century old, *Graver Tank* is the most recent decision of the Supreme Court to deal with the doctrine of equivalents, and has thus become the basis of the Federal Circuit's doctrine of equivalents jurisprudence. The decision ensured a continued role for the doctrine of equivalents in the peripheral claiming system.<sup>66</sup>

*Graver Tank* involved alleged infringement of a patent for a welding flux. The broadest valid claim was for a flux contain-

Because functional language became so prevalent and structural language more rare, the doctrine of equivalents was applied less frequently to structural language. Consequently, some felt that applying the doctrine of equivalents to structural claim language to find infringement was obsolete and had been abandoned. See John A. Diener, *Claims of Patents*, 18 J. PAT. OFF. SOC'Y 389, 403 (1936).

63. See *SRI Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1123 (Fed. Cir. 1985) (en banc) ("The law . . . acknowledges that one may only appear to have appropriated the patented contribution, when a product precisely described in a patent claim is in fact 'so far changed in principle' that it performs in a 'substantially different way' and is not therefore an appropriation (reverse doctrine of equivalents).") (quoting *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608 (1950)).

64. *Mahn v. Hardwood*, 112 U.S. 354, 361 (1884) ("The public is notified and informed by the most solemn act on the part of the patentee, that his claim to invention is for such and such an element or combination, and for nothing more.")

As discussed below in part IV.B.1, peripheral claims (as implemented with functional language) did serve as notice because they were never construed more broadly than their literal meaning. However, the use of some structural language in claims has still continued and is necessary. Structural language was and is still construed more broadly than its literal meaning (to include equivalents). Thus, under the peripheral system, infringement might still be found despite the literal language of the claim.

65. 339 U.S. 605 (1950).

66. At least one commentator had confidently predicted that the Supreme Court was going to take the opportunity to eliminate the doctrine of equivalents altogether. See Timothy L. Tilton, *The Doctrine of Equivalents in Patent Cases*, 32 J. PAT. OFF. SOC'Y 861, 869 (1950).

ing an "alkaline earth metal silicate."<sup>67</sup> However, the accused flux contained manganese silicate, a metal silicate—but not an alkaline earth metal silicate. The Court affirmed the trial court's finding of infringement under the doctrine of equivalents even though the plaintiff's claim did not literally "read on" the infringing device.<sup>68</sup> Thus, *Graver Tank* reaffirmed that, even under peripheral claiming, the doctrine of equivalents could result in infringement despite literal claim language.

*Graver Tank* was consistent with previous cases<sup>69</sup> although some felt that *Graver Tank's* "expansive" doctrine of equivalents was inconsistent with modern peripheral claiming practice.<sup>70</sup> Two commentators asserted that the Court was not re-affirming the use of the doctrine, but was applying it only as an "equitable last resort."<sup>71</sup> Whether the Court actually intended to do so is doubtful.<sup>72</sup>

#### 4. Patent Act of 1952

In 1952, Congress passed the modern patent statute, which includes § 112, ¶ 6, a provision that affirms the use of broad functional language in claims (as "means plus function" elements) but restricts the construction of these functional terms to "the corresponding structure, material, or acts described in the specification and equivalents thereof."<sup>73</sup>

67. *Graver Tank*, 339 U.S. at 610.

68. See *id.* at 613 (Black, J., dissenting) ("[T]he trial court admitted that [defendant's] flux did not 'literally infringe' [plaintiff's] patent. Nevertheless it invoked the judicial 'doctrine of equivalents' to broaden the claim . . .").

69. Leon Chasan, *Graver v. Linde—A Valid Patent*, 32 J. PAT. OFF. SOC'Y 285, 297 (1950) ("the Court was following established patent law"); John W. Melville, *Some Aspects of Patent Infringement*, 32 J. PAT. OFF. SOC'Y 890, 899 (1950) (disagreeing with the application of the facts to the law, but agreeing with the statement of the law); Swanson, *supra* note 56, at 33 ("[T]he *Graver v. Linde* case seems unquestionably to have strengthened the Doctrine of Equivalents . . ."). But see *Graver Tank*, 339 U.S. at 614 (Black, J., dissenting) (arguing that the majority's decision "tacitly reject[ed]" prior case law); Hantman, *supra* note 35, at 554 (arguing that the Federal Circuit should decide that the *Graver Tank* decision was an anomaly). Hantman believes, as probably did Justice Black, that the prior cases had held that the literal language of the claims always limited the scope of patent protection. See Hantman, *supra* note 35, at 531. The fact is that there were cases holding otherwise. See cases cited *supra* note 56.

70. See, e.g., Roylance & Steadman, *supra* note 29, at 491.

71. *Id.* at 504.

72. See *infra* part IV.A.3.

73. 35 U.S.C. § 112 (1994).



Section 112, ¶ 6 of the Patent Act of 1952 was meant to codify the doctrine of equivalents for functional claim elements,<sup>74</sup> and thus to limit the scope of functional language to something less than its literal import. Confusion has arisen, however, because there was no similar codification for structural elements. In fact, the Federal Circuit has taken the position that "equivalents" for purposes of § 112, ¶ 6 are different than "equivalents" for purposes of the doctrine of equivalents.<sup>75</sup> This position has affected the Federal Circuit's application of the doctrine of equivalents and has raised difficult questions about the doctrine's character, resulting in the confusion that eventually led to the controversy in *Hilton Davis*.

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74. Congressman Joseph R. Bryson, Chairman of Subcommittee No. 3 of the House Committee on the Judiciary that oversaw the drafting of the Patent Act of 1952, Address to the Philadelphia Patent Law Association (Jan. 24, 1952), in 98 CONG. REC. A415, A416 (1952) [hereinafter Address by Congressman Bryson] ("This provision in reality will give statutory sanction to combination claiming as it [has been] understood . . . . All the elements of a combination now will be able to be claimed in terms of what they do as well as in terms of what they are. . . . This provision also gives recognition to the existence of the doctrine of equivalents."); see also *In re Fuetterer*, 319 F.2d 259, 264 n.11 (C.C.P.A. 1963) ("[A] considerable body of case law, if not the preponderance thereof . . . interpreted broad statements of structure, e.g., 'means,' plus a statement of function in the manner now sanctioned by the statute."); *Patent Law Codification and Revision: Hearings on H.R. 3760 Before Subcomm. No. 3 of the House Comm. on the Judiciary*, 82d Cong., 1st Sess. 95 (1951) [hereinafter *Codification and Revision Hearings*] (statement of T. Hayward Brown, Chief, Patent Litigation Unit, Claims Division, Department of Justice) ("The section . . . introduces into the statute for the first time the controversial doctrine of equivalents . . . ."); Adelman & Francione, *supra* note 29, at 724 n.221 ("[Section 112, paragraph 6] should be viewed as a legislative codification of the reverse doctrine of equivalents."); Hantman, *supra* note 35, at 546 ("The language of 35 U.S.C. 112 and its application to the interpretation of functional claims during infringement is clearly a restrictive application of the doctrine of equivalents. It is the Westinghouse 'doctrine of equivalents' codified for the first time in the patent statute.") (emphasis omitted).

75. See *D.M.I., Inc. v. Deere & Co.*, 755 F.2d 1570, 1575 (Fed. Cir. 1985) ("[T]he word 'equivalent' in § 112 should not be confused . . . with the 'doctrine of equivalents.'"); *P.M. Palumbo v. Don-Joy Co.*, 762 F.2d 969, 975 n.4 (Fed. Cir. 1985) ("[T]here is a difference between a doctrine-of-equivalents analysis and a literal infringement analysis involving 'equivalents' under § 112 . . . ."); *Valmont Indus., Inc. v. Reinke Mfg. Co.*, 983 F.2d 1039, 1042-43 (Fed. Cir. 1993) ("Equivalency under section 112 . . . differs from the doctrine of equivalents. . . . In sum, section 112, ¶ 6, and the doctrine of equivalents have separate origins and purposes.").

## III. HILTON DAVIS v. WARNER-JENKINSON

## A. The Facts

Hilton Davis and Warner-Jenkinson both manufacture dyes used to color food, drugs, and cosmetics.<sup>76</sup> In 1982, each company began investigating less expensive and less wasteful methods of separating impurities from these dyes.<sup>77</sup> By March 1983, Hilton Davis had successfully developed an effective "ultrafiltration" process<sup>78</sup> and was issued a patent in December 1985.<sup>79</sup> The patent claims a process for purifying commercial dyes by "subjecting an aqueous solution . . . to ultrafiltration through a membrane having a nominal pore diameter of 5-15 Angstroms under a hydrostatic pressure of approximately 200 to 400 p.s.i.g., at a pH from approximately 6.0 to 9.0."<sup>80</sup>

During this time, Warner-Jenkinson independently developed a similar ultrafiltration process and put it into commercial use in February 1986,<sup>81</sup> without actual notice of Hilton Davis's patent.<sup>82</sup> Warner-Jenkinson's process operated at 500 p.s.i.g.,<sup>83</sup> at a pH of 5.0, and used a membrane with pores of roughly the same nominal diameter.<sup>84</sup> In October 1986, Warner-Jenkinson learned of Hilton Davis's patent from a technical journal, but relied on a patent attorney's opinion that its process did not infringe Hilton Davis's patent.<sup>85</sup>

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76. Hilton Davis Chem. Co. v. Warner-Jenkinson Co., 62 F.3d 1512, 1515 (Fed. Cir. 1995).

77. *Id.*

78. *Id.* at 1552 (Nies, J., dissenting).

79. *Id.* at 1552-53 (Nies, J., dissenting).

80. *Id.* at 1515 (emphasis omitted).

81. *Id.* at 1552 (Nies, J., dissenting).

82. *Id.* at 1516.

83. *Id.* at 1580 & n.33 (Nies, J., dissenting). There seems to be some confusion over the pressure at which Warner-Jenkinson's process operated. The majority states that the process operated at pressures ranging from 200-500 p.s.i.g. *Id.* at 1516. However, Judge Nies's dissent points out that "the correct measuring point" is "the upstream side of the membrane," at which "the pressure was 500 p.s.i.g." *Id.* at 1580 n.33 (Nies, J., dissenting). Judge Nies seems to be correct since the majority later comments that by the terms of the patent itself, the relevant pressure is defined "as applied to the upstream side of the membrane." *Id.* at 1525.

84. *Id.* at 1516. "While Hilton Davis did not present actual pore size measurements for Warner-Jenkinson's membrane, several experts testified that a membrane collecting [the relevant dyes] would have a nominal pore diameter of 5 to 15 Angstroms." *Id.*; see also *id.* at 1525 (commenting on evidence that measuring exact pore sizes is difficult and concluding that the record contained sufficient evidence of substantially similar pore diameters).

85. *Id.* at 1553 (Nies, J., dissenting). The attorney's opinion was that Warner-

In 1991, Hilton Davis sued Warner-Jenkinson for patent infringement based on the doctrine of equivalents. Warner-Jenkinson defended on the grounds that the doctrine of equivalents is an equitable doctrine. As such, it claimed that the doctrine should be applied only if the equities of the case favored the plaintiff. Warner-Jenkinson argued that because it had independently developed the process and because there was no evidence of copying or piracy, the equities were in its favor and the doctrine should not be applied.<sup>86</sup> Despite Warner-Jenkinson's objections, the court submitted the issue to the jury. The jury returned a verdict against the defendant, finding infringement under the doctrine of equivalents.<sup>87</sup>

After a three-member panel of the Federal Circuit heard the appeal, the case was granted en banc review. The court held that a trial judge has no discretion whether to apply the doctrine and that, in jury trials, infringement under the doctrine of equivalents is a question of fact and thus a question for the jury.<sup>88</sup>

### B. *The Majority's Reasoning*

To begin its analysis, the court established that the issue of infringement under the doctrine is a question of fact, not of law.<sup>89</sup> The court noted that the Supreme Court clearly stated

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Jenkinson's process parameters were different enough than Hilton Davis's claimed parameters that there was no literal infringement, nor infringement under the doctrine of equivalents. *Id.* (Nies, J., dissenting). Patent counsel also believed that the Hilton Davis patent was invalid due to obviousness in light of prior publications about ultrafiltration. *Id.* (Nies, J., dissenting).

86. *Id.* at 1522-23.

87. However, the jury also found that the infringement was not willful and awarded Hilton Davis only 20% (\$3.5 million) of its claim. *Id.* at 1516, 1553 (Nies, J., dissenting).

88. *Id.* at 1522.

89. Whether an issue is a question for the jury depends on two independent requirements. First, the issue must be a question of fact, as opposed to a question of law. Here, the court's emphasis on this prong is somewhat puzzling. No one disputes that the question is factual. *See id.* at 1541 (Plager, J., dissenting). Perhaps the majority's approach was meant to rebut the idea that the doctrine of equivalents is "an equitable remedy," as characterized in the questions certified for en banc review. *See id.* at 1516. The doctrine of equivalents is likened by some to the equitable remedy of reformation of contract. *See infra* part IV.C. Nevertheless, many of the issues underlying a decision to grant reformation of contract are questions of fact as surely as whether something is an "equivalent." Reformation of a contract is referred to as a remedy because it has as its final objective, if warranted, to amend the terms of a contract. Similarly, the doctrine of equivalents has as its final objective, if warranted, to "amend" the literal terms of a claim. In short,

as much, and used a "clearly erroneous" standard of review for the infringement issue in *Graver Tank*.<sup>90</sup>

The *Hilton Davis* majority next addressed whether the doctrine was a matter of equity, acknowledging that many of its decisions had labeled the doctrine an "equitable" one.<sup>91</sup> The court explained, however, that "allusions to equity invoke equity in its broadest sense—equity as general fairness."<sup>92</sup> The court stated that by labeling the doctrine as "equitable," Federal Circuit panels did not intend to "invoke[] equity in the technical sense."<sup>93</sup> The court then turned to *Graver Tank* to support this interpretation. It noted that *Graver Tank* did not discuss any of the principles common to equity, such as "the 'clean hands' doctrine, the elevated burden of proof, the abuse of discretion standard of review, or the mandatory balancing of the equities."<sup>94</sup> Furthermore, *Graver Tank* credited the origin of the doctrine to *Winans v. Denmead*, "a case at law, not equity."<sup>95</sup> The *Hilton Davis* majority also cited *Sanitary Refrigerator Co. v. Winters*<sup>96</sup> and *Seymour v. Osborne*<sup>97</sup> to support a

even though the result of applying the doctrine of equivalents might be considered a "remedy," the underlying issue of whether something is an "equivalent" remains a question of fact.

Second, the issue must be one of law, not of equity. As Judge Plager notes in his dissent, if the question is one of equity, an inquiry into the factual/legal nature of the question is irrelevant. It is still a question for the judge. *Hilton Davis*, 62 F.3d at 1543 (Plager, J., dissenting); see also Hofmann, *supra* note 5, at 1050 ("[M]erely identifying a determination as factual does not ensure the right to a jury trial if the question involves an issue that is entirely equitable.").

The explanation provided in this Note assumes that the court is simply being thorough by addressing each of the two sub-issues that might have a bearing on whether the question is one for the jury. This explanation is somewhat questionable, however, because the court does not address each issue independently. Instead, at times it mixes its conclusion that the question is one of fact with its discussion of whether the doctrine is an equitable one: "While recognizing the equity, or fairness, promoted by the doctrine of equivalents, . . . the Supreme Court stated unequivocally that application of the doctrine is a question of fact." *Hilton Davis*, 62 F.3d at 1521.

90. *Hilton Davis*, 62 F.3d at 1521. The "clearly erroneous" standard of review is used only for factual findings of a judge in a bench trial. See Fed. R. Civ. P. 52(a).

91. *Hilton Davis*, 62 F.3d at 1521.

92. *Id.*

93. *Id.*

94. *Id.*

95. *Id.* Although *Winans v. Denmead* was not the first case to apply the doctrine of equivalents, it was the first case to affirm the use of the doctrine in the face of a statutory claiming requirement. See *supra* note 41 and accompanying text.

96. 280 U.S. 30, 42 (1929). The majority's pinpoint citation to *Sanitary Refrigerator* must be an error, since the page cited mentions nothing which supports the

persuasive observation: "[T]he Supreme Court has more than once stated that every patent owner is entitled to invoke the doctrine of equivalents—a proposition inimical to the hypothesis that the doctrine is equitable."<sup>98</sup>

In a rebuttal to Judge Plager's dissenting opinion, the *Hilton Davis* court also addressed the argument that "because the Patent Act of 1952 does not expressly provide a general remedy for infringement under the doctrine of equivalents, the doctrine must be, like other judge-created extensions of inadequate legal remedies, purely equitable."<sup>99</sup> The majority responded by stating that infringement under the doctrine of equivalents could not be equitable because "[t]he Supreme Court has long held that the question of infringement, whether literal or by equivalents, is a question of fact for the jury if properly demanded."<sup>100</sup> The majority then cited an 1895 U.S. Supreme Court case, *Coupe v. Royer*,<sup>101</sup> as an example and explained it as asserting that "the question of infringement under the doctrine presented a question requiring trial to the jury."<sup>102</sup>

The majority also responded to Judge Plager's argument that the Patent Act of 1952 silently repealed the doctrine of equivalents, rendering it "extrastatutory and thus equitable."<sup>103</sup> The majority replied by quoting dictum from a 1961 U.S. Supreme Court case stating that "§ 271(a) of the new Patent Code [of 1952], which defines 'infringement,' left intact *the entire body of case law on direct infringement.*"<sup>104</sup> The *Hilton*

proposition.

97. 78 U.S. 516, 556 (1870).

98. *Hilton Davis*, 62 F.3d at 1521.

99. *Id.* at 1525.

100. *Id.*

101. 155 U.S. 565 (1895).

102. *Hilton Davis*, 62 F.3d at 1525 (citing *Coupe v. Royer*, 155 U.S. at 579-80).

See, however, Judge Plager's response to this interpretation of *Royer*. *Id.* at 1541 (Plager, J., dissenting) ("the opinion makes no such holding").

Even if the majority's interpretation of *Royer* is incorrect, there is dictum in another U.S. Supreme Court case which supports the majority's position. See *Machine Co. v. Murphy*, 97 U.S. 120, 125 (1877) (stating that infringement under the doctrine of equivalents should be found by "the court or jury, as the case may be"). Moreover, there were several lower court cases in which the issue of infringement under the doctrine of equivalents was tried by a jury and reviewed favorably on appeal. See cases cited *supra* note 51.

103. *Hilton Davis*, 62 F.3d at 1527.

104. *Id.* at 1526 (quoting *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 342 (1961)) (alteration in original). Direct infringement, as opposed to contributory infringement, encompasses both literal infringement and infringe-

*Davis* court asserted that the statutory definition of infringement has remained essentially the same since 1790, and as part of the infringement analysis, so has the doctrine of equivalents.

The majority also addressed Judge Plager's dissenting argument that "the claiming requirement [of patent acts since 1870] compels limiting the doctrine of equivalents by equitable principles."<sup>105</sup> Judge Plager contended that "[c]laiming practice today serves a purpose which the earlier practice did not, namely providing competitors with notice of the precise invention that they may not make, use, or sell."<sup>106</sup> The majority responded by noting that this argument was used by Justice Black but was rejected by the *Graver Tank* majority.<sup>107</sup> Moreover, the *Hilton Davis* court explained how the notice provided by peripheral claiming is still consistent with the doctrine.<sup>108</sup> The majority also pointed to *Graver Tank's* "reliance" on *Machine Co. v. Murphy* for an explanation of the doctrine of equivalents—"a case involving a patent granted in 1859, eleven years before the advent of peripheral claiming."<sup>109</sup> The court emphasized that the advent of peripheral claiming in the Patent Act of 1870 could not have altered "the legitimacy or basis of the doctrine of equivalents," otherwise "the [*Graver Tank*]

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ment under the doctrine of equivalents. A person directly infringes if he makes, uses, or sells a patented device. 35 U.S.C. § 271(a) (1994). A person contributorily infringes if he sells a component of a patented device "constituting a material part of the invention, knowing [it] to be especially made or especially adapted for use in an infringement." § 271(c).

105. *Hilton Davis*, 62 F.3d at 1526.

106. *Id.* at 1538 (Plager, J., dissenting).

107. *Id.* at 1526. Actually, Justice Black argued that because of the statutory claiming requirement, the doctrine of equivalents should be eliminated outright, not simply limited by equitable principles. See *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 613-14 (1950) (Black, J., dissenting).

108. Many feel that "use of the doctrine of equivalents conflicts with the notion that the claims define the scope of patent protection." Adelman & Francione, *supra* note 29, at 715. However, the majority explains that "equivalency, like exact copying, gives rise to infringement liability because it too is a relationship of identity, a proposition quite consistent with the requirement that the patent claim 'particularly point out' and thereby circumscribe the protected invention." *Hilton Davis*, 62 F.3d at 1526 (emphasis omitted). Just because the literal language of claims does not absolutely limit the scope of patent protection does not mean that the claims do not define the scope of the invention. The doctrine of equivalents is applied to the language of the claims, not the language of the specification.

109. *Hilton Davis*, 62 F.3d at 1526 (citation omitted).

Court's reliance on *Machine Co. v. Murphy* [would have been] utterly inexplicable."<sup>110</sup>

#### IV. ANALYSIS: AT LAW OR IN EQUITY?

Whether the issue of infringement under the doctrine of equivalents is one for the jury depends primarily on whether the issue arises in the context of an action at law or in equity.<sup>111</sup> The role of the jury in patent infringement actions was once clear. Under the peripheral claiming system before the merger of law and equity in 1938, a patentee seeking damages could only bring an infringement action in a court of law and a jury was used. On the other hand, when a patentee sought an injunction, the injunction invoked the jurisdiction of the courts of equity, and no jury trial right attached. The doctrine of equivalents was applied in both forums.<sup>112</sup> A patentee seeking damages at law did not stay the proceeding in order to seek application of the doctrine of equivalents in equity and then return, if necessary, to have a jury assess damages.

If the inquiry were as simple as a look at history, the answer would be clear. In *Hilton Davis*, the majority took this approach, showing how the doctrine of equivalents had been consistently applied under the peripheral claiming system as a question of fact for the jury. However, the majority failed to distinguish between the modern doctrine of equivalents that it was applying and the doctrine as originally applied under peripheral claiming—upon which it based its historical reasoning. The differences in the modern doctrine are relevant because they have rendered the modern doctrine of equivalents a distinctly equitable doctrine. And because the Supreme Court's Seventh Amendment jurisprudence emphasizes the "nature of the issue to be tried rather than the character of the overall action,"<sup>113</sup> there is arguably no right to a jury in the application of the doctrine of equivalents.

110. *Id.*

111. The question must also be one of fact, rather than law. There is virtually no question that infringement under the doctrine of equivalents is a question of fact. *See supra* note 89.

112. *See supra* notes 49-51 and accompanying text.

113. *Ross v. Bernhard*, 396 U.S. 531, 538 (1970) (finding a right to a jury trial to all issues relevant to determination of the first of two claims brought in the context of a shareholder's derivative action—an action previously available only in equity).

Part IV.A examines the history of the doctrine of equivalents, concluding that of all the historical changes to the doctrine, none except its modern treatment by the Federal Circuit has rendered the doctrine an equitable one. Part IV.B examines how modern changes in the doctrine of equivalents support the claim that the authority for exercising the doctrine of equivalents now derives from a court's equity powers. This Part illuminates the distinctions between the modern doctrine of equivalents and the doctrine as originally applied under peripheral claiming. It points out that the determination of structural and functional equivalents has been allocated differently based on the Federal Circuit's treatment of § 112, ¶ 6. The result is a modern doctrine of equivalents analysis whose two prongs are distinguished as a statutory and non-statutory analysis, rather than as a literal language and non-literal language analysis. Part IV.C shows why there is no right to a jury trial on the issue of infringement under the doctrine of equivalents based on the Supreme Court's modern Seventh Amendment jurisprudence. Nevertheless, Part IV.D proposes avoiding these difficult questions altogether by returning the doctrine to its historical roots, thus making it clear that the question of infringement under the doctrine of equivalents is a question for the jury.

#### A. *The Transformation Theory*

A basic argument of the "matter of equity" paradigm is that at some point, the doctrine of equivalents was transformed to an equitable remedy, making it a question for the court, not the jury. Advocates of this "transformation theory" assert, variously, that the transformation was caused by the Patent Act of 1870, the advent of peripheral claiming, *Graver Tank*, or the Patent Act of 1952.<sup>114</sup> The general argument is that the doctrine of equivalents has become extrastatutory—and thus equitable—in two ways: By its absence in the patent statutes and by its seeming conflict with any statutory claiming requirement. However, if anything "transformed" the doctrine, it

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114. For example, Judge Plager's dissent asserted that the advent of peripheral claiming "altered the . . . basis of the doctrine." *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1526 (Fed. Cir. 1995) (majority's characterization of the dissent's argument). Judge Plager also argued that the 1952 Act failed to mention the modern-day doctrine of equivalents and rendered it extrastatutory; justification for its application thereafter "ha[d] its roots in a court's traditional equity powers." *Id.* at 1537 (Plager, J., dissenting).



was none of the four events mentioned above, but the Federal Circuit's treatment of § 112, ¶ 6 and the resulting modern analytical framework for infringement. The modern framework further highlights the doctrine's extrastatutory nature, and bolsters the doctrine's image as an inadequate-remedy-at-law doctrine.

### 1. *The Patent Act of 1870*

The Patent Act of 1870 could not have transformed the doctrine into an equitable remedy. Although it made no mention of the doctrine, neither had the previous statutes under which the "central claiming" doctrine of equivalents had developed.<sup>115</sup> Moreover, commentary on the Act of 1870 suggests that, in general, the Act was only attempting to codify what was already the practice.<sup>116</sup>

Even though the Act made courts of equity the favored forums by allowing them to award damages in patent infringement actions, it did not make them the only forums in which the doctrine of equivalents was applied. An action in equity could be sustained only if there was an independent basis for equitable jurisdiction, such as a plaintiff's prayer for an injunction.<sup>117</sup> Pleading infringement by equivalents was not considered such an independent basis, since the doctrine of equivalents was used in infringement actions in both courts of law and equity. Thus, when infringement actions were brought at law, juries applied the doctrine of equivalents.<sup>118</sup>

### 2. *The advent of peripheral claiming*

As the *Hilton Davis* majority showed, the advent of peripheral claiming also did not alter the basis of the doctrine of equivalents. Although many in the patent community feel that "use of the doctrine of equivalents conflicts with the [peripheral claiming] notion that the claims define the scope of patent protection,"<sup>119</sup> history shows that the doctrine of equivalents continued to be applied by juries in actions at law. With the acceptance of the peripheral method, the doctrine of

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115. See *supra* part II.B.1.

116. Lutz, *supra* note 50, at 470.

117. See *supra* note 49 and accompanying text.

118. See *supra* note 51 and accompanying text.

119. Adelman & Francione, *supra* note 29, at 715.

equivalents was applied as a second prong of the infringement analysis—to the structures recited in the claims rather than to the structures of the embodiment described in the specification.<sup>120</sup>

### 3. Graver Tank

It is conceivable that the *Graver Tank* Court meant to transform the doctrine of equivalents into a matter of equity,<sup>121</sup> or to allow, at the very least, courts to apply the “expansive half”<sup>122</sup> of the doctrine at their discretion. However, the strongest arguments suggest that the Court did not intend to change the basis of the doctrine.<sup>123</sup> Since *Graver Tank* was a bench trial, there is no discussion of the relative roles of judge and jury. However, there is language in the Court’s opinion suggesting that the doctrine should not be applied in every case.<sup>124</sup> In addition, the Court considered equitable factors,

120. See *supra* part II.B.2.

121. At least some have thought so. Roylance & Steadman, *supra* note 29, at 499 (“[T]he doctrine no longer has a place as a necessary legal rule. . . . It is submitted that the decision of the Court in the *Graver Tank* case can be interpreted as a tacit recognition of [an] equitable need rather than a mere routine application of the doctrine of equivalents in its historical form.”); see also *International Visual Corp. v. Crown Metal Mfg. Co.*, 991 F.2d 768, 774-75 (Fed. Cir. 1993) (Lourie, J., concurring) (“The Supreme Court did not make clear in *Graver Tank* whether the tripartite [function-way-result] tests themselves constitute the application of equity or whether there is an equitable duty upon a court beyond the application of the tripartite tests.”).

122. In this Note, “expansive half” of the doctrine of equivalents is used to refer to the doctrine of equivalents in its capacity to expand the literal meaning of a claim element. This was characteristic of the doctrine of equivalents as applied under the “central” claiming system. See *supra* part II.B.1. After the advent of peripheral claiming, the doctrine of equivalents more frequently limited the scope of protection—of the broad, functional language used to implement peripheral claims. This might be termed, then, the “restrictive half” of the doctrine of equivalents. As explained in part IV.B.1, this Note suggests that the “restrictive half” of the doctrine of equivalents is essentially the same as the “functional half” of the doctrine of equivalents, since when the doctrine of equivalents was applied to a functional term, the doctrine limited protection to something less than the term’s literal meaning. Part IV.B.1 suggests that, similarly, the “expansive half” is the same as the “structural half” of the doctrine of equivalents, since it is only when the doctrine of equivalents is applied to a structural term that it has expanded protection beyond the term’s literal meaning.

123. See *infra* text accompanying notes 126-129.

124. The Court stated that the question before it was “the applicability of the doctrine of equivalents to findings of fact in this case,” *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 606 (1950) (emphasis added), and that the doctrine was “ready and available for utilization when the proper circumstances arise,” *id.* (emphasis added). It then declared that “a patentee may invoke this doc-

such as evidence of copying or pirating of the invention.<sup>125</sup> Never before had these factors entered an infringement analysis. Since application of the "expansive half" of the doctrine had become so infrequent in modern patent practice, the Court might have been applying it as a matter of equity.

On the other hand, the Court does not seem to believe its version of the doctrine of equivalents was a new one.<sup>126</sup> If the Court meant to apply the doctrine as a matter of equity and to make such a significant change in the law, it would likely have said so. Similarly, if the Court intended to split its analysis into a "whether-it-should-be-applied" prong and an "is-it-equivalent" prong, the opinion does not reflect such a clearly divided approach. Many of the same factors advanced under what might be viewed as the Court's "whether-it-should-be-applied" prong<sup>127</sup> are also included in what might be termed the Court's "is-it-equivalent" discussion.<sup>128</sup> Most significantly, no court has interpreted *Graver Tank* as making such a change in the law.<sup>129</sup>

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trine 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." *Id.* (quoting *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30, 42 (1929)) (emphasis added).

125. The Court stated that the doctrine is meant to discourage the "unscrupulous copyist" and those who seek to "pirate an invention." *Id.* at 607. A statement of the doctrine's purpose seems innocuous enough, but the Court later implied that this behavior was somehow involved in the doctrine's application. "[T]he record contains no evidence of any kind to show that [the accused flux] was developed as the result of independent research or experiments." *Id.* at 611. And "[w]ithout some explanation or indication that [the accused flux] was developed by independent research, the trial court could properly infer that the accused flux is the result of imitation rather than experimentation or invention." *Id.* at 612.

126. The Court attributed the origin of the doctrine to *Winans v. Denmead* and stated that the doctrine had been "consistently applied by this Court and the lower federal courts, and continues today ready and available for utilization when the proper circumstances for its application arise." *Id.* at 608. If the Court had stopped after "available for utilization," its intentions would have been more clear. The words "when the proper circumstances for its application arise" do not fit with the doctrine as a routinely-applied rule for infringement.

127. *See id.* at 612.

128. *See id.* at 609-11.

129. *See* Cary W. Brooks, *Equitable Triggers for Invoking the Doctrine of Equivalents*, 76 J. PAT. & TRADEMARK OFF. SOC'Y 220, 224 (1994) (concluding that the "silence" of courts for four decades confirms that the Court intended no change in the law); Smith, *supra* note 3, at 915 (stating that if the Court meant to make the basis of the doctrine of equivalents an equitable one, then "nobody has taken the Court's advice seriously").

4. *The Patent Act of 1952*

Some advocates of the transformation theory assert that Congress must have meant to do away with the doctrine of equivalents when it refrained from codifying the doctrine in the 1952 Patent Act.<sup>130</sup> Moreover, if, as this Note advances, the Patent Act of 1952 explicitly codified "one-half" of the doctrine of equivalents in § 112, ¶ 6,<sup>131</sup> then the modern statute seems to lend even stronger support to the Act's transforming power. It might then be argued that Congress meant to do away with the structural half of the doctrine of equivalents because it codified the doctrine in its application to functional language and did not do so for structural language.<sup>132</sup>

The *Hilton Davis* majority's only rebuttal to these arguments was dictum from a 1961 Supreme Court case stating that the 1952 Act "left intact the entire body of case law on direct infringement."<sup>133</sup> However, there are stronger rebuttals. First, the *primary* purpose for appending ¶ 6 to § 112 was to revalidate the use of functional language in claims,<sup>134</sup> not to codify the doctrine of equivalents.<sup>135</sup> Congress was simply

130. *E.g.*, *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1539 (Plager, J., dissenting) ("If Congress wanted to provide for [the doctrine of equivalents], it knew how to do it.").

131. *See supra* notes 74-75 and accompanying text.

132. *Hantman, supra* note 35, at 546; *see also* *Bullard Co. v. General Elec. Co.*, 234 F. Supp. 995, 997 (W.D. Va. 1964) (stating that Congress may have intended to eliminate the doctrine of equivalents, but the legislative history throws no light on this point). This argument is stronger than the dissent's. The dissent simply advocates that "[i]f Congress wanted to provide for equivalents to what is claimed, it knew how to do it." *Hilton Davis*, 62 F.3d at 1539 (Plager, J., dissenting). Of course, the same argument was made for the Patent Act of 1870, but was rejected in *Graver Tank*.

133. *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 342 (1961), *quoted in* *Hilton Davis*, 62 F.3d at 1526.

134. Just three years earlier, the Supreme Court had cast doubt on the now common practice in *Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1 (1946).

135. The only direct legislative history explaining the paragraph implies its primary purpose: "A new paragraph relating to functional claims is added." S. REP. NO. 1979, 82d Cong., 2d Sess. 19 (1952), *reprinted in* 1952 U.S.C.C.A.N. 2394, 2412; *see also* Address by Congressman Bryson, *supra* note 74, at A416 ("This provision in reality will give statutory sanction to combination claiming as it was understood before the *Halliburton* decision. All the elements of a combination now will be able to be claimed in terms of what they do as well as in terms of what they are."). In addition, the opinion of P.J. Federico, then Examiner-in-Chief of the Patent Office was included in his *Commentary on the New Patent Act*, 35 U.S.C.A. 1, 25 (1954 ed.), *quoted in* *Hantman, supra* note 35, at 544: "The last paragraph of section 112 relating to so-called functional claims is new. . . . It is unquestionable

reauthorizing the use of functional language and, in the process, re-authorized the application of the doctrine of equivalents to functional language as it had been applied before. Second, there is no indication that Congress refrained from codifying the doctrine's application to structural language to reverse the case law. In fact, the implications are just the opposite.<sup>136</sup> Had Congress foreseen the ramifications, it might have codified the doctrine of equivalents as it had been applied to structural language as well. In sum, the Patent Act of 1952 was not meant to affect the doctrine of equivalents.

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that some measure of greater liberality in the use of functional expressions . . . is authorized than had been permitted by some court decisions, and that decisions such as that in [*Halliburton*] are modified or rendered obsolete . . ." See also *Valmont Indus., Inc. v. Reinke Mfg. Co.*, 983 F.2d 1039, 1042 (Fed. Cir. 1993) ("Congress added this language to the Patent Act of 1952 to change the doctrine enunciated in [*Halliburton*]."); *Codification and Revision Hearings*, *supra* note 74, at 45 (Report of the Laws and Rules Committee of the American Patent Law Association) ("Section 112 in the last paragraph recognizes the validity of combination claims wherein the novelty is expressed in functional terms and . . . offset[s] the much criticized theory of the *Halliburton* case . . .").

136. One of the overriding purposes of the subcommittee which drafted the statute was simply to codify the existing patent law and "only such changes in existing laws as . . . would meet with substantial approval of the patent profession." *Codification and Revision Hearings*, *supra* note 74, at 23 (Statement of Henry R. Ashton, Representing the Coordinating Committee on Revision and Amendment of the Patent Laws of the National Council of Patent Law Associations) (quoting instructions to drafting committee).

Justice Black's dissent in *Graver Tank* argued that the statutory reissue process was meant by Congress to eliminate and to provide an alternative to use of the doctrine of equivalents. 339 U.S. 605, 614-17 (Black, J., dissenting). The reissue process allows a patentee to exchange the claims issued with her patent for narrower claims at any time during the term of the patent or for broader claims within two years of issuance. 35 U.S.C. § 251 (1994). In contrast to the traditional application of the doctrine of equivalents, a court may, under principles of equity, permit those who are found to infringe the broadened claims of a patent to continue to infringe "to the extent . . . [that] the court deems equitable for the protection of investments made or business commenced before the grant of the reissue." § 252.

Justice Black's argument was rejected by the *Graver Tank* majority and, additionally, reveals a misunderstanding that persists today. The reissue process is different than the doctrine of equivalents and has co-existed with it since 1832 as a judicially developed and then codified doctrine. See *Grant v. Raymond*, 31 U.S. (6 Pet.) 218 (1832). The reissue process allows a patentee to broaden or narrow the literal language of her claim by adding additional claim elements or by modifying existing ones. The doctrine of equivalents simply construes existing elements as including their equivalents. The scope of a claim as issued includes equivalents of structural claim elements. Thus, reissue changes the scope of a claim, whereas the doctrine of equivalents does not.

5. *The modern Federal Circuit analysis*

If anything has transformed the doctrine of equivalents into a matter of equity, it is the current infringement analysis. In the general scheme of the patent system, the modern doctrine's character is decidedly like those of the Chancery doctrines. Suits at law were those "in which *legal* rights were to be ascertained and determined, in contradistinction to those where equitable rights alone were recognized."<sup>137</sup> Many in the patent community argue that "[t]he legal rights established by a patent are defined by [the literal language of the] claims," and the doctrine of equivalents is available only when there is not an adequate remedy at law.<sup>138</sup>

This paradigm is bolstered by several facts. First, infringement under the modern doctrine of equivalents is applied *only* if literal infringement fails.<sup>139</sup> Second, the modern patent practice has emphasized the role of claims, and courts have often stated that "it is the claim, [not the specification,] which measures the grant to the patentee."<sup>140</sup> A common sentiment in the patent community is that "use of the doctrine of equivalents conflicts with the notion that the claims define the scope of patent protection."<sup>141</sup> Moreover, the modern doctrine of equivalents is noticeably absent from the patent statutes.<sup>142</sup> On its face, this makes the doctrine appear all the more like an

137. *Parsons v. Bedford*, 28 U.S. (3 Pet.) 433, 447 (1830).

138. *Hilton Davis*, 62 F.3d at 1540 (Plager, J., dissenting); see also Professor Martin Adelman, Comments at the Eleventh Annual Judicial Conference of the United States Court of Appeals for the Federal Circuit (June 18, 1993), in 153 F.R.D. 177, 239 (1993) [hereinafter Comments of Professor Adelman] ("What you're really doing when you as a patentee go in and talk about the doctrine of equivalents to a court is that you're asking the court to rewrite your claims. . . . Interpreting contracts, of course, is an old common law remedy. But reformation of your contract—and that's what you're asking for—is an equitable remedy.")

139. *E.g.*, *Hughes Aircraft Co. v. United States*, 717 F.2d 1351, 1362 (Fed. Cir. 1983) ("[T]he doctrine of equivalents is unnecessary when literal infringement is present . . .").

140. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 336 U.S. 271, 277 (1949); see also *Milcor Steel Co. v. George A. Fuller Co.*, 316 U.S. 143, 145-46 (1942) ("[I]t is these claims, not the specifications, that afford the measure of the grant to the patentee.")

141. Adelman & Francione, *supra* note 29, at 715.

142. "If Congress wanted to provide for equivalents to what is claimed, it knew how to do it." *Hilton Davis*, 62 F.3d at 1539 (Plager, J., dissenting). But see *supra* notes 74-75 and accompanying text (demonstrating that § 112, ¶ 6 was intended to codify the doctrine of equivalents as originally applied to functional language under peripheral claiming).

extrastatutory remedy to be used only if the legal remedy is inadequate.<sup>143</sup>

It is true that the modern doctrine of equivalents has been omitted from the statutes and that it also seems to contradict the current claiming requirement—which, in contrast, has been included in the statutes since 1870. These two factors highlight the extrastatutory nature of the modern doctrine of equivalents. Alone, however, these two facts have not been enough to transform the doctrine into a matter of equity. As the *Hilton Davis* majority pointed out, an extrastatutory doctrine of equivalents has been applied in the face of the current statutory claiming requirement by juries in actions at law since 1870.<sup>144</sup>

However, the *Hilton Davis* majority did not recognize that the characteristics of its own doctrine of equivalents analysis have transformed the doctrine even further. The modern “doctrine of equivalents” differs from its predecessor. As will be discussed in Part IV.B, these differences lie in a modified allocation of structural and functional equivalents between the first and second prongs of the modern infringement analysis. The first prong has been distinguished as a statutory analysis and the second as a non-statutory analysis, rather than as a literal language analysis and a non-literal language analysis. This has bolstered the extrastatutory nature of the modern doctrine of equivalents even further and has also caused the doctrine to resemble the inadequate-remedy-at-law doctrines of the Chancery courts. It is doubtful that the Federal Circuit, in establishing such an analytical framework, intended to make the doctrine equitable. However, it is clear that the character of the current doctrine is now decidedly equitable, a fact which has raised legitimate questions about the role of the jury in its application.

### B. Differences in the Modern Doctrine

The majority’s analysis correctly concludes that despite the advent of peripheral claiming, the doctrine of equivalents remained a question for the jury in actions at law. However, the majority failed to recognize that the modern application of the

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143. Judge Plager states, “[T]oday the doctrine is regularly used by patentees to seek greater coverage for their patents than the patent statute grants.” *Hilton Davis*, 62 F.3d at 1537 (Plager, J., dissenting).

144. See *supra* part III.B.

doctrine of equivalents differs from the doctrine as originally applied under peripheral claiming. Thus, the fact that the doctrine as originally applied under peripheral claiming was a question for the jury in actions at law does not necessarily mean that the modern doctrine is also.

Had the *Hilton Davis* majority examined the Federal Circuit's past analysis, it would have seen that a different analytical framework is used today. Today's framework is based on an erroneous treatment of § 112, ¶ 6 of the 1952 Patent Act. This treatment results in a different allocation of structural and functional equivalents between the prongs of the infringement analysis. This new allocation suggests that the traditional legal nature of the doctrine of equivalents needs to be reevaluated.

### 1. *Structural and functional language*

Much of the confusion surrounding the modern doctrine of equivalents has arisen because of a failure to distinguish between equivalents for structural as opposed to functional language.<sup>145</sup> If the claim element in question is a structural term, the doctrine of equivalents has always *expanded* protection of the claim to include that structure plus its equivalents.<sup>146</sup> On the other hand, if the element in question is a functional term, the doctrine of equivalents—as originally applied under peripheral claiming—did not protect all structures that literally fell within the claim language. Rather, it *limited* protection to the particular structure disclosed in the specification plus its equivalents,<sup>147</sup> just as § 112, ¶ 6 does today.

This theory is supported by the few Supreme Court cases which found infringement despite a claim's literal language. In

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145. For an explanation of both functional and structural claim language, see *supra* note 57.

146. If, for example, the claim element is a "roller press," a device identical in every respect (except for the use of a "plunger press" instead of a "roller press") may or may not infringe the claim. Whether it does so is the question of fact posed by application of the doctrine of equivalents.

147. If, for example, the claim element is a "means for compressing," and the embodiment disclosed in the specification uses a "roller press," a device identical in every respect to the embodiment disclosed in the specification (except for the use of a "plunger press" instead of a "roller press") may or may not infringe the claim. Even though a "plunger press" is a "means for compressing" and falls within the literal claim language, application of the doctrine of equivalents would necessarily raise as a question of fact whether the "plunger press" is an equivalent of the "roller press" disclosed in the specification.



all six cases, infringement was based on the equivalent of a structural claim element.<sup>148</sup> *Graver Tank* and *Hilton Davis* also involved equivalents of structural language.<sup>149</sup> Furthermore, Supreme Court cases which applied a "limiting" doctrine of equivalents involved claims with functional language.<sup>150</sup>

Some argue that the pre-*Graver Tank* case law held that the literal language of the claim absolutely limited the scope of patent protection.<sup>151</sup> Yet this view is inconsistent with the fact that there were cases in which infringement was found "though the letter of the claims [was] avoided."<sup>152</sup> This view probably derives, in part, from a failure to distinguish between functional and structural language. For claim elements written in peripheral-style functional language, this view would be correct. For functional language, application of the doctrine of equivalents never resulted in a broader construction than the literal import of the language.

On the other hand, application of the doctrine of equivalents to claim elements written in structural language resulted in infringement for structures which were not within the literal language of the claim. Because structural language was being used only when necessary, findings of infringement despite the literal language of claims became less frequent. Thus, the foregoing view probably arose, in part, because it seemed the "ex-

148. One commentator identifies six Supreme Court cases before *Graver Tank* which found infringement despite the literal language of a claim. Hantman, *supra* note 35, at 533-35. In all six cases, each accused device infringed by substituting an equivalent of a structural claim element. *Ives v. Hamilton*, 92 U.S. 426 (1875) (broken-line segments equivalent to "curves"); *Imhaeuser v. Buerk*, 101 U.S. 647 (1879) (fixed markers equivalent to "spring [marking] points"); *Royer v. Schultz Belting Co.*, 135 U.S. 319 (1890) (whether clamped half-cylinders are equivalent to "a slot" is question for jury); *Western Elec. Co. v. LaRue*, 139 U.S. 601 (1890) (telegraph sounder equivalent to "telegraph key"); *Hoyt v. Horne*, 145 U.S. 302 (1892) (side half of vat equivalent to "upper section of vat" and vertical partition equivalent to "horizontal partition"); *National Cash Register Co. v. Boston Cash Indicator and Recorder Co.*, 156 U.S. 502 (1895) (sliding bar equivalent to "supporting wing").

149. The claim language in question in *Graver Tank* was an "alkaline earth metal silicate," 339 U.S. at 610, and the language in question in *Hilton Davis* was "a pH of approximately 6.0 to 9.0," 62 F.3d at 1515.

150. See *Westinghouse v. Boyden Power Brake Co.*, 170 U.S. 537, 568-69 (1898) ("We have no desire to qualify the repeated expressions of this court to the effect that, where the invention is functional, . . . the alleged infringer must have done something more than reach the same result. He must have reached it by substantially the same or similar means.").

151. See *supra* note 55.

152. *Westinghouse*, 170 U.S. at 568; see also cases cited *supra* note 56.

pansive" (structural) half of the doctrine was being abandoned.<sup>153</sup> However, courts were not eliminating an expansive application of the doctrine; such findings were simply becoming more infrequent due to the corresponding decrease in the use of structural language.

Today, what the Federal Circuit labels the "doctrine of equivalents" is only "one-half" of the original doctrine of equivalents as applied under peripheral claiming—the half that *expanded* structural language. The "half" that limited functional language was intended to be codified by § 112, ¶ 6. The Federal Circuit's modern treatment of § 112, ¶ 6 reflects this misunderstanding of structural and functional equivalents.

## 2. Allocation of structural and functional equivalents

The misunderstanding of functional and structural equivalents has resulted in a further difference between the original infringement analysis under peripheral claiming and the modern infringement analysis: a modified allocation of structural and functional equivalents. As discussed above, the Federal Circuit has developed a two-prong infringement analysis based on "literal infringement" and "infringement under the doctrine of equivalents."<sup>154</sup> There has been a two-prong analysis since the acceptance of peripheral claiming, but the Federal Circuit's current two-prong analysis is different.<sup>155</sup> It has seemingly distinguished the first prong as a statutory analysis and the second as a non-statutory analysis, rather than as a literal language analysis and a non-literal language analysis. For example, it has allocated determination of "equivalents" for § 112, ¶ 6 to the "literal infringement" category, not to the second-prong "doctrine of equivalents" analysis.<sup>156</sup>

153. See *supra* note 62.

154. See *supra* text accompanying notes 1-4.

155. The original two-prong analysis was described in *Grover Tank*, in which the Court stated, "If accused matter falls clearly within the claim, infringement is made out and that is the end of it." 339 U.S. 605, 607 (1950). The language of *Westinghouse* also describes the distinction. 170 U.S. 537, 568 (1898) ("infringement though the letter of the claims be avoided"). Thus, the original two prongs were distinguished based on whether only literal claim language was to be used; the doctrine of equivalents (as applied to both functional and structural language) was applied under the second prong. ELLIS, *supra* note 55, § 10. By contrast, the two prongs of the Federal Circuit's infringement analysis seem to be distinguished based on whether the subject matter to be analyzed is required by the statute.

156. See, e.g., *Texas Instruments v. United States Int'l Trade Comm'n*, 805 F.2d 1558, 1562 (Fed. Cir. 1986).

Moreover, the Court has limited § 112, ¶ 6 "equivalents" to those which perform an *identical* function. Equivalents of functional elements with *substantially similar* functions are only considered in the modern second-prong analysis, along with the structural-language "half" of the original doctrine of equivalents.<sup>157</sup> As such, the modern, second-prong "doctrine of equivalents" determination is a hybrid of the pre-Federal Circuit doctrine of equivalents. Because the Court seems to have distinguished the two prongs based on whether or not there is a connection to the statute, the second-prong "doctrine of equivalents" hybrid is very much an extrastatutory doctrine.

The modified allocation of structural and functional equivalents has also made the modern doctrine appear more like an inadequate-remedy-at-law doctrine, since it is applied only if no literal infringement is found. Yet, this is also how the analysis worked originally under peripheral claiming—for structural language. For functional language, the doctrine of equivalents was *always* applied to limit the coverage of the broad literal claim language. In fact, this is how § 112, ¶ 6 continues to operate on functional claim language today. Functional elements are construed according to § 112, ¶ 6 for *every* literal infringement analysis. However, since the allocation of structural and functional equivalents has been modified, the modern doctrine of equivalents is applied only to structural language and thus only if no literal infringement is found. This limited application makes the doctrine appear to be an inadequate-remedy-at-law doctrine.

Understanding the origin of § 112, ¶ 6 and the difference between equivalents for structural and functional language helps in understanding the modern doctrine of equivalents. If the *Hilton Davis* majority had examined these two concepts, it would have realized that infringement analysis has become unnecessarily convoluted and that the modern doctrine of equivalents is different than its ancestor.

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157. See *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1580 (Fed. Cir. 1989) ("Section 112 ¶ 6 can never provide a basis for finding that a means-plus-function claim element is met literally where the function part of the element is not literally met in an accused device."); *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 934 (Fed. Cir. 1987) ("If the required function is not performed *exactly* in the accused device, . . . section 112, paragraph 6, equivalency is not involved. Section 112, paragraph 6, plays no role in determining whether an *equivalent* function is performed by the accused device under the doctrine of equivalents.") (second emphasis added), *cert. denied*, 485 U.S. 961 (1988).

### C. Seventh Amendment Analysis

The Seventh Amendment "preserves" the right to a trial by jury in actions at common law.<sup>158</sup> This has been interpreted to "articulate an 'historical test' for determining when [a] jury trial right attaches."<sup>159</sup> "If the issue in the context in which it arises today would have been heard at common law in 1791, when the Seventh Amendment was adopted, or . . . in 1938 when law and equity were merged, it is now triable of right to a jury."<sup>160</sup> Thus, if a case presents "both legal and equitable issues, it is for the jury to decide the legal issues and for the court to decide the equitable issues."<sup>161</sup> A plausible Seventh Amendment analysis demonstrates that there is no right to a jury trial in the application of the doctrine of equivalents, and that it is a question for the court.

As discussed above, the answer to whether there is a right to a jury trial in patent infringement actions involving the doctrine of equivalents was once clear. If a plaintiff brought an action for damages and an injunction, the injunction invoked the jurisdiction of a court of equity, and no jury-trial right attached. On the other hand, if there was no equity jurisdiction, there was a right to a jury trial. The doctrine of equivalents was applied in both forums.<sup>162</sup>

Today, however, the doctrine is part of a different infringement analysis scheme and is decidedly equitable in character. Moreover, changes in the doctrine's character are relevant<sup>163</sup>

158. U.S. CONST. amend. VII.

159. 9 WRIGHT & MILLER, *supra* note 18, § 2302.

160. *Id.* (footnotes omitted).

161. *Id.* § 2305.

162. *See supra* notes 49-51 and accompanying text.

163. The *Hilton Davis* majority does not mention the Seventh Amendment, presumably because it assumed that there was a right to a jury trial and simply engaged in a historical inquiry as to the role of the jury. However, it is somewhat puzzling that Judge Plager's dissent sees no Seventh Amendment issue. *Hilton Davis*, 62 F.3d at 1543 (Plager, J., dissenting) ("There is no issue of a right to a trial by jury under the Seventh Amendment; the court does not suggest that that is the source of the jury's role."). Compare *id.* with *Malta v. Schulmerich Carillons, Inc.*, 952 F.2d 1320, 1345 (Fed. Cir. 1991) (Newman, J., dissenting) ("[T]he right to jury trial of this factual issue [cannot] be extinguished because the doctrine of equivalents was 'judicially devised to do equity.' The jury has historically been charged with the factual inquiry of equivalency . . ."), *cert. denied*, 504 U.S. 974 (1992) and *with Transmatic, Inc. v. Gulton Indus., Inc.*, 835 F. Supp. 1026, 1028 (E.D. Mich. 1993) (holding that there is no Seventh Amendment right to a jury trial on the issue of infringement under the doctrine of equivalents), *vacated as moot and aff'd on other grounds*, 53 F.3d 1270 (Fed. Cir. 1995).

in light of changes in the Supreme Court's Seventh Amendment jurisprudence.<sup>164</sup> To determine whether legal or equitable rights are involved, courts must identify the most analogous "18th-century action[] brought in the courts of England prior to the merger of the courts of law and equity."<sup>165</sup>

It must be recognized that infringement under the doctrine of equivalents has not generally been considered a cause of action in and of itself. The cause of action is direct infringement under 35 U.S.C. § 271(a), and whether there is infringement under the doctrine of equivalents is one of several issues relevant to the resolution of the infringement action. Nevertheless, the Supreme Court has stated that "[t]he Seventh Amendment question depends on the nature of the issue to be tried rather than the character of the overall action."<sup>166</sup>

The modern cause of action for direct infringement was enacted in 1952, but its definition has remained essentially the same since 1790 ("making, using or selling").<sup>167</sup> Nevertheless, as this Note has demonstrated, the method of determining whether infringement has occurred under the doctrine of equivalents has changed twice—first with the advent of peripheral claiming and second with the Federal Circuit's new analytical framework.

The patent community is split as to the traditional action that is most analogous to infringement under the doctrine of equivalents. One camp argues that the most analogous action is common law patent infringement, an action at law. The doctrine of equivalents was essentially *the* test of infringement

164. See 9 WRIGHT & MILLER, *supra* note 18, § 2302.1 (showing how the post-merger *Beacon Theatres* and *Dairy Queen* decisions of the Supreme Court have changed the pre-merger Seventh Amendment analysis); see also *id.* § 2312 (noting that the "major change in the use of a jury in patent . . . litigation" has also come from *Beacon Theatres* and *Dairy Queen*).

165. *Tull v. United States*, 481 U.S. 412, 417 (1986). The so-called "complexity exception" to the Seventh Amendment is not discussed here. See *Ross v. Bernhard*, 396 U.S. 531, 538 n.10 (1970) (stating that whether an issue is legal or equitable depends on "the pre-merger custom with reference to such questions," "the remedy sought," and "the practical abilities and limitations of juries.")

166. *Ross*, 396 U.S. at 538 (finding a right to a jury trial to all issues relevant to determination of the first of two claims brought in the context of a shareholder's derivative action). "One of the most important features of the merger of law and equity . . . is that the right to a trial by jury now extends to particular issues rather than to an entire action." 9 WRIGHT & MILLER, *supra* note 18, § 2337.

167. *Hilton Davis Chem. Co. v. Warner-Jenkinson*, 62 F.3d 1512, 1526 (Fed. Cir. 1995).

under the common law, just as it was under “central” claiming.<sup>168</sup>

The other camp points out that the doctrine of equivalents as applied under the common law did not consider claims. Not until the advent of peripheral claiming was the doctrine of equivalents analysis directed to equivalents of claim elements. Thus, this camp argues that the doctrine of equivalents is more like reformation of contract, a classic action in equity.<sup>169</sup> They suggest that the language of the claims, as negotiated between the patent examiner and the patentee, are closely akin to a contract with the public that secures legal rights to the patentee. Thus, when a patentee institutes an infringement action, and the literal language of the claim is not broad enough to cover an accused device, the patentee must seek “reformation” of his claims.<sup>170</sup>

This argument is based on an assumption that the doctrine of equivalents was “transformed” by the advent of peripheral claiming, since it distinguishes common law patent infringement from “peripheral claiming” infringement on the relative importance of claims under the two systems. However, even though peripheral claiming might have changed the infringement analysis, the doctrine of equivalents was still applied as a question of fact in both courts of law and equity until their merger in 1938. In other words, the doctrine of equivalents as applied in 1938 under the peripheral claiming system was part of an infringement action to which a jury trial right attached if the plaintiff was seeking damages. And some modern courts would find it highly relevant to the historical Seventh Amendment inquiry that the doctrine of equivalents—as applied un-

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168. See *supra* part II.B.1.

169. See *Transmatic, Inc. v. Gulton Indus., Inc.*, 835 F. Supp. 1026, 1029 (E.D. Mich. 1993), *vacated as moot and aff'd on other grounds*, 53 F.3d 1270 (Fed. Cir. 1995). A number of commentators have also taken this view. See, e.g., Comments of Professor Adelman, *supra* note 138, at 239 (“What you’re really doing when you as a patentee go in and talk about the doctrine of equivalents to a court is that you’re asking the court to rewrite your claims. . . . Interpreting contracts, of course, is an old common law remedy. But reformation of your contract—and that’s what you’re asking for—is an equitable remedy.”).

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der peripheral claiming—was not treated like reformation of contract in pre-merger 1938.<sup>171</sup>

In fact, if it were not for the nature of the modern analytical framework, the reformation of contract analogy is a weak one. The analogy is strengthened, however, by the fact that even more changes have been made to the doctrine of equivalents than occurred with the advent of peripheral claiming. Today, the modern doctrine of equivalents has been arranged as the non-statutory prong of the infringement analysis. Allocating the structural and functional equivalents according to their tie to the statutes makes the nature of the doctrine look all the more extrastatutory and equitable. Since the Supreme Court's modern jury-trial-right analysis emphasizes the *nature* of the issue, the doctrine is decidedly equitable and is even more analogous to reformation of contract.<sup>172</sup>

One additional question, however, makes the Seventh Amendment inquiry more nebulous. Even if the Supreme Court classified the modern doctrine as a matter of equity, it might not allow the equitable issue to be severed from the rest of the claim to *deny* a jury determination of the issue. In all the Court's cases on this question, it has severed legal claims for purposes of *granting* a jury trial.<sup>173</sup> There is no right to a non-jury trial.<sup>174</sup>

171. See 9 WRIGHT & MILLER, *supra* note 18, § 2302 (noting that some judges make the historical inquiry to classify an action as legal or equitable by looking at the pre-merger custom).

172. In any case, this Note rejects Warner-Jenkinson's argument that independent development and conduct of the parties should be weighed by the judge making this decision. The equitable determination should be the same for any defendant, based on a balancing of the right of the public to have notice of what constitutes infringement and adequate protection for the patentee.

173. In fact, in one case, an injured seaman joined a statutory claim triable of right by jury with claims grounded in admiralty. The Court noted that the case would be too complicated if part were tried to a jury and part to a judge. The Court stated, "Only one trier of fact should be used for the trial of what is essentially one lawsuit to settle one claim split conceptually into separate parts because of historical developments." *Fitzgerald v. United States Lines Co.*, 374 U.S. 16, 21 (1963). It is unclear whether the case is applicable to the issue of infringement under the doctrine of equivalents. "Although the language . . . suggest[s] that when a single claim gives rise to both legal and equitable issues, all of the issues should be decided by the jury, it is not clear that the Court meant to go beyond the admiralty situation that the particular case presented." 9 WRIGHT & MILLER, *supra* note 18, § 2302.1.

174. 9 WRIGHT & MILLER, *supra* note 18, § 2317.

### D. Recommendations

Even though the allocation of structural and functional equivalents between the two prongs of the modern infringement analysis is different than originally formulated, the overall effect of the two analyses seems to be basically the same. An accused device analyzed under the original two-prong analysis of peripheral claiming will result in the same finding of infringement as if it were analyzed under the modern two-prong analysis.<sup>175</sup> Thus, the real difficulty is that the modern doctrine no longer "looks" like the original doctrine.<sup>176</sup>

To clarify the confusion surrounding the doctrine of equivalents, it must be made clear that § 112, ¶ 6 is the doctrine of equivalents codified for functional language. Further, the doctrine of equivalents for structural language should be codified.<sup>177</sup> Additionally, the Federal Circuit should clarify the

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175. There might be one exception. With a claim containing a means-plus-function element and with an accused device which contains an element performing the identical function, literal infringement might conceivably be found more often under the Federal Circuit's analysis than under the original analysis. This is because "equivalents" for purposes of § 112, ¶ 6 seem to be construed more broadly than "equivalents" for purposes of the modern doctrine of equivalents. Cf. *D.M.I., Inc. v. Deere & Co.*, 755 F.2d 1570, 1575 (Fed. Cir. 1985).

176. Other difficulties, beyond the scope of this Note, are that much of the patent community is unsatisfied with the doctrine and the role of juries in applying it. Whether the doctrine is a good one and whether juries actually contribute to the unpredictability of the doctrine are separate but related questions. In the first place, the doctrine is necessary. It is only reasonable that a patentee should not have to claim every imaginable structural element. Otherwise, the number of claims per patent would skyrocket. Moreover, there are instances in which functional language is not adequate and structural elements simply cannot be eliminated from a claim. Furthermore, the doctrine strikes a fair balance in only allowing equivalents of elements *in a claim*. Thus, an accused device does not infringe unless the claim structure encompasses it. To give the patentee the full benefit of his invention, the claim structure could be disregarded, but it is not. The doctrine of equivalents does not simply allow a jury or judge to throw away a patent's claims; the doctrine of equivalents must be exercised within the strictures of the claims the patentee has drafted. In this way, the doctrine is fair. The business of deciding whether something is an equivalent of a claim element is not and never will be predictable, regardless of who decides the issue.

177. Perhaps the statutory language could be amended to read as follows:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof. *An element in any claim which recites structure, material, or acts and which is not expressed as a means or step for performing a specified function shall be construed to cover the recited structure, material, or acts and equivalents thereof.*



doctrine of equivalents by returning the infringement analysis to its previous framework. This would entail performing the two-part analysis as originally applied under peripheral claiming. First, the court would perform a first-prong literal-claim-language analysis without limiting the coverage of means-plus-function elements. Second, the court would perform a second-prong doctrine-of-equivalents analysis to expand the coverage of structural elements and constrain the coverage of functional ones. This would put the doctrine on a firm historical footing and would leave no doubt as to the doctrine's legal roots.

## V. CONCLUSION

Although the history of the original doctrine of equivalents shows that it has always been applied as part of the infringement inquiry, both at law and in equity, the modern doctrine has changed substantially from its predecessors. This is a result of the Federal Circuit's failure to distinguish between functional and structural equivalents as was done originally under peripheral claiming—a failure which can be seen from the modern treatment of § 112, ¶ 6 of the Patent Act of 1952. The modern infringement analysis distinguishes the first prong as a statutory analysis and the second as a non-statutory analysis, rather than as a literal-claim-language analysis and a non-literal-claim-language analysis. The resulting character of the modern doctrine of equivalents is distinctly extrastatutory and functions as an inadequate-remedy-at-law doctrine, peculiarly analogous to the equitable remedy of reformation of contract. Thus, infringement under the modern doctrine of equivalents involves resolution of equitable rights and carries no Seventh Amendment jury trial right.

However, in holding that infringement under the doctrine is a question for the jury, the *Hilton Davis* court failed to appreciate this difference and perform the necessary Seventh Amendment analysis. Thus, the role of the jury under the modern doctrine remains cloudy. For now, *Hilton Davis* has held that infringement under the doctrine is a question for the jury.<sup>178</sup> By returning the infringement analysis to its original

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35 U.S.C. § 112 (1994) (suggested changes emphasized).

178. Shortly before this Note was published, the Supreme Court granted certiorari. See 64 U.S.L.W. 3574 (U.S. Feb. 26, 1996) (No. 95-728). A decision by the Supreme Court on this issue has the potential to be as momentous as *Graver Tank*. However, it appears that the issue to be addressed by the Court is not

framework, the Federal Circuit can restore historical continuity. Although a more satisfactory doctrine may eventually replace it, the doctrine of equivalents can thus proceed as a matter for the jury surrounded by fewer questions and less confusion.

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whether infringement under the doctrine of equivalents is a question for the jury, but what properly constitutes infringement under the doctrine. *See id.* at 3570 (reporting the question presented: "Does patent infringement exist whenever accused product or process is 'equivalent' to invention claimed in patent, in that differences are not 'substantial' as determined by jury, even though accused product or process is outside the literal scope of the patent claim?"); *see also supra* note 32 (discussing the "new" substantiality of the differences standard articulated by the *Hilton Davis* court).

Even though, on its face, the issue to be addressed by the Court is different from the issue addressed in this Note, the Court's opinion is likely to contain implications for the proper role of the jury in applying the doctrine of equivalents. Similarly, lower courts are certain to look to such an opinion for guidance on virtually every aspect of the doctrine of equivalents, including the role of the jury, as the Federal Circuit has done with *Graver Tank*.

