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## Proving Patent Infringement under the Doctrine of Equivalents: The Specific Evidentiary Requirements for Getting to the Jury

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# Proving Patent Infringement under the Doctrine of Equivalents: The Specific Evidentiary Requirements for Getting to the Jury

*Lear Siegler, Inc. v. Sealy Mattress Co., Inc.*<sup>1</sup>

## I. INTRODUCTION

Imagine trying a case before a jury, getting a verdict in your favor, along with an award of \$2.8 million in damages, only to have it all set aside on appeal because your evidence was "fatally deficient."<sup>2</sup> This unfortunate sequence of events recently happened to Lear Siegler, Inc. when they sued Sealy Mattress Company of Michigan, Inc. for patent infringement.<sup>3</sup> The United States Court of Appeals for the Federal Circuit granted Sealy Mattress Co.'s motion for judgment notwithstanding the verdict (JNOV) because Lear Siegler, Inc.'s evidentiary showing under the patent law "doctrine of equivalents,"<sup>4</sup> a theory of patent infringement, was insufficient.<sup>5</sup> This Note will examine the Federal Circuit's evidentiary requirements for proving infringement under the doctrine of equivalents and demonstrate how to get a doctrine of equivalents case to the jury.

## II. BRIEF OVERVIEW OF PATENT INFRINGEMENT

In order to understand the doctrine of equivalents and the issues raised in *Lear Siegler*, one must first have a basic understanding of what a patent is and how it is infringed. A patent is a grant issued by the United States government giving the patent owner the right to exclude others from making, using, or selling the patented invention in the United States for a specified

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1. 873 F.2d 1422 (Fed. Cir. 1989).

2. *Id.* at 1427.

3. *Id.* at 1423-24.

4. *See infra* notes 15-25 and accompanying text.

5. *Lear Siegler*, 873 F.2d at 1426-27.

number of years.<sup>6</sup> A patentee (i.e., inventor) acquires a patent by initially filing a patent application with the Commissioner of the Patent and Trademark Office.<sup>7</sup> This initial filing begins a long process, which often takes several years, of negotiating with the Patent Office on the patentability of the invention.<sup>8</sup> These negotiations are often referred to as the patent prosecution process.<sup>9</sup>

The patent application must contain a specification<sup>10</sup> which "shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention."<sup>11</sup> The patented invention is defined by the scope of these claims.<sup>12</sup> A patent claim contains subdivisions, or "elements."<sup>13</sup> These claim elements are

6. 35 U.S.C. § 154 (1982); R. HILDRETH, *PATENT LAW: A PRACTITIONER'S GUIDE* 1 (1988). Congress' power to enact patent statutes stems from the United States Constitution which provides that "[t]he Congress shall have power . . . [t]o promote the progress of science and useful arts by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." U.S. CONST. art. I, § 8, cl. 8. The current patent statutes are codified at 35 U.S.C. §§ 1-376 (1982).

7. 35 U.S.C. § 111 (1982).

8. S. JONES, *THE PATENT OFFICE* 39 (1971).

9. R. HILDRETH, *supra* note 6, at 13.

10. 35 U.S.C. § 111 (1982).

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

35 U.S.C. § 112 (1982).

*See also* *Autogiro Co. v. United States*, 384 F.2d 391, 397 (Ct. Cl. 1967) ("[T]he specification . . . describe[s] the manner and process of making and using the patent so that any person skilled in the patent's art may utilize it.").

11. 35 U.S.C. § 112 (1982).

12. *Aro Mfg. Co., Inc. v. Convertible Top Replacement Co., Inc.*, 365 U.S. 336, 344-46 (1961); *Autogiro Co.*, 384 F.2d at 395 ("The claims of the patent provide the concise formal definition of the invention.").

13. One of the most confusing aspects of this note is that the word "elements" has two unrelated meanings. "Elements" is used to refer to each of the three parts of the Graver Tank function/way/result equivalency test, and "elements" is also used to refer to limitations set forth in a patent claim. The reader should be aware of the different uses. The author has tried to use language which indicates which meaning is being used. For example, the phrase "*Graver Tank* elements" refers to the three parts of the equivalency test; the phrase "claim elements" refers to limitations in a patent claim. Avoiding this double meaning, however, is impossible because the case law uses

"limitation[s] of a claim that count[] in determining both [patent] validity and infringement."<sup>14</sup>

In general, a patent is infringed when someone makes, uses, or sells the patented device in the United States during the term of the patent without the patent owner's authority.<sup>15</sup> There are two types of infringement: 1) literal infringement, and 2) infringement under the doctrine of equivalents.<sup>16</sup> Literal infringement occurs when the accused device embodies every element and limitation of at least one claim of the patent.<sup>17</sup> In other words, at least one patent claim must "read[] directly, unequivocally, and word-for-word on" the accused device.<sup>18</sup>

"The doctrine of equivalents comes into play only when actual literal infringement is not present."<sup>19</sup> Many times the accused device contains minor changes and substitutions such that the patent owner's claims do not literally "read on" the accused device; in these situations there is no literal infringement.<sup>20</sup> In *Graver Tank & Manufacturing Co., Inc., v. Linde Air Products Co.*,<sup>21</sup> however, the United States Supreme Court recognized:

that to permit imitation of a patented invention which does not copy every literal detail would be to convert the protection of the patent grant into a hollow and useless thing. Such a limitation would leave room for—indeed encourage—the unscrupulous copyist to make unimportant and insubstantial changes and substitutions in the patent which, though adding nothing, would be enough to take the copied matter outside the claim, and hence outside the reach of law. . . . The doctrine of equivalents evolved in response to

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"elements" interchangeably.

Furthermore, the phrase "claim elements" as is used in this note refers to the limitations in a patent claim, rather than the structural part of the accused device or an embodiment of the invention. *Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d 1528, 1533 n.9 (Fed. Cir. 1987). In other words, the phrase "claim elements" is used as it is used in the phrase "[a]n element in a claim" in 35 U.S.C. § 112 para. 6 (1982).

14. *Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d 1528, 1533 n.9 (Fed. Cir. 1987) (emphasis in original).

15. 35 U.S.C. § 271(a) (1982).

16. Adelman and Francione, *The Doctrine of Equivalents in Patent Law: Questions That Pennwalt Did Not Answer*, 137 U. PA. L. REV. 673, 679-80 (1989).

17. *Stewart Warner Corp. v. City of Pontiac, Mich.*, 767 F.2d 1563, 1570 (Fed. Cir. 1985).

18. *SRI Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1118 (Fed. Cir. 1985) (en banc).

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

20. See *SRI Int'l*, 775 F.2d at 1123.

21. 339 U.S. 605 (1950).

this experience. The essence of the doctrine is that one may not practice a fraud on a patent.<sup>22</sup>

The *Graver Tank* court went on to hold that infringement under the doctrine of equivalents may be found, where there is no literal infringement, when the accused device "performs substantially the same *function* in substantially the same *way* to obtain the same *result*" as the patented device.<sup>23</sup> This test is often referred to as the "function/way/result" equivalence test.<sup>24</sup> *Graver Tank* is considered to embody the modern formulation of the doctrine of equivalents.<sup>25</sup>

### III. *LEAR SIEGLER, INC. v. SEALY MATTRESS CO., INC.*<sup>26</sup>

#### A. *The Facts*

Plaintiff Lear Siegler, Inc. (LSI) owns two patents which claim box spring assemblies for use in conventional beds.<sup>27</sup> The box spring assemblies incorporate "isolated, non-contacting, modular torsion bar springs."<sup>28</sup> The modular torsion bar springs, which are the focus of this controversy, are claimed in one of LSI's patents.<sup>29</sup> Following the issuance of LSI's patents, defendant Sealy Mattress Company of Michigan, Inc. (Sealy) developed, manufactured, and sold its own box spring assemblies which included "individual, non-contacting, torsional springs"<sup>30</sup> very similar to LSI's modular torsion bar springs.<sup>31</sup>

22. *Id.* at 607-08.

23. *Id.* at 608 (quoting *Sanitary Refrigerator Co. v. Winters*, 208 U.S. 30, 42 (1929)) (emphasis added).

24. Adelman and Francione, *supra* note 16, at 687. The case law often uses the word "way" interchangeably with the word "means." Thus, for purposes of this note, the "function/way/result" test is the same as the "function/means/result" test.

25. *Id.* at 700. The doctrine of equivalents was first used in *Winans v. Denmead*, 56 U.S. 330 (1853), where the Supreme Court stated that "[t]he exclusive right to the thing patented is not secured, if the public are at liberty to make substantial copies of it, varying its form or proportions." 56 U.S. at 343.

26. 873 F.2d 1422 (Fed. Cir. 1989).

27. *Id.* at 1423.

28. *Id.*

29. *Id.*

30. *Id.*

31. *Id.* at 1423-24.

LSI sued Sealy in the United States District Court for the Eastern District of Michigan<sup>32</sup> alleging that Sealy's springs infringed LSI's patents.<sup>33</sup> At trial, which was heard by a jury, LSI sought to prove literal infringement by contending that LSI's "claims read on Sealy's spring."<sup>34</sup> Through the cross-examination testimony of Mr. Mizelle, the designer of the accused spring, LSI alleged that Sealy's spring "incorporated all the features recited in [LSI's] claims" and thus literally infringed LSI's patent.<sup>35</sup>

At the close of the evidence, Sealy moved for a directed verdict of non-infringement, arguing that because its springs did not embody certain elements from LSI's patent claims, there could be no literal infringement.<sup>36</sup> Sealy further pointed out that "LSI's counsel . . . neither explicitly relied on the doctrine of equivalents nor specifically proved its elements. Thus, . . . LSI did not delineate the elements of infringement under the doctrine . . . sufficiently for the issue to reach the jury."<sup>37</sup> In denying Sealy's motion for directed verdict, the district court stated that there was sufficient evidence of literal infringement for the jury to consider.<sup>38</sup> Furthermore, "considering the evidence in a light most favorable to plaintiff, a reasonable inference of infringement under the doctrine of equivalents could be made by the jury," the district court added.<sup>39</sup>

The only time that LSI's counsel referred to the doctrine of equivalents, however, was during closing arguments when LSI reminded the jurors of the cross-examination testimony of Mr. Mizelle.<sup>40</sup> LSI contended that "at least a portion of [that] cross-examination testimony 'ha[d] to do with the equivalents' and shows that if one takes Sealy's spring and just turned portions around, and 'if you eliminate one of the torsion bars, . . .' one ends up with LSI's claimed spring."<sup>41</sup> Apparently the district court considered this reference to the doctrine to be sufficient for giving the issue to the jury.<sup>42</sup>

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32. *Id.* at 1423.

33. *Id.* at 1424.

34. *Id.*

35. *Id.*

36. *Id.*

37. *Id.*

38. *Id.*

39. *Id.*

40. *Id.* The portion of Mr. Mizelle's cross-examination testimony which relates to the doctrine of equivalents is repeated *infra*, note 92.

41. *Lear Siegler*, 873 F.2d at 1424 (quoting *Lear Siegler, Inc. v. Sealy Mattress Co., Inc.*, Civ. A. No. 84-CV-75319-DT (E.D. Mich. Aug. 21, 1987)).

42. *Id.*

The jury found that Sealy infringed LSI's patents under the doctrine of equivalents and awarded LSI damages of \$2,806,571.<sup>43</sup> Sealy moved for a JNOV, or in the alternative, for a new trial.<sup>44</sup> Sealy argued that under *Nestier Corp. v. Menasha Corp.-Lewisystems Div.*<sup>45</sup> LSI's showing of infringement under the doctrine of equivalents was inadequate.<sup>46</sup> According to Sealy, *Nestier* required LSI to "explicitly delineate to the jury, through testimony and argument, equivalence of function, means, and result between the claimed and accused springs, and that failing such delineation in testimony and argument, the jury's verdict cannot stand."<sup>47</sup>

The district court denied Sealy's motions for JNOV and for new trial, reasoning that the *Nestier* requirements had been met.<sup>48</sup> Furthermore, the district court distinguished *Nestier*: "in *Nestier* the plaintiff never expressly relied on the doctrine of equivalents, while in this case the doctrine was in issue '[f]rom the beginning of the trial to the end.'<sup>49</sup> Sealy then appealed the district court's denial of Sealy's alternative JNOV and new trial motions.<sup>50</sup>

### B. The Holding

The United States Court of Appeals for the Federal Circuit reversed<sup>51</sup> and held that "*Nestier* requires that the three *Graver Tank* elements [of function, way, and result] must be presented in the form of particularized testimony and linking argument" for a jury to find patent infringement under the doctrine of equivalents.<sup>52</sup>

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43. *Id.* The jury found no literal infringement. *Id.* Furthermore, literal infringement was not an issue on appeal. *Id.* at 1425.

44. *Id.* at 1424.

45. 739 F.2d 1576 (Fed. Cir. 1984), *cert. denied*, 470 U.S. 1053 (1985).

46. *Lear Siegler*, 873 F.2d at 1424-25.

47. *Id.* at 1425.

48. *Id.*

49. *Id.* (quoting *Lear Siegler, Inc. v. Sealy Mattress Co., Inc.*, Civ. A. No. 84-CV-75319-DT (E.D. Mich. Aug. 21, 1987)).

50. *Id.*

51. *Id.* at 1423, 1427.

52. *Id.* at 1426.

## IV. THE DOCTRINE OF EQUIVALENTS

A. *The Range of Equivalence Afforded to a Patent*

The doctrine of equivalents will have varying breadth depending upon the degree of the invention, that is, whether the invention is a pioneer invention which discovers a new and very large scientific field, or just an improvement patent which adds only a small improvement to a known field.<sup>53</sup> "[A] greater degree of liberality and a wider range of equivalents are permitted where the patent is of a pioneer character than when the invention is simply an improvement . . . in the art theretofore partially developed by other inventors in the same field."<sup>54</sup>

The breadth of the doctrine of equivalents, however, is limited by the doctrine of prosecution history estoppel.<sup>55</sup> During the patent prosecution process<sup>56</sup> the inventor will often make concessions as to the scope of the patent claims in order to secure patentability.<sup>57</sup> The inventor is in effect surrendering matter which she admits should not be covered by her patent.<sup>58</sup> These concessions are recorded in the prosecution history file, or "file wrapper."<sup>59</sup> The doctrine of prosecution history estoppel, also known as "file wrapper estoppel,"<sup>60</sup> states that the patent owner may not later attempt to broaden the patent claims under the doctrine of equivalents and allege

53. *Continental Paper Bag Co. v. Eastern Paper Bag Co.*, 210 U.S. 405, 415 (1908); *Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d 1528, 1532 (Fed. Cir. 1987) ("A pioneer invention is entitled to a broad range of equivalents."); *Hughes Aircraft Co. v. United States*, 717 F.2d 1351, 1362 (Fed. Cir. 1983) (pioneer invention entitled to very broad range of equivalents); *Sealed Air Corp. v. United States Int'l Trade Comm'n*, 645 F.2d 976, 984 (C.C.P.A. 1981); *Autogiro Co. v. United States*, 384 F.2d 391, 400-01 (Ct. Cl. 1967) (pioneer patent will have broader range of equivalence than improvement patent).

54. *Continental Paper Bag*, 210 U.S. at 415 (quoting *Cimiotti Unhairing Co. v. American Fur Ref. Co.*, 198 U.S. 399, 406 (1905)). The Court also stated that "[t]he range of equivalents depends upon the extent and nature of the invention. If the invention is broad or primary in its character, the range of equivalents will be correspondingly broad." *Id.* at 414 (quoting *Miller v. Eagle Mfg. Co.*, 151 U.S. 186, 207 (1894)).

55. *Adelman and Francione*, *supra* note 16, at 680; *Autogiro Co. v. United States*, 384 F.2d 391, 400-01 (Ct. Cl. 1967).

56. *See supra* notes 7-9 and accompanying text.

57. R. HILDRETH, *supra* note 6, at 30-34.

58. *Id.*

59. *Autogiro Co.*, 384 F.2d at 398.

60. *Hughes Aircraft Co. v. United States*, 717 F.2d 1351, 1362 (Fed. Cir. 1983); *Autogiro Co.*, 384 F.2d at 398.



infringement by matter which was surrendered during the patent prosecution process.<sup>61</sup>

### B. Applying the Doctrine of Equivalents

As discussed above, a patent claim recites the elements and limitations which define the the patentee's invention; furthermore, literal infringement occurs when the accused device embodies every element of at least one claim of the patent.<sup>62</sup> Therefore, determining whether there is literal infringement is simply a process of going through a patent claim element-by-element and demonstrating that the accused device embodies each of these elements.<sup>63</sup> Appropriately, this process has often been labeled the "element-by-element" approach of proving infringement.<sup>64</sup>

There has been some confusion as to whether proving infringement under the doctrine of equivalents requires an element-by-element approach or a so-called "entirety" approach.<sup>65</sup> Infringement under the element-by-element approach requires the accused device to embody an equivalent for each claim element of the patent, whereas the entirety approach, often referred to as the "invention as a whole" approach, requires only that the claimed invention and the accused device be equivalent as "wholes" or in their "entireties."<sup>66</sup> Recently, however, in *Pennwalt Corp. v. Durand-Wayland, Inc.*,<sup>67</sup> the Federal Circuit held that proving infringement under the doctrine of equivalents requires an element-by-element approach, the same approach required in proving literal infringement.<sup>68</sup> The court stated that "[i]t is . . . well settled that each element of a claim is material and essential, and that in order to find infringement, the plaintiff must show the presence of every element or its *substantial equivalent* in the accused device."<sup>69</sup> The court held "that the

61. *Smith v. Magic City Kennel Club, Inc.*, 282 U.S. 784, 790 (1931); *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 870 (Fed. Cir. 1985); *Standard Oil Co. v. American Cyanamid Co.*, 774 F.2d 448, 452 (Fed. Cir. 1985); *Hughes Aircraft Co.*, 717 F.2d at 1362; *Autogiro Co.*, 384 F.2d at 400-01.

62. See *supra* notes 10-18 and accompanying text.

63. *SRI Int'l v. Matsushita Electric Corp.*, 775 F.2d 1107, 1123 (Fed. Cir. 1985) (en banc).

64. *Adelman and Francione*, *supra* note 16, at 677-78.

65. *Id.*

66. *Id.*

67. 833 F.2d 931 (Fed. Cir. 1987) (en banc), *cert. denied*, 485 U.S. 961 (1988).

68. *Id.* at 935.

69. *Id.* (quoting *Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d 1528, 1532-33 (Fed. Cir. 1987) (quoting *Lemelson v. United States*, 752 F.2d 1538, 1551 (Fed. Cir. 1985))) (emphasis added).

district court correctly relied on an element-by-element comparison to conclude that there was no infringement under the doctrine of equivalents."<sup>70</sup>

### C. *The Evidentiary Requirements*

The *Graver Tank* court stated that "[a] finding of equivalence is a determination of fact."<sup>71</sup> The court suggested several forms of proof of equivalence, including expert testimony, documents, texts, treatises, and disclosures of the prior art.<sup>72</sup> These general suggestions, however, are the extent of the court's attempt to articulate the evidence which must be presented at trial in order to enable the jury to decide the factual issue of equivalence.<sup>73</sup> The Court did not offer a specific method of presenting the function/way/result equivalency test to the jury.<sup>74</sup>

In *Nestier Corp. v. Menasha Corp.-Lewisystems Division*,<sup>75</sup> the Federal Circuit discussed in detail the evidence required to prove equivalence and the method of presenting the equivalency test to the jury.<sup>76</sup> In *Nestier*, the plaintiffs never expressly relied on the doctrine of equivalents at trial;<sup>77</sup> furthermore, the plaintiffs actually stated during a conference on the form of the jury instructions that their theory was literal infringement and not the doctrine of equivalents.<sup>78</sup> The plaintiffs then alleged that the trial court erred because it did not instruct the jury on the doctrine.<sup>79</sup> In affirming the trial court, the Federal Circuit stated that "[a]t no time did Nestier's attorneys or witnesses present evidence which was explicitly related to the jury in the *Graver Tank* terms of equivalence of function, means, and result."<sup>80</sup> The court explained that "[a]nalysis of equivalence involves those three factors, and a jury cannot be expected to be able to make any such determination absent evidence and argument concerning the doctrine and each of its elements."<sup>81</sup>

The *Nestier* decision, however, rests on alternative grounds;<sup>82</sup> namely, the trial court's decision not to instruct the jury on the doctrine of equivalents

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70. *Id.*

71. *Graver Tank*, 339 U.S. at 609.

72. *Id.*

73. *See id.* at 609-10.

74. *See id.*

75. 739 F.2d 1576 (Fed. Cir. 1984), *cert. denied*, 470 U.S. 1053 (1985).

76. *Id.* at 1579.

77. *Id.*

78. *Id.* at 1580.

79. *Id.* at 1578.

80. *Id.* at 1579.

81. *Id.*

82. *Id.* at 1580; *Lear Siegler*, 873 F.2d at 1427.

was proper because 1) the plaintiffs explicitly disavowed reliance on the doctrine, and alternatively, 2) there was a lack of evidence to form a basis for analysis of equivalence by the jury.<sup>83</sup> Therefore, the court's discussion of the evidence required to find equivalency can be considered only dicta because the case would have been decided the same without it.<sup>84</sup> Until *Lear Siegler*, the Federal Circuit had not firmly adopted a method for presenting the issue of equivalency to a jury.

## V. THE *LEAR SIEGLER* COURT'S ANALYSIS

Judge Michel, writing for the Federal Circuit, began the court's analysis by citing *Graver Tank* and stating that "[i]nfringement under the doctrine of equivalents 'does not require complete identity for every purpose and in every respect,' but does require substantial identity of function, means, and result."<sup>85</sup> Specifically, the court stated that "substantial identity must be proven with regard to all three elements of the doctrine specified in *Graver Tank*: *function* performed, *means* by which function is performed, and *result* achieved."<sup>86</sup>

Citing *Nestier*, Judge Michel added that "a jury must be separately directed to the proof of each *Graver Tank* element."<sup>87</sup> Furthermore, the evidence of infringement under the doctrine of equivalents "cannot merely be subsumed in the plaintiff's case of literal infringement."<sup>88</sup> The plaintiff must compare "the function, means, and result of its claimed invention with those of the accused device."<sup>89</sup> Without this comparison, the court stated that "a jury is more or less put to sea without guiding charts when called upon to determine infringement under the doctrine."<sup>90</sup> The Federal Circuit summarized by holding that "*Nestier* requires that the three *Graver Tank* elements [of function, way, and result] must be presented in the form of particularized testimony and linking argument."<sup>91</sup>

Judge Michel reviewed the cross-examination testimony of Mr. Mizelle, the designer of the accused spring.<sup>92</sup> According to the court, this testimony

83. *Nestier*, 739 F.2d at 1580; *Lear Siegler*, 873 F.2d at 1427.

84. *Lear Siegler*, 873 F.2d at 1427.

85. *Id.* at 1425 (quoting *Graver Tank*, 339 U.S. at 609).

86. *Id.* (emphasis in original).

87. *Id.*

88. *Id.*

89. *Id.* at 1425-26.

90. *Id.*

91. *Id.*

92. *Id.* at 1426. The relevant portion of Mr. Mizelle's cross-examination testimony states:  
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is all that LSI relied on as compliance with the evidentiary requirements of *Nestier*.<sup>93</sup> The Federal Circuit pointed out two deficiencies in LSI's evidence.<sup>94</sup> First, the evidence "clearly . . . was not broken down into the three *Graver Tank* elements as required by *Nestier*."<sup>95</sup> Second, the only attempt to make an argument linking the three *Graver Tank* elements together was during closing argument when LSI's counsel stated that Mr. Mizelle's testimony "has to do with the equivalents."<sup>96</sup> The court found all of this evidence "fatally deficient."<sup>97</sup>

Judge Michel discussed the distinctions between this case and *Nestier*.<sup>98</sup> The court pointed out that in *Nestier* the plaintiffs expressly stated that the doctrine of equivalents was not their theory, and alleged that the district court erred in not instructing the jury on the doctrine.<sup>99</sup> Whereas, in this case LSI referred to the doctrine in their closing argument and never disavowed it; furthermore, the jury was instructed on the doctrine.<sup>100</sup> The Federal Circuit,

Q: Now, if you took Plaintiff's Exhibit #2—I have got two left over—if you took those [torsion bar spring members] out and threw them away and you swung this around, that would be the same design, wouldn't it?

A: I don't know.

Q: Well, take a look at it. You have been designing these a lot longer than me and I didn't have any trouble figuring it out. If I am wrong, you straighten me out. It would be the same as Plaintiff's Exhibit #1, wouldn't it, Mr. Mizelle?

A: If wishes were horses, beggars [sic] would ride . . . .

. . . .

Q: Well, just by looking at it, would you agree it is the same configuration.

A: *What you have done is you have taken and made a whole different spring out of what you had.*

Q: Perhaps. I am not arguing with you. I just want to know whether you agree.

A: You can do anything you want to.

Q: If you took these two, cut this right here and cut it right here and put that up there—

A: Okay, if we did—

Q: Yes.

A: —and if your patent describes it that way, I would say you'd have the same spring.

*Id.* (quoting *Lear Siegler, Inc. v. Sealy Mattress Co., Inc.*, Civ. A. No. 84-CV-75319-DT (E.D. Mich. Aug. 21, 1987)) (emphasis in original).

93. *Id.*

94. *Id.*

95. *Id.*

96. *Id.*

97. *Id.* at 1427.

98. *Id.* at 1426-27.

99. *Id.* at 1426.

100. *Id.*

however, found these distinctions not critical.<sup>101</sup> While admitting that *Nestier's* discussion of the proper method of presenting the *Graver Tank* equivalency test to the jury could be considered dicta,<sup>102</sup> the court insisted that "[n]evertheless, *Nestier* is binding precedent as to what *Graver Tank* implicitly requires."<sup>103</sup> In repeating the rationale of *Nestier* with approval, Judge Michel observed that "if a jury is to rationally find all three elements of equivalence, it must be told what evidence establishes the equivalence of the claimed and accused devices as to each element."<sup>104</sup> Judge Michel concluded that "[i]n our view, the jury in this case was not so guided."<sup>105</sup>

The Federal Circuit held that the district court should not have instructed the jury on the doctrine of equivalents because "there was neither argument nor evidence explicitly setting forth equivalence of result, function, and means."<sup>106</sup> Moreover, because of this error, the trial court should have granted Sealy's motion for JNOV.<sup>107</sup>

#### VI. THE EFFECT OF *LEAR SIEGLER* ON *PENNWALT'S* ELEMENT-BY-ELEMENT APPROACH OF PROVING INFRINGEMENT UNDER THE DOCTRINE OF EQUIVALENTS

The *Lear Siegler* court did not discuss the specific evidence which must be shown when proving infringement under *Pennwalt's* element-by-element approach.<sup>108</sup> This section of the Note will attempt to explain how to satisfy *Lear Siegler's* evidentiary requirements when proving equivalence under the element-by-element approach.

According to the *Graver Tank* function/way/result equivalency test, one "object"<sup>109</sup> is considered legally equivalent to another "object" when there

101. *Id.*

102. *Id.* at 1427.

103. *Id.*

104. *Id.*

105. *Id.* at 1426.

106. *Id.*

107. *Id.*

108. *See id.* at 1425-27.

109. The word "object" is substituted for the word "device" in the *Graver Tank* equivalency test. This substitution is made because *Graver Tank's* use of the word "device" implies that the entirety approach, rather than the element-by-element approach, should be used when proving infringement under the doctrine of equivalents. While not specifically addressing the issue, the *Graver Tank* court stated that "a patentee may invoke this doctrine to proceed against the producer of a *device* 'if it performs substantially the same function in substantially the same way to obtain the

is substantial equivalency of function, way, and result.<sup>110</sup> In other words, first, the two objects must perform substantially the same function.<sup>111</sup> Second, the two objects must perform that function in substantially the same way.<sup>112</sup> And third, the two objects must obtain the same result.<sup>113</sup> All three parts of the test must be applied each time one object is equated to another object.<sup>114</sup>

*Lear Siegler* created two requirements which must be met in order for an infringement case to get to the jury under a doctrine of equivalents theory of infringement.<sup>115</sup> First, there must be particularized testimony for each part of the *Graver Tank* equivalency test.<sup>116</sup> Namely, there must be separate testimony showing that the two objects perform substantially the same function, separate testimony showing that the two objects perform that function in substantially the same way, and separate testimony showing that the two objects obtain the same result.<sup>117</sup> Second, *Lear Siegler* requires an argument linking the separate testimony addressing each of the three parts of the test together to show that the two objects are indeed equivalent.<sup>118</sup>

At first blush, the *Graver Tank* equivalency test and the *Lear Siegler* evidentiary requirements for presenting the equivalency test to the jury seem very straight forward. When one considers the issues raised by *Pennwalt*, however, proving infringement under the doctrine of equivalents becomes

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same result." *Graver Tank*, 339 U.S. at 608 (quoting *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30, 42 (1929)) (emphasis added). Furthermore, the Court stated that "[t]he theory on which it is founded is that 'if two devices do the same work in substantially the same way, and accomplish substantially the same result, they are the same, even though they differ in name, form or shape.'" *Id.* (quoting *Union Paper-Bag Machine Co. v. Murphy*, 97 U.S. 120, 125 (1877)) (emphasis added). The context in which "device" is used tends to imply that the "device" is the entire invention, rather than just an element of a claim, leading to the conclusion that the equivalency test is applied once to the entire invention. As already discussed, *Pennwalt* rejected the entirety approach in favor of the element-by-element approach. *Pennwalt*, 833 F.2d at 935.

110. *Graver Tank*, 339 U.S. at 608. The *Graver Tank* test is satisfied when an alleged infringer seeks to appropriate an invention by making minor modifications in order to avoid literal infringement of the patent claims. *Carman Industries, Inc. v. Wahl*, 724 F.2d 932 (Fed. Cir. 1983).

111. *Id.*

112. *Id.*

113. *Id.*

114. *See id.*

115. *Lear Siegler*, 873 F.2d at 1425-26.

116. *Id.*

117. *Id.*

118. *Id.*

complicated. *Pennwalt's* element-by-element approach requires the accused device to embody an equivalent for each element of the patent claim when none of the claim elements are copied literally in the accused device.<sup>119</sup> For purposes of applying the equivalency test, each claim element is an "object;" therefore, a reasonable conclusion is that all three parts of the equivalency test must be applied to each element in order to determine if each element's legal equivalent is embodied in the accused device.<sup>120</sup> For example, for a patent having a single claim with five elements, none of which are copied literally in the accused device, the entire equivalency test must be applied five times in order to prove infringement.<sup>121</sup> Conversely, if *Pennwalt* had held that the "entirety" or "invention as a whole" approach should be used, the entire invention would be the "object," and the equivalency test would only have to be applied once in order to prove infringement.<sup>122</sup>

A recent case which supports the conclusion stated above is *Malta v. Schulmerich Carillons, Inc.*<sup>123</sup> where the United States District Court for the Eastern District of Pennsylvania combined the equivalency test and the *Pennwalt* element-by-element approach. In *Malta*, the jury returned a verdict of infringement under the doctrine of equivalents.<sup>124</sup> In granting defendant's motion for JNOV, the district court stated that "the deficiency that necessitates setting aside plaintiffs' award" is that "[a] jury cannot make a factual finding of equivalence without 'particularized testimony and linking argument.'<sup>125</sup> The court added that "[t]he evidentiary explanation is lacking as to how . . . these features are 'buttons or the equivalent thereof.' . . . To uphold this jury's finding would violate *Graver Tank-Nestier-Lear Siegler* and would reduce the doctrine of equivalents to a result oriented catch-all."<sup>126</sup>

119. *Pennwalt*, 833 F.2d at 935.

120. As will be seen, this is the same conclusion reached by the court in *Malta v. Schulmerich Carillons, Inc.*, Civ. A. No. 85-5330 (E.D. Pa. Nov. 21, 1989) (WESTLAW, Dist. Ct. Database).

121. See *Malta*, WESTLAW op. at 6-7. For purposes of this discussion, assume there is no literal infringement, that is, that none of the claim elements are copied literally in the accused device. In practice, however, many of the claim elements are literally infringed by the accused device and an equivalent will only have to be found for one or two elements. See R. HILDRETH, *supra* note 6, at 132-37. Therefore, the equivalency test must be applied to only one or two elements which will reduce the evidentiary complexities. See *id.*

122. See Adelman and Francione, *supra* note 16, at 677-78.

123. Civ. A. No. 85-5330 (E.D. Pa. Nov. 21, 1989) (WESTLAW, Dist. Ct. Database).

124. *Malta*, WESTLAW op. at 3.

125. *Malta*, WESTLAW op. at 6 (quoting *Lear Siegler*, 873 F.2d at 1426).

126. *Malta*, WESTLAW op. at 9 (quoting trial transcript, T. 2.60-61, testimony of Mr. Malta).

The *Malta* court, agreeing with the conclusion stated above as to the application of the element-by-element approach, further stated that "[a] patentee . . . must substantiate all three aspects of equivalency, per *Graver Tank*, as to each limitation of a claim in order to establish equivalence between claim and accused device."<sup>127</sup> The district court made it clear that "*Graver Tank's* tripartite requirements extend to each and every element of the claim."<sup>128</sup>

Assuming one accepts the above conclusions, that is, that the entire three part *Graver Tank* equivalency test must be applied to each element of the claim, satisfying *Lear Siegler's* evidentiary requirements will be no easy chore, for a highly detailed evidentiary presentation is required. Each time the equivalency test is applied to an element of the claim, three separate pieces of particularized testimony will be required in order to address the equivalency of function, way, and result between the claim element and an element in the accused device.<sup>129</sup> Furthermore, a linking argument is required each time the equivalency test is applied.<sup>130</sup> Therefore, in the above example of a patent having a single claim with five elements, *Lear Siegler* requires a total of fifteen separate pieces of particularized testimony<sup>131</sup> and five linking arguments<sup>132</sup> in order for the jury to decide the factual issue of equivalence. The plaintiff must carefully organize her case to ensure that not one set of testimony is left out. Indeed, with so many separate pieces of particularized testimony, the jury might become confused and unable to properly fit all of the testimony together when deciding whether the accused device infringes the patent.

This highly detailed evidentiary presentation, however, may not be what the *Pennwalt* court had in mind. A careful reading of *Pennwalt* indicates that the Federal Circuit's main concern is ensuring that at least the second part of the equivalency test (i.e., "way") is applied to each claim element.<sup>133</sup> *Pennwalt* states that infringement under the doctrine of equivalents may be found "if an accused device performs substantially the same *overall function*

127. *Malta*, WESTLAW op. at 6.

128. *Malta*, WESTLAW op. at 7.

129. See *Lear Siegler*, 873 F.2d at 1425-26.

130. *Id.*

131. (5 applications of test) x (3 parts of test, i.e., function/way/result) = 15 pieces of particularized testimony.

132. (5 applications of test) x (1 linking argument per application of test) = 5 linking arguments.

133. See *Pennwalt*, 833 F.2d at 934-35. See also *Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d 1528, 1531 (Fed. Cir. 1987) ("[T]he critical question . . . is whether . . . the claimed invention and the accused devices do not operate in substantially the same way."). See also *id.* at 1531 n.6.



or work, in substantially the same way, to obtain substantially the same overall result as the claimed invention."<sup>134</sup> Furthermore, 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."<sup>135</sup> The court's language implies that parts one and three of the equivalency test (i.e., "function" and "result") need to be applied only once to the "overall invention" or the "claimed invention" rather than each claim element.<sup>136</sup> It follows that parts one and three of the equivalency test are applied on an "entirety" or "invention as a whole" approach, and because *Pennwalt* clearly adopts the element-by-element approach, the second part of the test is the only part remaining which can be applied on an element-by-element approach.<sup>137</sup>

Two commentators have interpreted *Pennwalt* in this same manner.<sup>138</sup> They suggest that *Pennwalt's* adoption of the element-by-element approach "did not mean that the entire function/way/result test needed to be applied to each element."<sup>139</sup> Furthermore, they state that "[t]here can be no infringement under the doctrine of equivalents . . . if an element has been changed in the accused device and the changed element does not operate in substantially the same way."<sup>140</sup> The commentators did not say that the individual changed element must have substantially the same function and result as the claimed element.<sup>141</sup> Therefore, they feel that *Pennwalt* requires that only the second part of the equivalency test need be applied on an element-by-element approach.<sup>142</sup>

Satisfying *Lear Siegler's* evidentiary requirements becomes easier when only the "way" part of the equivalency test must be applied on an element-by-element approach. Turning back to the example above of a patent having a single claim with five elements, the "function" and "result" parts are applied once to the entire invention and thus require only two pieces of particularized testimony to prove infringement. The "way" part is applied once to each of the five elements and requires five separate pieces of particularized testimony. Therefore, only seven separate pieces of particularized testimony are required as opposed to fifteen. The number of linking arguments required is less clear.

134. *Pennwalt*, 833 F.2d at 934 (emphasis added).

135. *Id.* at 935 (quoting *Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d 1528, 1533 (Fed. Cir. 1987)) (emphasis added).

136. *See id.* at 934-35.

137. *See infra* notes 138-42 and accompanying text.

138. Adelman and Francione, *supra* note 16, at 687-88.

139. *Id.* at 687.

140. *Id.* at 688.

141. *See id.* at 687-88.

142. *See id.*

The safe method is to still require five linking arguments, that is, one argument linking the "way" in which each element functions to the overall function and result of the accused device. Surely a jury's task of fitting together and understanding a doctrine of equivalents case will be easier when there are fewer pieces of particularized testimony.

## VII. CONCLUSION

When applying the *Graver Tank* equivalency test to prove patent infringement under the doctrine of equivalents, there must be particularized testimony and linking argument comparing the equivalence of function, way, and result of the two objects sought to be equated.<sup>143</sup> Furthermore, infringement under the doctrine of equivalents must be proven under the element-by-element approach, that is, the plaintiff must demonstrate that the accused device embodies every element of at least one claim of the patent.<sup>144</sup> Therefore, a reasonable conclusion is that the equivalency test, along with three pieces of particularized testimony, must be applied to each element of a patent claim.<sup>145</sup> A closer examination of *Pennwalt*, however, reveals that only the "way" part of the equivalency test needs to be applied under the element-by-element approach, and the "function" and "result" parts can be applied under the "entirety" or "invention as a whole" approach.<sup>146</sup> Thus, because only one part of the equivalency test needs to be applied under the element-by-element approach, only one piece of particularized testimony must be applied to each element of the patent claim, and the total amount of testimony required to prove infringement under the doctrine of equivalents is reduced.<sup>147</sup>

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143. *Lear Siegler*, 873 F.2d at 1425-26.

144. *Pennwalt*, 833 F.2d at 934-35.

145. See *supra* notes 119-21 and accompanying text.

146. See *supra* notes 133-37 and accompanying text.

147. See *supra* notes 142-43 and accompanying text.

