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INFRINGEMENT AND ASSEMBLY ABROAD — PATENT PROTECTION TAKES A VACATION IN DEEPSOUTH

INTRODUCTION

The doctrine of infringement originated as a means of enforcing a patentee's superior claim to intellectual property and was legislatively recognized in this country by the original Patent Act of 1790.¹ However, as application of the patent system broadened and technology advanced, a patentee's ability to protect his patent was diluted by the impracticality of maintaining infringement actions against direct infringers.² In 1871, as a solution to this dilemma, the concept of contributory infringement was advanced in *Wallace v. Holmes*.³ A line of case law embracing this concept⁴ was codified as section 271(c) of the Patent Act of 1952.⁵ Although the courts' interpretations of this section led to much controversy, the doctrine of contributory infringement has gained general acceptance. This doctrine has been most useful in the area of combination patents. Opponents of its broad application argue that the doctrine of contributory infringement indirectly extends the

¹ Patent Act of 1790, ch. 7, § 4, 1 Stat. 109, 111.

² As an example of a fairly common pattern that made it difficult for a patentee to pursue the direct infringer, a private consumer might purchase an unpatented element of a patented combination from an unauthorized manufacturer and then combine this element with the rest of the combination (which he had either manufactured himself or bought from another). The ultimate use of the resulting combination would be a direct infringement if the replacement of the element in question was a reconstruction of the patented combination. (See text accompanying notes 19-33 *infra* for a complete discussion of this aspect of infringement.) In such a situation, the private consumer would be the direct infringer whether or not he had knowledge of the nature of his conduct. The inadequacy of an infringement action against an individual consumer or even consumers as a class is obvious to even the most aggressive patent holder. The loss of good will would easily outweigh the possibility of recovery. Additionally, the monetary recovery resulting from a cause of action against a consumer or a group of consumers would, of necessity, be too small to reasonably compensate the plaintiff for the costs of his action, not to mention damages incurred as a result of the infringement. A more equitable and effective remedy was needed by the patent holder.

³ 29 F. Cas. 74 (No. 17,100) (C.C.D. Conn. 1871). This doctrine permits a patentee to sue a person who sells an unpatented component of a patented combination with the intent and purpose of bringing about its use in a patented combination. See text accompanying notes 38 to 62 *infra*. The practical advantage of the doctrine is that it gives the patentee a cause of action against a party better able than the direct infringer to compensate him adequately for his damages.

⁴ *Carbice Corp. of America v. American Patents Dev. Corp.*, 283 U.S. 27 (1931); *Henry v. A. B. Dick Co.*, 224 U.S. 1 (1912); *Leeds & Catlin Co. v. Victor Talking Mach. Co.*, 213 U.S. 325 (1909); *Morgan Envelope Co. v. Albany Paper Co.*, 152 U.S. 425 (1894); *Heaton-Peninsular Button-Fastener Co. v. Eureka Specialty Co.*, 77 F. 288 (6th Cir. 1896); *Saxe v. Hammond*, 21 F. Cas. 593 (No. 12,411) (C.C.D. Mass. 1875); *Wallace v. Holmes*, 29 F. Cas. 74 (No. 17,100) (C.C.D. Conn. 1871).

⁵ 35 U.S.C. § 271(c) (1970). See note 66 *infra*.

patent monopoly beyond its intended bounds by protecting unpatented elements as well as the patented combination itself.⁶

The recent Supreme Court patent case, *Deepsouth Packing Co. v. Laitram Corp.*,⁷ dealt with an analogous area. This case involved an alleged infringer who manufactured a domestically patented machine, omitting two small pieces that would be present in the finished product. The almost complete combination was then exported for final assembly and sale to a foreign country where the patentee had no patent rights. The Supreme Court, in a 5-4 decision, narrowly construed the section 154⁸ right to exclude others from "making" the patented invention in the United States as embracing only the fully assembled patented combination.

Although the Court's holding, reversing a unanimous Fifth Circuit Court of Appeals, was consonant with established precedents, this paper will urge application of a more realistic test of infringement. Such a test would seek out the "heart of the invention," a focus revived by the second *Aro Manufacturing Co. v. Convertible Top Replacement Co.*⁹ case. Such a change is necessary to bolster the patent system by offering the patentee broader protection in exchange for his disclosure of the details of the patented invention. Just as section 271(c) codified early case law and overruled the Supreme Court's holding in the *Mercoïd* cases,¹⁰ an amendment to 35 U.S.C. § 271 could codify substantial case law and overrule the holding in *Deepsouth*. The purpose of this paper is to explain the need for and urge the adoption of such an amendment which would become section 271(e). The proposed subsection reads as follows:

- (e) Whoever shall substantially manufacture in the United States so much of the unpatented elements of a patented combination

⁶ The philosophy tending to construe a patent grant most narrowly was clearly manifested in two cases dealing with the activities of an alleged contributory infringer, the *Mercoïd* Corporation. The resulting "*Mercoïd* doctrine" greatly limited the permissible uses of a combination patent. Although *Mercoïd* was found to have unauthorizedly manufactured the significant unpatented element of a patented combination, the Court held that the patent grant could not be extended to cover such unprotected elements regardless of their dominance in the combination. The patentee and his licensee were barred from enforcing their patent rights against *Mercoïd* in companion cases, *Mercoïd Corp. v. Minneapolis Honeywell Regulator Co.*, 320 U.S. 680 (1944); *Mercoïd Corp. v. Mid-Continent Inv. Co.*, 320 U.S. 661 (1944).

⁷ 406 U.S. 518, *rehearing denied, request for leave to amend petition granted*, 409 U.S. 902 (1972).

⁸ 35 U.S.C. § 154 (1970). See note 14 *infra*.

⁹ 377 U.S. 476 (1964). For further discussion of this case, see text accompanying notes 101-121 *infra*.

¹⁰ *Mercoïd Corp. v. Minneapolis Honeywell Regulator Co.*, 320 U.S. 680 (1944); *Mercoïd Corp. v. Mid-Continent Inv. Co.*, 320 U.S. 661 (1944). See note 6 *supra*.

that the patentable aspect of that combination is captured, and there exists no significant practical use for such manufactured item(s) other than assembly into the patented combination, and such assembly, requiring only minor integration, does in fact take place abroad, shall be liable as a direct infringer.¹¹

The remainder of this paper will discuss the development of patent protection concepts and their relationship to the patent problem most graphically illustrated in *Deepsouth*, partial domestic manufacture and assembly abroad. It is hoped that this background exploration will illustrate the unsoundness of the result achieved by the Court in its first decision affecting this significant area.

INFRINGEMENT

The mandate of the patent system is to implement the intention of the framers of the Constitution: "The Congress shall have Power . . . [t]o promote the Progress of Science . . . by securing for limited Times to . . . Inventors the exclusive Right to their respective . . . Discoveries."¹² The hope was that offering this exclusive right to an inventor in exchange for his full and frank disclosure would enable others to have an opportunity to become familiar with his invention within a short period of time. The natural result of such wide dissemination of knowledge is the advancement of technology through the development and application of new techniques, processes and equipment.¹³

A patent grant gives a patentee, his heirs or assigns, the right to exclude others from making, using or selling the invention in the United States for a period of 17 years.¹⁴ The patentee's remedy for violation of this patent grant by another is a civil action for infringement.¹⁵

The present infringement statute, § 271(a)¹⁶ of the Patent Act of

¹¹ An explanation of the proposed amendment and an analogous case law analysis are presented in text accompanying note 190 *infra*.

¹² U.S. CONST. art. I, § 8.

¹³ SUBCOMM. ON PATENTS, TRADEMARKS AND COPYRIGHTS OF THE SENATE COMM. ON THE JUDICIARY, 81ST CONG., 2D SESS., PROPOSALS FOR IMPROVING THE PATENT SYSTEM (Comm. Print 1956).

¹⁴ 35 U.S.C. § 154 (1970) reads:

Every patent shall contain a short title of the invention and a grant to the patentee, his heirs or assigns, for the term of seventeen years . . . of the right to exclude others from making, using, or selling the invention throughout the United States. . . .

¹⁵ 35 U.S.C. § 281 (1970) reads:

A patentee shall have remedy by civil action for infringement of his patent.

¹⁶ 35 U.S.C. § 271(a) (1970) provides:

Except as otherwise provided in this title, whoever without authority makes, uses or sells any patented invention, within the United States during the term of the patent therefor, infringes the patent.

1952, is a recodification of earlier statutes. The infringement concept has been well received and broadly applied by the courts. The statute prohibits unauthorized use, manufacture or sale of the intellectual property claimed by the patent. To determine if there is an infringement, the claims of the patent are compared to the device allegedly used, manufactured or sold in violation of the patent. Consideration is given to the patent disclosure and the prosecution history of the patent application.¹⁷ If the identical elements recited in the claims are present in the defendant's item, there is "literal" infringement.

When a user purchases a patented item from an authorized seller, the sale implies authority to use that item. Consistent with this authority, the purchaser has the right to repair the device to keep it operable. However, difficulty arises in determining when the repair exceeds what is permissible and thus becomes reconstruction, *i.e.*, a remaking. The authority to reconstruct is not ordinarily implied in the sale of a patented item even though the reconstructed device will be used solely by the original purchaser.¹⁸ The distinction between repair and reconstruction becomes even more elusive when the patented item is protected by a combination patent under which individual elements are unpatented, only the combination being protected.

The concept of repair versus reconstruction¹⁹ was first considered in the 1850 case, *Wilson v. Simpson*,²⁰ wherein defendant purchaser of a patented planing machine replaced only the unpatented knife blades. The Court discussed tests that could be used to determine the limits of permissible repair. The two factors given greatest weight in this decision were the durability of the part and the intention of the patentee. The major assembly of the machine had a useful life of several years while the cutting blades had a comparatively shorter life. Therefore, the Court held the replacement of the blade a permissible repair within the implicit intention of the patentee. However, the other parts were not intended to be replaced by a purchaser and the useful life of the machine was thus limited by the life of the more durable parts.²¹

The *Wilson* Court's analysis was relied upon in a line of cases

¹⁷ Janes, *Infringement*, in ENCYCLOPEDIA OF PATENT PRACTICE AND INVENTION MANAGEMENT 437, 439 (R. Calvert ed. 1964).

¹⁸ *Wilson v. Simpson*, 50 U.S. (9 How.) 109 (1850). The *Wilson* Court found that reconstruction constitutes a re-"making."

¹⁹ This concept gains significance in the area of contributory infringement. When an unpatented element of a patented combination is the basis of an infringing reconstruction, the unauthorized supplier of that element may be liable for contributory infringement. See text accompanying notes 38-62 *infra*.

²⁰ 50 U.S. (9 How.) 109 (1850).

²¹ *Id.* at 125-26.

dealing with repair and reconstruction. Significantly, a number of factors besides intent²² and durability²³ have been used by courts to test whether a replacement is repair or reconstruction.²⁴ For instance, the inventiveness of the unpatented element in the combination was the determining factor in *Davis Electrical Works v. Edison Electric Light Co.*²⁵ where the patent for an electric light bulb was held to be infringed by the replacement of the filament. The First Circuit stated that the filament was the distinctive element and its replacement was reconstruction and not repair.

In *Leeds & Catlin Co. v. Victor Talking Machine Co.*,²⁶ the Supreme Court found the patent covering the combination of the record and the player to be infringed by the replacement of the record disc. This holding was also based on the importance or dominance of that element in the patented combination.²⁷

Other factors were relied upon in *Westinghouse Electric & Manufacturing Co. v. Hesser*²⁸ when the Sixth Circuit held that replacement of certain unpatented elements in a patented progressive-feed stoker was merely repair and not infringing reconstruction. This decision was based primarily on the factors of removability and frequency of replacement of the element in question. The Court also relied on durability and intent, saying:

²² The leading case on intent is *Cotton-Tie Co. v. Simmons*, 106 U.S. 89 (1882). This case dealt with a patented combination consisting of a steel buckle and a steel strap. The patentee sold these ties for use on cotton bales. The ties were removed by cutting them off. Although the ties were marked "licensed to use once only," the defendant welded the used ties together and resold the remade combination. The Court held such replacement to be infringing reconstruction since the obvious *intent* of the patentee was for the ties to be used but once. See Hildreth, *Contributory Infringement*, 44 J. PAT. OFF. SOC'Y 512, 535-36 (1962), for the suggestion that intention be deemed the controlling consideration and other factors such as dominance, removability, life and inventiveness are means of determining the patentee's intention.

²³ Examples of cases relying on durability are *Wilson v. Simpson*, discussed in text accompanying note 20 *supra*, and another early case, *Morgan Envelope Co. v. Albany Paper Co.*, 152 U.S. 425 (1894). The latter case concerned a patented toilet paper roll and dispenser combination. The patentee charged the defendant with contributory infringement for supplying purchasers of the combination with replacement rolls of toilet paper. Because of the perishable nature of the commodity, the Court found for the defendant. The toilet paper roll, by its very nature, would have to be replaced frequently during the useful life of the dispenser-roll combination. Such replacement of a perishable element is merely permissive repair. *Accord*, *Heyer v. Duplicator Mfg. Co.*, 263 U.S. 100 (1923).

²⁴ See Hildreth, *Contributory Infringement*, *supra* note 22, at 528-36; Comment, *Repair and Reconstruction of Patented Combinations*, 32 U. CHI. L. REV. 353 (1965); Note, *Repair and Reconstruction in Patented Combinations*, 23 U. PITT. L. REV. 184 (1961).

²⁵ 60 F. 276 (1st Cir. 1894).

²⁶ 213 U.S. 325 (1909).

²⁷ See text following note 49 *infra*. Actually, the disc itself had been protected by an early patent that had expired.

²⁸ 131 F.2d 406 (6th Cir. 1942).

Where the perishable nature of the parts are recognized by the patentee, and where the parts are adapted to be removed from the patented combination and, from time to time, replaced, replacement of such parts is repair and not reconstruction.²⁹

*Aro Manufacturing Co. v. Convertible Top Replacement Co. (Aro I)*³⁰ was the first major infringement case decided by the Supreme Court subsequent to enactment of the Patent Act of 1952. Cautioning that direct infringement is a prerequisite to a finding of contributory infringement,³¹ the Court found that the mere replacement of part of a patented combination would not constitute infringement.³² Justice Brennan's concurring opinion recognized that replacement of elements could not be dismissed so categorically. In order to determine whether a replacement is permissible repair or infringing reconstruction,

[a]ppropriately to be considered are the life of the part replaced in relation to the useful life of the whole combination, the importance of the replaced element to the inventive concept, the cost of the component relative to the cost of the combination, the common sense understanding and intention of the patent owner and the buyer of the combination as to its perishable components, whether the purchased component replaces a worn-out part or is bought for some other purpose, and other pertinent factors.³³

When the infringement concept was initially introduced, only literal infringement was considered. However, the courts expanded the concept with their recognition of the doctrine of equivalents. In 1853, the Supreme Court, in *Winans v. Denmead*,³⁴ first applied this doctrine. The modern case that is most frequently cited for this principle is *Graver Tank & Manufacturing Co. v. Linde Air Products*³⁵ where the Court stated:

"To temper unsparing logic and prevent an infringer from stealing the benefit of the invention" 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 same result."³⁶

²⁹ *Id.* at 410.

³⁰ 365 U.S. 336 (1961).

³¹ *Id.* at 341, citing *Mercoird Corp. v. Mid-Continent Inv. Co.*, 320 U.S. 661 (1944).

³² 365 U.S. at 346.

No element, not itself separately patented, that constitutes one of the elements of a combination patent is entitled to patent monopoly, however essential it may be to the patented combination and no matter how costly or difficult replacement may be.

Id. at 345.

³³ *Id.* at 363-64 (footnotes omitted). See *id.* nn.2-7.

³⁴ 56 U.S. (15 How.) 330 (1853).

³⁵ 339 U.S. 605 (1950).

³⁶ *Id.* at 608, quoting *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30, 42 (1929).

The doctrine of equivalents recognizes society's moral and practical obligation to protect the patentee in exchange for his disclosure of the patented item, thus preventing someone else from changing an insignificant element and claiming the whole item as new. Such application of the doctrine of equivalents effectively broadens the protection afforded by a patent grant although the claims themselves are, of course, not affected.³⁷ This doctrine is the product of judicial decision and has never been codified.

CONTRIBUTORY INFRINGEMENT

Similar to the doctrine of equivalents, the doctrine of contributory infringement was also a logical response to the practical and equitable obligation to protect patentees. Typically, an inventor of a combination would patent it as such if the elements were individually unpatentable although the combination met patentability requirements.³⁸ Such a patent protects the combination only and not the individual elements.³⁹ As stated in *Aro I*,⁴⁰

[I]f anything is settled in the patent law, it is that the combination patent covers only the totality of the elements in the claim and that no element, separately viewed, is within the grant.⁴¹

The doctrine of contributory infringement, as it developed at common law, was a tort concept.⁴² It provided that a patentee could sue a person who sold an unpatented component of a patented combination with the intent and purpose of bringing about its use in a patented combination. The earliest case applying this doctrine was *Wallace v. Holmes*⁴³ which permitted recovery against an unauthorized seller of a patented kerosene lamp. The defendant sold the lamp without the glass chimney, thus omitting one claimed element in an effort to avoid

³⁷ Janes, *Infringement*, *supra* note 17, at 443, citing *International Harvester Co. v. Killeser Mfg. Co.*, 67 F.2d 54, 61 (9th Cir. 1933).

³⁸ The statutory requirements of patentability are novelty, utility and non-obviousness. For a discussion of the modern considerations for patentability, see *Graham v. John-Deere Co.*, 383 U.S. 1 (1966).

³⁹ *Mercoid Corp. v. Minneapolis Honeywell Regulator Co.*, 320 U.S. 680, 684 (1944). *But see* 35 U.S.C. § 271(c) (1970). This section sets down circumstances in which the contributory infringement action will be used to protect unpatented elements of a patented combination: when the component is a material part of the invention, especially made or especially adapted for use in infringement of the patent and not a staple article of commerce, the sale or manufacture of that unpatented component is expressly prohibited.

⁴⁰ 365 U.S. 336 (1961).

⁴¹ *Id.* at 344.

⁴² REPORT OF ATTORNEY GENERAL'S NATIONAL COMMITTEE TO STUDY ANTI-TRUST LAWS at 251 (March 31, 1955).

⁴³ 29 F. Cas. 74 (No. 17, 100) (C.C.D. Conn. 1871).

liability for infringement. The court allowed recovery on the theory that the ultimate purchaser would supply the missing element and thus infringe the patent by the use of the lamp. Since the recovery against the user was impractical, the court felt that equity demanded recovery against the contributory infringer, the supplier of the almost complete combination.

Just four years later, in *Saxe v. Hammond*,⁴⁴ this broad holding was limited to the situation where the element sold was usable only in the patented combination. If the element sold was a staple item of commerce capable of significant non-infringing use, the seller escaped liability as a contributory infringer. This principle was applied much later in *Carbice Corp. of America v. American Patent Development Corp.*⁴⁵

The Patent Act of 1952 codified the doctrine of contributory infringement.⁴⁶ In the 81 years between *Wallace*⁴⁷ and the Patent Act there arose a number of significant cases. In *Morgan Envelope Co. v. Albany Paper Co.*,⁴⁸ the holder of a patent on a toilet paper dispenser combination brought suit against an alleged contributory infringer who supplied purchasers of this device with replacement rolls of paper. The Court denied recovery because of the nature of the element supplied and its impliedly permissible replacement (repair) without direct infringement of the patent.

Similarly, *Leeds & Catlin Co. v. Victor Talking Machine Co.*⁴⁹ was an action brought against the unauthorized manufacturer of sound discs, charging the company with contributory infringement. The patent in question covered the combination of player and sound disc. The disc manufactured by the defendant Leeds & Catlin Company could be used only on plaintiff's player. Recovery was allowed because the replacement constituted an infringing reconstruction and the defendant, as supplier, was a contributory infringer. Thus, the determination of the alleged contributory infringer's liability turned on both the existence of direct infringement (the consumer's use of the Leeds & Catlin

⁴⁴ 21 F. Cas. 593, 594 (No. 12,411) (C.C.D. Mass. 1875).

⁴⁵ 283 U.S. 27 (1931). This case dealt with a combination patent on a refrigerator device that incorporated dry ice (solid carbon dioxide) as a coolant. The patentee granted another the exclusive license to supply purchasers of the patented device with the dry ice. The defendant, Carbice Corporation, supplied dry ice to the same customers with the knowledge that the ice would be used in the patented combination. Carbice escaped liability because the dry ice was a staple item and could not be granted patent protection.

⁴⁶ 35 U.S.C. §§ 271(b), (c) (1970).

⁴⁷ 29 F. Cas. 74 (No. 17,100) (C.C.D. Conn. 1871).

⁴⁸ 152 U.S. 428 (1894).

⁴⁹ 213 U.S. 325 (1909). See text accompanying note 26 *supra*.

disc in combination with the player) and the absence of a substantial non-infringing use for the component supplied by the defendant.

The *Leeds & Catlin* Court distinguished the nature of the element supplied in the *Morgan Envelope* case from the record disc. The Supreme Court stated that the paper rolls in the earlier case were mere passive elements while in the latter case the discs were "the distinction of the invention, . . . the advance upon the prior art." This formulation has also come to be known as the "heart of the invention" test.

That a patentee could enforce his patent rights against a contributory infringer was a well-settled principle until 1944 when the two *Mercoïd* cases⁵⁰ were decided by the Supreme Court. The suit brought by Mid-Continent Investment Company against Mercoïd Corporation,⁵¹ the alleged contributory infringer, concerned a combination patent for a heating system. The dominant element of the combination was an unpatented stoker switch which was being manufactured by Mercoïd without authorization. Mid-Continent, the patent holder, brought an action for contributory infringement based on the fact that Mercoïd's stoker switch was not a staple item since it lacked any significant non-infringing use. As a defense, Mercoïd alleged that the prosecution of a contributory infringement action based on an element not itself patented constituted patent misuse.⁵² This view was supported by the dis-

⁵⁰ *Mercoïd Corp. v. Mid-Continent Inv. Co.*, 320 U.S. 661 (1944); *Mercoïd Corp. v. Minneapolis Honeywell Regulator Co.*, 320 U.S. 680 (1944).

⁵¹ 43 F. Supp. 692 (N.D. Ill. 1942).

⁵² The particular significance of a patent misuse defense or counterclaim lies in its remedial aspects. Some forms of patent misuse involve conduct that, by its nature, constitutes an antitrust violation, e.g., patent pooling, tying arrangements, and fraud on the Patent Office. Only the patent monopoly itself is exempted from Sherman Act antitrust liability and the above types of repressive conduct related to the use of patents are not.

A typical patent pooling agreement involves a number of patentees who have agreed to condition the licensing of their particular patents upon the licensee acquiring the rights to use all the patents in the pool. These agreements unlawfully expand a patent monopoly beyond its permissible bounds and the Sherman Act exemption does not apply.

Tying arrangements condition the sale of patented proprietary items upon the purchase of nonpatented, readily available items as well. These restrictions remove the sale of the unpatented items from free competition and constitute unlawful attempts to expand the scope of a patent grant.

Fraud on the Patent Office is another type of patent misuse that is characterized as an antitrust violation. When a patent applicant knowingly and wilfully submits false information or conceals pertinent information from the Patent Office to acquire a patent, that patentee is wrongfully removing the subject from the public domain and fraudulently acquiring a monopoly.

Typically, these severe manifestations of patent misuse result in antitrust liability. The wrongful patentee may be liable for treble damages and the counsel fees of the aggrieved party and can be compelled to enter into royalty-free licensing agreements with others in the field. In extreme cases, the court may even order that the patent be dedicated to the public.

The *Mercoïd* Court held that the use of a combination patent to protect an unpatented element was a patent misuse of sufficient gravity to entitle the aggrieved party to antitrust

strict court.⁵³ The Court of Appeals for the Seventh Circuit reversed,⁵⁴ basing its decision on the *Leeds*⁵⁵ case. *Leeds* had held that the unauthorized use of an unpatented element constituted infringement if that element was the dominant aspect of the patented combination. The Supreme Court, in *Mercoid Corp. v. Mid-Continent Investment Co.*,⁵⁶ reversed, stating that the *Leeds* rule could no longer be used to protect an unpatented element of a patented combination.⁵⁷ Factors such as the dominance or inventiveness of an element were no longer of consequence.⁵⁸ Justice Douglas, writing for the Court, clarified the resulting status of the doctrine of contributory infringement:

The result of this decision, together with those which have preceded it, is to limit substantially the doctrine of contributory infringement. What residuum may be left we need not stop to consider.⁵⁹

Thus limiting the patent monopoly was deemed to be justified in the public interest and consistent with the judicial attitude that monopoly is "evil" per se.⁶⁰

The companion case, *Mercoid v. Minneapolis Honeywell Regulator Co.*,⁶¹ was brought by Honeywell, a patent licensee. The Court reiterated its position and clarified its attitude of opposition to the use of a patent on a combination to control the market for unpatented elements. The mere bringing of a contributory infringement action against a manufacturer or seller of an unpatented element of a patented combination was held to be patent misuse per se and an antitrust violation:

The legality of any attempt to bring unpatented goods within the

damages. This holding was grounded on the belief that the patent was being used to protect an unpatented element from competition. In reality, however, the patentee was "using his patent not to monopolize the sale of what is not patented but to prevent the defendants from aiding others to infringe what is patented." *Florence-Mayo Nuway Co. v. Hardy*, 168 F.2d 778, 785 (4th Cir. 1948).

⁵³ *Id.*

⁵⁴ 133 F.2d 803 (7th Cir. 1942).

⁵⁵ 213 U.S. 325 (1909).

⁵⁶ 320 U.S. 661 (1944).

⁵⁷ The Court's holding had the effect of overruling the *Leeds* case although Justice Roberts stated, in his dissenting opinion, that *Leeds* had not been overruled. *Id.* at 675.

⁵⁸ *Id.* at 667.

⁵⁹ *Id.* at 669.

⁶⁰ This judicial hostility is prevalent notwithstanding the creation of the patent monopoly by Article I, section 8 of the United States Constitution. One explanation for this current attitude toward patents is the 1938 Hartford Conspiracy. This incident and the resulting antitrust action, *Hartford-Empire Co. v. United States*, 323 U.S. 386 (1945), arose from the pooling of over 500 patents by a number of companies engaged in glass manufacturing. See Gregg, *Tracing the Concept of "Patentable Invention,"* 13 VILL. L. REV. 98, 104 (1967).

⁶¹ 320 U.S. 680 (1944).

protection of the patent is measured by the anti-trust laws not by the patent law.⁶²

The holding in the *Mercoïd* cases led to much confusion and criticism. In effect, the doctrine of contributory infringement had been abrogated, the patentee's protection stripped of much of its attractiveness, and the distinction between patent misuse and antitrust violations all but disregarded.

LEGISLATIVE REACTION

The controversy that resulted from the *Mercoïd* decisions led to the passage of § 271 of the Patent Act of 1952. Subsection (a)⁶³ merely restates the general definition of infringement applied by the courts. The doctrine of contributory infringement was revived and codified in the remaining subsections of section 271. Subsection (b)⁶⁴ was interpreted by *Hautau v. Kearney & Trecher Corp.*⁶⁵ to apply only in the situation where actual infringement occurs as a result of inducement by the alleged infringer. A mere attempt to induce infringement is insufficient.

Subsection (c)⁶⁶ narrowly defines the elements of contributory infringement. Specifically, the components of the patented device sold for use in performing the patented process or as an element of a patented combination must be a material part of the invention, must be known to be particularly made or adapted for use in the infringement, and such component must not be a staple item suitable for substantial non-infringing use. If these elements are present, the unauthorized seller is guilty of contributory infringement.

The House Judiciary Committee⁶⁷ attempted to clarify the purpose of section 271(c):

One who makes a special device constituting the heart of a patented machine and supplies it to others with directions (specific or im-

⁶² *Id.* at 684.

⁶³ 35 U.S.C. § 271(a) (1970) provides:

Except as otherwise provided in this title, whoever without authority makes, uses or sells any patented invention, within the United States during the term of the patent therefor, infringes the patent.

⁶⁴ 35 U.S.C. § 271(b) (1970) reads:

Whoever actively induces infringement of a patent shall be liable as an infringer.

⁶⁵ 179 F. Supp. 490 (E.D. Mich. 1959).

⁶⁶ 35 U.S.C. § 271(c) (1970) provides:

Whoever sells a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.

⁶⁷ HOUSE COMM. ON THE JUDICIARY, REVISION OF TITLE 35, UNITED STATES CODE, H.R. REP. NO. 1923, 82d Cong., 2d Sess. (1952).

plied) to complete the machine is obviously appropriating the benefit of the patented invention. It is for this reason that the doctrine of contributory infringement, which prevents appropriating another man's patented invention, has been characterized as "an expression both of law and morals." Considerable doubt and confusion as to the scope of contributory infringement has resulted from a number of decisions of the courts in recent years. The purpose of this section is to codify in statutory form principles of contributory infringement and at the same time eliminate this doubt and confusion.⁶⁸

Since subsection (c) specifically reestablished the offense of contributory infringement, another section was required to allow a patentee to utilize this concept without risking patent misuse liability. The law prior to the Patent Act of 1952 followed the holding of the *Mercoïd* cases and considered enforcement of patent rights against a contributory infringer to be a per se patent misuse. Theoretically, section 271(d)⁶⁹ was intended to overrule this concept. Justice Brennan's concurring opinion in *Aro I* found that "the legislative history makes it clear that paragraph (d) complements (c) with the view to avoid the application of the patent misuse doctrine to conduct such as that of the patent owner in the present case."⁷⁰

POST SECTION 271 CASE LAW

*Aro Manufacturing Co. v. Convertible Top Replacement Co.*⁷¹ (*Aro I*) was the first case to be decided by the Supreme Court under § 271 of the Patent Act of 1952. Briefly, this case was concerned with a

⁶⁸ *Id.* at 9.

⁶⁹ 35 U.S.C. § 271(d) (1970) reads:

No patent owner otherwise entitled to relief for infringement or contributory infringement of a patent shall be denied relief or deemed guilty of misuse or illegal extension of the patent right by reason of his having done one or more of the following: (1) derived revenue from acts which if performed by another without his consent would constitute contributory infringement of the patent; (2) licensed or authorized another to perform acts which if performed without his consent would constitute contributory infringement of the patent; (3) sought to enforce his patent rights against infringement or contributory infringement.

⁷⁰ 365 U.S. 365 n.9, citing HOUSE COMM. ON THE JUDICIARY, REVISION OF TITLE 35, UNITED STATES CODE, H.R. REP. NO. 1923, 82d Cong., 2d Sess. (1952) and *Hearings on H.R. 3760 Before the Subcomm. of the House Comm. on the Judiciary*, 82d Cong., 1st Sess., at 161-62, 169-75 (1951).

In *Aro Mfg. Co. v. Convertible Top Replacement Co. (Aro II)*, 377 U.S. 476 (1964), the Court stated that

Congress enacted § 271 for the express purpose of reinstating the doctrine of contributory infringement as it had been developed by decisions prior to *Mercoïd*, and of overruling any blanket invalidation of the doctrine that could be found in the *Mercoïd* opinions.

Id. at 492.

The court made reference to the *Aro I* opinions of Justice Black, 365 U.S. at 348-49 and nn.3-4; Justice Harlan, *id.* at 378 n.6; and Justice Brennan, *id.* at 365-67.

⁷¹ 365 U.S. 336 (1961).

combination patent on a self-sealing weatherproof convertible top used in 1952-1954 Ford and General Motors automobiles.⁷² Older designs required the user to fasten external devices along the sides of the top whenever it was raised. The new design obviated the need for this operation. The patented top contained a number of major elements including wood or metal supports, a fitted fabric top, and a wiper panel that sealed the top against the body of the car by applying internal pressure along the sides of the top. These individual elements were unpatented.

The controversy arose when Convertible acquired territorial rights to the combination patent and brought an action to enjoin Aro, the alleged contributory infringer, from making and selling replacement fabrics. The district court held for Convertible⁷³ and the Court of Appeals for the First Circuit affirmed.⁷⁴ Both decisions were based on the determination that the replacement of so major an element of the combination was a reconstruction and, therefore, an infringement.⁷⁵

The Supreme Court reversed, declaring, "It is plain that § 271(c) . . . made no change in the fundamental precept that there can be no contributory infringement in the absence of direct infringement."⁷⁶ In the Court's opinion, direct infringement was lacking because the replacement of the unpatented fabric element was permissible "repair" and not infringing "reconstruction."⁷⁷ The actual test applied was quite simple:

Mere replacement of individual unpatented parts, one at a time, whether of the same part repeatedly or different parts successively, is no more than the lawful right of the owner to repair his property. Measured by this test, the replacement of the fabric involved in this case must be characterized as permissible "repair," not "reconstruction."⁷⁸

⁷² Mackie-Duluk Patent No. 2,569,724.

⁷³ 119 U.S.P.Q. 122 (D. Mass. 1957).

⁷⁴ 270 F.2d 200 (1st Cir. 1959).

⁷⁵ Representatives of the Aro Company admitted that replacement fabrics cut for the Mackie-Duluk top, due to their unique shape, could not be used on any other type of convertible top. Thus, the courts found that the replacement fabric was not a staple article since it had no non-infringing use.

⁷⁶ 365 U.S. at 341.

⁷⁷ The Court apparently overlooked the fact that Ford's use of the Mackie-Duluk top was unauthorized. General Motors had acquired a license to use the top on its 1952-54 cars but Ford had not. Thus, any manufacture or sale of Ford automobiles containing that patented top was a direct infringement of the patent. Further, the use of the convertible top by Ford purchasers was unauthorized and a direct infringement as well, making it unnecessary to even consider repair versus reconstruction since anyone supplying a material element of a patented combination to a direct infringer is liable as a contributory infringer.

⁷⁸ 365 U.S. at 346.

Additionally, the Court reasserted the concept that a combination patent protects only the combination and not the unpatented elements of that combination.⁷⁹ It found that no distinction could be made based on whether the element was the inventive or dominant part of the patent or merely an insignificant part. The Court thus expressly rejected the "heart of the invention" test applied prior to *Mercoïd* and by the lower courts in *Aro I*.

Justice Black, in his concurring opinion, construed the doctrine of contributory infringement under section 271(c) very narrowly. He stated that a combination patent protects only the combination and that, if an element is novel, it should be patented individually. Otherwise, any member of the public has the right to make the part except where it is knowingly supplied for a new making of what is in effect the whole combination.⁸⁰ Finally, Justice Black joined the majority in rejecting the "heart of the invention" test for infringement, whether direct or contributory.⁸¹

Although the *Aro I* holding was a 6-3 decision, the reasoning of the Court was more evenly split. Chief Justice Warren and Justices Whitaker, Douglas, Clark, and Black held the test of infringement to be a narrow interpretation of "reconstruction," that is, the combination is merely repaired so long as at least one element is left untouched.⁸² Justice Brennan joined the dissenters, Justices Harlan, Frankfurter and Stewart, in calling for a broader test of repair versus reconstruction,⁸³ a test to be based on a collection of factors from the Court's earlier decisions, including, in particular, the "inventive" factor.⁸⁴ The dissent's argument is particularly persuasive in light of the express intent of the

⁷⁹ *Id.* at 344, citing *Mercoïd Corp. v. Mid-Continent Inv. Co.*, 320 U.S. 661, 676 (1944).

⁸⁰ 365 U.S. at 362. The knowing supply of a part for use in the whole combination could make the supplier a contributory infringer.

⁸¹ A patented combination is no more than that, a novel relationship brought to bear on what presumably are familiar elements already in the public domain. Such familiar elements are not removed from the public domain merely because of their use, *however crucial*, in the novel combination.

Id. at 361 (Black, J., concurring) (emphasis added).

⁸² An inconsistency in the opinion must be pointed out. The majority, at 365 U.S. 346, cited the *Cotton Tie* case, as an example of reconstruction by "second creation." However, under the majority's new test set down on the same page of the opinion, the *Cotton Tie* situation would be a prime example of mere repair. The combination consisted of two separate elements, the buckle and the strap. Replacing only the strap element left the buckle element untouched. Thus, under the new test, such replacement would constitute repair and not the reconstruction which *Cotton Tie* had held it to be. See 32 U. CHI. L. REV. 353, 360 (1965); 49 CALIF. L. REV. 988, 992 (1961).

⁸³ 365 U.S. at 363.

⁸⁴ See Hildreth, *Contributory Infringement*, *supra* note 22, at 537-40.

drafters of section 271(c): restoration of the concept of contributory infringement as it existed prior to the *Mercoid* cases.⁸⁵

Aro I's treatment of precedents caused much confusion.⁸⁶ As a result, in 1964, *Wilbur-Ellis Co. v. Kuther*⁸⁷ came before the Court. Defendant petitioner had purchased four patented fish canning machines in nonoperable condition. Complete sandblasting of the machines and grinding of some elements was required to restore them to working order. In the process of restoration, six of the 35 unpatented elements were modified so that the machine would pack a five ounce can of fish instead of the one pound can it had originally been designed for. The patentee's ensuing infringement action against the purchaser was upheld by the district court.⁸⁸

The petitioner argued that, under the *Aro I* test,⁸⁹ the individual elements could have been replaced with identical elements without infringing the patent so long as at least one element remained untouched. Thus, it was contended, a finding of non-infringement should also result if the same elements are merely ground to a different size or relocated. However, the district court based its decision on the determination that changing the essential elements of the machine was reconstruction and not merely repair.⁹⁰

The Court of Appeals for the Ninth Circuit affirmed⁹¹ but the Supreme Court reversed on the basis of the principle that a combination patent protects only the entire combination, not the elements.⁹² The petitioner had modified only six elements,⁹³ the size and location of which were not covered by the patent claims.⁹⁴ The Court held that

⁸⁵ *Hearings on H.R. 3760 Before the Subcomm. of the House Comm. on the Judiciary*, 82d Cong., 1st Sess., 151 (1951). See Connor, *The Second Aro Case: A Realignment of the Supreme Court on the Matter of Contributory Infringement of a Combination Patent*, 34 U. CIN. L. REV. 127 n.18 (1965) [hereinafter cited as Connor].

The codification of the doctrine of contributory infringement in § 271(c) of the Patent Act of 1952 must be considered an expansion of patent protection. The traditional judicial hostility toward the patent monopoly is the only possible explanation for the consistent refusal of the courts to acknowledge the explicit intent of the framers of the Patent Act. The report of the House Committee on the Judiciary expressly states the purpose of § 271(c) as "codifying the principles of contributory infringement" and "eliminating the doubt and confusion." HOUSE COMM. ON THE JUDICIARY, REVISION OF TITLE 35, UNITED STATES CODE, H.R. REP. NO. 1923, 82d Cong., 2d Sess. 9 (1952).

⁸⁶ Note, *Repair and Reconstruction of Patented Combinations*, 32 U. CHI. L. REV. 353, 360-61 n.48 (1965).

⁸⁷ 377 U.S. 422 (1964).

⁸⁸ *Kuther v. Leuscher*, 200 F. Supp. 841 (N.D. Cal. 1961).

⁸⁹ See text accompanying note 78 *supra*.

⁹⁰ 200 F. Supp. at 842.

⁹¹ *Leuscher v. Kuther*, 314 F.2d 71 (9th Cir. 1963).

⁹² 377 U.S. 422 (1964).

⁹³ The claimed invention included a total of 35 elements.

⁹⁴ 377 U.S. at 423.

such replacement was within the rights purchased by the petitioner and constituted repair, not reconstruction. The abandonment of the "heart of the invention" concept after *Aro I* made it clear that the existence of 29 unchanged elements sufficed to classify the replacement as a mere repair even though the essential elements were in fact modified.

Unlike the lower courts in the *Wilbur-Ellis* case, most lower courts interpreted the *Aro I* decision as greatly limiting the power of a patent grant to protect the elements of a patented combination. In *Switzer Brothers v. Locklin*,⁹⁵ a particularly noteworthy case, the Seventh Circuit held that the *Mercoïd* rule had not been vacated by section 271(c). Instead, as had been stated in *Aro I*, the monopoly granted to the patentee applied only to the entire patented combination and not to the elements thereof regardless of their essential nature.⁹⁶

Similarly, in *Pierce v. Aeronautical Communication Equipment, Inc.*,⁹⁷ the Fifth Circuit refused to find double patenting⁹⁸ where an element of a patented combination was separately patented. A combination patent covered an electrical circuit containing a Pierce oscillator, among other elements. Seven years later, a second patent was issued for the oscillator element alone. The court of appeals overruled the district court's finding of double patenting,⁹⁹ citing *Aro I* and *Mercoïd* for the proposition that a combination patent protects only the combination and not the individual elements regardless of their essential nature. Thus, a second patent on the oscillator alone would not give rise to double patenting for that individual element received no protection from the combination patent.¹⁰⁰

⁹⁵ 297 F.2d 39 (7th Cir. 1961). This case dealt with an assignee of several patents for fluorescent fixtures and displays. The plaintiff assignee required that licensees purchase from him the raw materials needed to produce the fixtures. Although the materials in question were raw materials and not included in a patent grant, the assignee tried to invoke the protection of section 271(c). Not only did the Seventh Circuit state that section 271(c) did not abrogate the *Mercoïd* doctrine but it also asserted that *Aro* affirmed that same doctrine. Thus, the elements of the combination would not be covered by the patent. Furthermore, the court stated that, after *Aro*, it could no longer be argued that section 271(c) overruled the *Mercoïd* holdings.

⁹⁶ *Id.* at 46.

⁹⁷ 307 F.2d 790 (5th Cir. 1962). See Connor, *supra* note 85, at 127 for a complete discussion of this point.

⁹⁸ Double patenting occurs when the same invention receives patent protection from more than one patent. The effect of a double patenting situation could be to extend the patent protection beyond the statutory 17-year period. To avoid such a result, the later patent is declared invalid. The significance of this rule is demonstrated by a situation like the *Pierce* case where one separately patented element was part of a patented combination. If the combination patent was held to give protection to the already patented oscillator element, the later combination patent would have been declared invalid as a form of double patenting.

⁹⁹ 198 F. Supp. 269 (S.D. Fla. 1961).

¹⁰⁰ 307 F.2d at 795. The oscillator patent was held to be invalid by the First Circuit in

It was necessary to mitigate the absolute rule the lower courts had derived from the *Aro I* case. The refusal to protect any element of a combination patent regardless of its essential nature created a situation that required the Supreme Court to reanalyze its *Aro I* holding.

THE SECOND *ARO* CASE (*ARO II*)

Such an opportunity to assess the effect of the *Aro I* decision occurred in 1964 when the *Aro* case¹⁰¹ which had been remanded to the district court¹⁰² and then appealed to the court of appeals,¹⁰³ once again came to the Supreme Court on a writ of certiorari. This second decision sounded a retreat from much of the holding in *Aro I*. *Aro II* drew a sharp distinction between the claims with respect to the licensed use of the convertible tops in General Motors cars and the unlicensed use in Ford cars.¹⁰⁴ In *Aro II*, the Court claimed it had never intended, in *Aro I*, to reverse the original court of appeals' finding of contributory infringement with respect to *Aro's* supplying of the fabric elements for use as replacements in Ford cars. In fact, however, there had been no such apparent distinction made in *Aro I* since the Court had ordered the case as a whole "reversed and remanded."

On remand, the district court, acting under the Supreme Court order, entered a judgment negating any allegation of infringement, either direct or contributory. Convertible Top appealed to the Court of Appeals for the First Circuit¹⁰⁵ which reversed the lower court determination with respect to the fabric elements supplied for use on Ford cars. The circuit court was in the unusual position of having to explain its own holding in the first *Aro* case in order that the precise scope of the earlier decision might be determined.¹⁰⁶ Such analysis was needed

Pierce v. Hewlett-Packard Co., 220 F.2d 531, *cert. denied*, 350 U.S. 833 (1955), and by the Third Circuit in *Pierce v. Allen B. DuMont Laboratories*, 297 F.2d 323 (1961), although the latter court did not reach the same issue. The holding in *Blonder-Tongue Laboratories v. University of Ill. Foundation*, 402 U.S. 313 (1971), has since obviated the need for multiple litigation on the validity of a single patent by abolishing the requirement of mutuality of estoppel. Now, once a patent is held invalid by one court, an alleged infringer may use the defense of collateral estoppel provided the invalidating judgment was rendered under conditions meeting the Supreme Court's fairness test outlined in *Blonder-Tongue*.

¹⁰¹ *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476 (1964).

¹⁰² (S.D. Mass. 1961) (unreported decision).

¹⁰³ 312 F.2d 52 (1st Cir. 1962).

¹⁰⁴ General Motors had acquired a license to use the patented top combination while Ford had no such license. Thus, Ford's use was a direct infringement of the combination patent—a prerequisite for a finding of contributory infringement liability that obviated the need for a repair versus reconstruction analysis.

¹⁰⁵ 312 F.2d 52 (1st Cir. 1962).

¹⁰⁶ Through Chief Judge Woodbury, the court of appeals acknowledged the summary

to, in turn, define the parameters of the Supreme Court's reversal in *Aro I*.

In particular, the First Circuit directed its attention to a consideration of whether *Aro I* reviewed (and thus reversed) a decision covering the contributory infringement aspects of Aro's conduct with respect to both General Motors and Ford Cars or General Motors cars alone. In a very persuasive opinion, the court of appeals found that the Supreme Court's *Aro I* decision dealt only with the question of contributory infringement in relation to replacement tops for licensed General Motors cars.¹⁰⁷ Speaking for the Court in *Aro II*, Justice Brennan¹⁰⁸ agreed, declaring, in reference to *Aro I*, "Our decision dealt, however, only with the General Motors and not with the Ford cars."¹⁰⁹

Aro II had significant impact on three areas of prime concern to patent lawyers:¹¹⁰ the vitality of the *Mercoïd* doctrine, the effect of licensing, and the concept of "heart of the invention." First, *Aro II* expressly recognized that the legislative intent behind the enactment of section 271 was the restoration of the pre-*Mercoïd* doctrine of contributory infringement.¹¹¹ The Court held that contributory infringement actions seeking to protect substantial unpatented elements under combination patents would no longer be barred as per se patent misuse.¹¹²

The impact of *Aro II*'s holding on the area of licensing is not as easy to assess. The case is generally cited as authority for the proposition that repair alone is infringement when the original use was unautho-

treatment given in the original district court opinion to Ford's infringement and concluded that its own attention in the earlier decision had been directed primarily to the basic question of repair versus reconstruction. *Id.* at 54. This question was only relevant to a consideration of the allegation of contributory infringement with respect to licensed General Motors cars since Ford's unauthorized use of the Convertible tops constituted a direct infringement and thus obviated any need to resort to a reconstruction concept.

¹⁰⁷ *Id.* at 56.

¹⁰⁸ Mr. Justice Brennan's concurring opinion in *Aro I* did refer to this distinction. 365 U.S. at 368.

¹⁰⁹ 377 U.S. at 479.

¹¹⁰ Additionally, *Aro II* considered the element of knowledge required by section 271(c) for a finding of contributory infringement. Although knowledge is particularly significant to a determination of monetary liability, *Aro I* disregarded this element. 377 U.S. at 488. See Moseley, *The Knowledge Requirement of Contributory Infringement and the Aro Case*, 47 J. PAT. OFF. SOC'Y 98 (1965), for a thorough discussion of the legislative considerations leading to the enactment of § 271(c) of the Patent Act, in particular the development of the knowledge concept.

¹¹¹ 377 U.S. at 492.

¹¹² The *Mercoïd* Court held that the defense of patent misuse barred a contributory infringement action. 320 U.S. at 668. However, the second *Aro* Court stated that section 271(c) was enacted for the "express purpose of reinstating the doctrine of contributory infringement as it had been developed by decisions prior to *Mercoïd*, and of overruling any blanket invalidation of the doctrine that could be found in the *Mercoïd* opinions." 377 U.S. at 492.

rized since the repair operates to perpetuate the infringing use.¹¹³ The Court stated:

The reconstruction-repair distinction is decisive, however, only when the replacement is made in a structure whose original manufacture and sale have been licensed by the patentee, as was true only of the General Motors cars; when the structure is unlicensed, as was true of the Ford cars, the traditional rule is that even repair constitutes infringement. . . . This aspect of the case was not considered or decided by our opinion in *Aro I*.¹¹⁴

The minority Justices in *Aro II* maintained, however, that *Aro I* considered the issue of contributory infringement as it applied to replacement fabric for *both* the licensed General Motors and the unlicensed Ford cars. They felt that there was no reason to draw a distinction between the two situations.¹¹⁵

This statement is particularly significant because the dissenters in *Aro II* had all been members of the majority in *Aro I*.¹¹⁶ The *Aro II* dissent reiterated the earlier holding that the patent monopoly could not be applied to the unpatented fabric element regardless of any lack of authorization for use of the entire patented combination.¹¹⁷ Thus, the *Aro II* dissenters would accord no significance to the licensing of General Motors.¹¹⁸ These Justices were, of course, in the best position to clarify that the intent of *Aro I* was not to differentiate between the General Motors and Ford situations. This creates at least one problem: since *Aro II* did not *expressly* overrule the licensing aspect of the *Aro I* holding and that holding is at least arguably as the *Aro II* dissenters would have it, it could be claimed that the mere unlicensed use of a device covered by a combination patent does not make a supplier of an element for the device a contributory infringer.¹¹⁹ It is clear, however, that, if *Aro II* does indeed permit this escape from liability via *Aro I*,

¹¹³ See Janes, *Infringement*, *supra* note 17, at 446.

¹¹⁴ 377 U.S. at 480.

¹¹⁵ *Id.*

¹¹⁶ Justice Black, who wrote the dissenting opinion in *Aro II*, suggested that a change in Court personnel resulted in the different holding. Justice Whittaker, the author of the majority opinion in *Aro I*, was replaced by Justice White, who, with Justices Harlan, Stewart, Goldberg and Brennan, formed the majority in *Aro II*. 377 U.S. at 521. Justices Harlan and Stewart had dissented in *Aro I*. Justice Goldberg replaced *Aro I*'s dissenting Justice Frankfurter while Justice Brennan had already drawn the *Aro II* distinction in his *Aro I* concurring opinion. In light of the sharp line later drawn between General Motors and Ford replacements in *Aro II*, Justice Brennan's concurrence in *Aro I* could effectively be considered a dissenting opinion.

¹¹⁷ *Id.* at 519.

¹¹⁸ *Id.*

¹¹⁹ *Accord*, Connor, *supra* note 85, at 133.

it is limited to unauthorized suppliers of *non-material* elements because of the later decision's restoration of the "heart of the invention" test.¹²⁰

The judicial restoration of the essential element doctrine makes *Aro II* one of the few recent Supreme Court decisions that strengthens the patent system. Through reinstatement of the pre-*Mercoïd* concepts of contributory infringement, the combination patent could properly protect some unpatented elements. With dominance and inventiveness of the element in question once again given primary consideration, *Mercoïd's* prima facie refusal to protect any unpatented element was rejected.¹²¹ This holding was more realistic, giving greater recognition to the policy concepts behind the patent system and the need to give the inventor of a combination broader protection.

PARTIAL MANUFACTURE AND EXPORT

In an analogous area, the recent Supreme Court decision, *Deepsouth Packing Co. v. Laitram Corp.*,¹²² perpetuates the improper application of the patent laws. This action was commenced in the District Court for the Eastern District of Louisiana by the Laitram Corporation, assignee of a combination patent for a machine that cleaned and deveined shrimp,¹²³ against the Deepsouth Packing Company.¹²⁴ Laitram charged that Deepsouth infringed its patent through manufacture in the United States of all the elements of the patented deveining machine and their subsequent assembly (by Deepsouth) at the customer's facility in Brazil. Laitram sought to enjoin Deepsouth from such activity.

¹²⁰ 377 U.S. at 485-86, 491-92. One commentator has said:

Now the situation has changed entirely . . . [with] the Supreme Court believing that protection may be afforded to an individual element of a patented combination. . . . [I]t is [now] reasonable to protect from direct and contributory infringement elements which go to the heart of a combination patent.

Connor, *supra* note 85, at 135.

¹²¹ 377 U.S. at 491-92.

¹²² 406 U.S. 518 (1972). See generally the discussions of this case in Lipman, *Deepsouth Packing Co. v. Laitram Corp.—How to Succeed in Deveining Without Really Trying*, 54 J. PAT. OFF. SOC'Y 695 (1972); 58 A.B.A.J. 1226 (1972); 41 FORDHAM L. REV. 458 (1972); 10 HOUSTON L. REV. 216 (1972).

¹²³ The validity and priority of the Laitram patent had been established in earlier actions. *Laitram Corp. v. Deepsouth Packing Co.*, 301 F. Supp. 1037 (E.D. La. 1969), *aff'd*, 443 F.2d 928 (5th Cir. 1971). The elements of the combination were individually unpatentable. Furthermore, each element was available commercially and shown in suppliers' catalogues. The Laitram patent was awarded for the novelty of the combination of the known elements.

The first district court opinion held that the Laitram and Deepsouth machines were substantially the same and thus, under the doctrine of equivalents, Laitram's patent was infringed. An injunction specifically prohibiting Deepsouth from selling its infringing machine in the United States was issued.

¹²⁴ *Laitram Corp. v. Deepsouth Packing Co.*, 310 F. Supp. 926 (E.D. La. 1970).

The district court relied on the earlier decisions of the Second, Third and Seventh Circuits in *Radio Corp. of America v. Andrea (Andrea I)*,¹²⁵ *Cold Metal Process Co. v. United Engineering & Foundry Co.*,¹²⁶ and *Hewitt-Robins, Inc. v. Link-Belt Company*,¹²⁷ respectively, and concluded that its injunction in an earlier infringement action against Deepsouth could not properly be used to guard against less than complete manufacture and assembly within the United States. The Fifth Circuit reversed unanimously,¹²⁸ holding that, since Deepsouth manufactured all parts for its deceiver in the United States and assembled it to such a degree before exporting that the machine could be made operable by a mere one hour final assembly abroad, there was a direct infringement of Laitram's patent. On certiorari, the Supreme Court heard the case. In a 5-4 decision,¹²⁹ the Court reversed the Fifth Circuit, restoring the holding of the district court.

The district court had relied heavily on the Second Circuit's first decision in the *Andrea I* case.¹³⁰ In *Andrea I* the defendants manufactured all the components of a patented radio receiver but, to avoid infringement, packed the receiver chassis and uninstalled vacuum tubes separately (although they were shipped in the same carton) for exclusively foreign sales. The court stated:

No wrong is done the patentee until the combination is formed. His monopoly does not cover the manufacture or sale of separate elements capable of being, but never actually, associated to form the invention. Only when such association is made is there a direct infringement of his monopoly, *and not even then if it is done outside the territory for which the monopoly was granted.*¹³¹

¹²⁵ 79 F.2d 626 (2d Cir. 1935).

¹²⁶ 235 F.2d 224 (3d Cir. 1956). This case concerned a defendant who manufactured and sold a steel rolling mill to users overseas. The mill, though manufactured in the United States, was shipped abroad before it was assembled. The plaintiff patentee had licensed the defendant to manufacture such mills but a controversy arose over the royalties involved in this sale. The defendant escaped liability because the place of final assembly was beyond the limits of American patent protection.

¹²⁷ 371 F.2d 225 (7th Cir. 1966). *Hewitt-Robins* dealt with a patented reclaiming apparatus. Plaintiff Hewitt-Robins, as assignee of the patent, brought the action against Link-Belt. The defendant had contracted to supply the reclaiming apparatus to purchasers in Eneqli, Turkey. The patented apparatus was never assembled in the United States and parts were sent to Turkey in numerous shipments over a three month period. This case can clearly be distinguished from *Deepsouth* by the degree of assembly required at the place of foreign usage. In *Hewitt-Robins* the assembly took months while in *Deepsouth* it took merely one hour although the equipment was complex and weighed over one and three quarter tons.

¹²⁸ 443 F.2d 936 (5th Cir. 1971).

¹²⁹ 406 U.S. 518 (1972).

¹³⁰ 310 F. Supp. at 929.

¹³¹ 79 F.2d at 628 (emphasis added).

The later *Cold Metal* and *Hewitt-Robins* cases cited by the *Deepsouth* district court added little to the analysis of this situation. These later cases cited *Andrea I* as the primary reason for their holdings.

The Fifth Circuit reviewed the above decisions in *Deepsouth* and rejected their reasoning, stating that "the courts have worked themselves into what we perceive to be a conceptual box."¹³² The court of appeals argued that the term "makes" in section 271(a)¹³³ should be given a realistic construction,¹³⁴ *i.e.*, it should be read as meaning "what it ordinarily connotes — the *substantial* manufacture of the constituent parts of the machine."¹³⁵ Thus, the court held:

[W]hen all parts of a patented machine are produced in the United States and, in merely minor respects, the machine is to be finally assembled for its intended use in a foreign country . . . the machine is "made" within the United States.¹³⁶

One year later, the Supreme Court overruled the court of appeals in an opinion written by Justice White. Citing *Aro I* and *Mercoid v. Mid-Continent Investment Co.*,¹³⁷ the Supreme Court reiterated the rigid rule that a combination patent protects only the entire combination and not the unpatented elements.¹³⁸ On that premise, the Court rejected the view that substantial manufacture of the constituent parts of a machine results in direct infringement of a combination patent.¹³⁹ The Court quoted Judge Swan's declaration for the Second Circuit in the *Andrea I* case, "[The] relationship is the essence of the patent,"¹⁴⁰ and concluded that, unless all the elements are assembled, there is no "essence" to be violated by the manufacturing exporter.¹⁴¹

¹³² 443 F.2d at 938.

¹³³ 35 U.S.C. § 271(a) (1970) provides:

(a) Except as otherwise provided in this title, whoever without authority *makes*, *uses* or *sells* any patented invention, within the United States during the term of the patent therefor, infringes the patent.

(Emphasis added.)

¹³⁴ 443 F.2d at 938.

¹³⁵ *Id.* at 939. (Emphasis added.)

¹³⁶ *Id.*

¹³⁷ 320 U.S. 661 (1944).

¹³⁸ 406 U.S. at 528-29.

¹³⁹ *Id.*

¹⁴⁰ 79 F.2d at 628, *quoted in* 406 U.S. at 529.

¹⁴¹ This attitude is unrealistic. By their selection of the words "makes," "uses" and "sells," the framers of the Patent Act were obviously trying to offer the patentee an attractive exclusive right. He could exclude others from making, using or selling his invention. Since it is to be presumed that each of these words has independent legislative significance, an interesting argument that would produce a result contrary to *Deepsouth* can be developed. The argument would run as follows: First, it would be noted that, in addition to its explicit meaning, the term "use" protects the patentee where another appropriates the benefit of his invention and, without authority, makes and then uses the

The dissenting opinion, written by Justice Blackmun and joined by Chief Justice Burger and Justices Powell and Rehnquist,¹⁴² identified the major weakness in the majority's argument, a point not highlighted by the court of appeals but one discussed by commentators prior to the Supreme Court's *Deepsouth* decision.¹⁴³ The authority of *Andrea I*, relied on by the majority, was substantially undermined by the modified opinion of the same court just two years later,¹⁴⁴ reversing the holding and arguably overruling the rationale of the original decision. This later case held that the sale of the substantially assembled parts of the patented combination for a minor final assembly and use abroad was a direct infringement since the entire combination was made, sold and practically completely assembled in the United States.

It is the opinion of this author that the second *Andrea* case completely eviscerated the first decision because, in its modification, the Second Circuit neutralized its prior holding point for point. Seeking to narrow the *Andrea II* holding, the *Cold Metal*¹⁴⁵ and *Hewitt-Robins*¹⁴⁶ courts incorrectly relied upon only one of the distinctions drawn by the majority in *Andrea II*¹⁴⁷ — complete assembly for testing purposes and subsequent disassembly before shipment. However, immediately following its observation regarding assembly for testing purposes, *Andrea II* also noted:

Where the elements of an invention are thus sold in *substantially* unified and combined form, infringement may not be avoided by a

device himself. Similarly, "sells" protects the patentee from one who, without authority, makes and then sells the device. Thus, since a domestic maker of a fully assembled combination (*i.e.*, the only type of "maker" *Deepsouth* would provide protection against) could invariably be found guilty of use or sales infringement, the inclusion of the term "makes" in section 271(a) would be unnecessary unless a broader meaning were intended. Second, it would be pointed out that, in fact, the only situation in which one can use or sell a patented device without also necessarily incurring liability for making it as well, occurs when that device is made or purchased outside the United States and then imported by the ultimate user or seller. In any but this infrequent situation the prohibition of "making" the patented item is necessarily included in the very terms "sells" and "uses." Third, it would be determined that it is, therefore, a reasonable interpretation of the framers' intent to conclude that "makes" has a broader meaning than that attributed to it in *Deepsouth* and that it could specifically protect the patentee from an exporter-manufacturer who only makes the item in this country and ships it abroad for sale or use. Allowing a manufacturer to escape liability because minor, insubstantial elements are not finally assembled before shipment abroad seems to be contrary to the overall intent of § 271(a) of the Patent Act.

¹⁴² 406 U.S. at 532.

¹⁴³ See, e.g., Comment, *Tightening the Screws on Minor Assemblies Abroad: The Meaning of "Makes" Under the Patent Infringement Statute*, 57 IOWA L. REV. 889, 891-97 (1972).

¹⁴⁴ *Radio Corp. of America v. Andrea*, 90 F.2d 612 (2d Cir. 1937).

¹⁴⁵ 235 F.2d at 230.

¹⁴⁶ 371 F.2d at 230-31.

¹⁴⁷ 90 F.2d at 613.

separation or division of parts which leaves to the purchaser a simple task of integration.¹⁴⁸

The court then quoted its earlier *Andrea I* holding, pointing out that

[the judgment was made] on the basis that the defendants were manufacturing and selling a complete combination which infringed, even though the tubes were not inserted in the sockets of the receiver at the time of sale.¹⁴⁹

Going even further, the court held that the sale in the United States of the supposedly disassembled receiver constituted infringement because “[t]he single package contained all the elements of the combination”¹⁵⁰ and thus was a “sale” of the patented device. Therefore, the assembly for testing purposes analysis was merely one aspect of the decision and not a proper basis for distinguishing the *Cold Metal* and *Hewitt-Robins* cases from *Andrea II*. The primary consideration should be the substantial combination of all the elements. In *Deepsouth*, there was a sale of the entire combination¹⁵¹ — although not fully assembled, all the elements were present.

The *Andrea I* opinion restated the rule that a combination patent protects only the entire combination. *Andrea II* noted that the defendant appellant did in fact sell the whole combination, the only mitigating factor being that the vacuum tubes needed cursory insertion to make the combination operable. However, only sale of a complete combination, not sale of an operable combination, was required by the Patent Act.¹⁵²

To clarify its holding and complete its analysis, *Andrea II* discussed the defendant’s right to use the tubes¹⁵³ as an element in an unauthorized combination.

Judge Swan,¹⁵⁴ in his partial dissent to *Andrea II*, stated that the Second Circuit’s later holding overruled its decision in *Andrea I*. He expressed his agreement with the second holding on the merits but

¹⁴⁸ *Id.* at 613 (emphasis added).

¹⁴⁹ *Id.* at 614.

¹⁵⁰ *Id.*

¹⁵¹ Liability under the “sales” aspect was also discussed by the Court.

¹⁵² 90 F.2d at 614.

¹⁵³ The existence of other uses for the tubes and the written notice accompanying the sale of each tube stating that “tubes are to be used in systems already licensed for use” negated any implied license to use the tubes in this unauthorized combination. Thus, the defendant’s use of the tubes was an infringement. *Id.* at 615.

¹⁵⁴ Judge Swan had written the opinion of the court in *Andrea I*, and would, therefore, have been well aware of its intent.

dissented because he felt the court should not disregard its earlier opinion before the Supreme Court had an opportunity to review it.¹⁵⁵

In light of *Andrea II*, the precedential value of the line of cases that relied upon *Andrea I* must be viewed cautiously. As mentioned earlier, neither *Cold Metal* nor *Hewitt-Robins* added any significant independent basis for their holdings. Indeed, the court in *Hewitt-Robins* demonstrated a superficial treatment of this aspect of patent law by citing *Aro I* for the proposition that a combination patent covers only the totality of the elements in the claim and that no element separately viewed is within the grant.¹⁵⁶ Just two years prior to this Seventh Circuit observation, the *Aro II* decision had demonstrated that such a statement was no longer absolutely true.¹⁵⁷

Additionally, the Seventh Circuit "deem[ed] it equally clear that unassembled elements of a combination patent do not constitute the 'patented invention.'" ¹⁵⁸ This statement was totally unsupported by authority¹⁵⁹ and demonstrated the court's desire to affirm the district court holding. A more reasonable basis for such a result would have been the factual distinction which could be drawn between *Hewitt-Robins* and *Andrea II*: in *Hewitt-Robins* there were separate shipments of the various parts over a prolonged period of time and, even more significantly, the assembly overseas was substantial.

The same argument cannot be used to distinguish *Deepsouth* from *Andrea II* for, in both these cases, the entire combination was shipped at one time and the final assembly abroad was really a "final sham assembly."¹⁶⁰

CRITICAL ANALYSIS OF THE SUPREME COURT HOLDING

The majority of the Court, in an opinion written by Justice White, refused to find that *Deepsouth's* conduct infringed *Laitram's* patent. The Court based its holding on a number of points which must have had a synergistic effect because, when considered individually, they are not persuasive at all.

Citing *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment*

¹⁵⁵ 90 F.2d at 615.

¹⁵⁶ 371 F.2d at 229.

¹⁵⁷ 377 U.S. at 485-86, 491-92. The opinion of the Court in *Aro II* expressly stated that the sale of the fabric element by the unauthorized manufacturer made such manufacturer liable as a contributory infringer under section 271(c). In this noteworthy instance the unpatented element was indeed protected by the combination patent.

¹⁵⁸ 371 F.2d at 229.

¹⁵⁹ See Comment, *Tightening the Screws on Minor Assemblies Abroad: The Meaning of "Makes" Under the Patent Infringement Statute*, 57 IOWA L. REV. 889, 893 (1972).

¹⁶⁰ D. DUNNER, J. GAMBRELL, I. KAYTON, *PATENT LAW PERSPECTIVES*, at Dev. B.1(2)(a)-9 (1971 Developments).

Corp.,¹⁶¹ the opinion first reiterated the principle that a combination patent is awarded not for the novelty of the elements but for the novelty of the combination which in some way exceeds the sum of its parts.¹⁶² Thus, only the entire combination was entitled to patent protection. In this case, however, Deepsouth did manufacture the entire combination. The patentable essence of the combination had been captured by Deepsouth when it manufactured and substantially assembled the patented device. Once the novelty of a combination is present in the substantially assembled device and there is no other legitimate use for the partial assembly, there is an effective misappropriation of enough of the combination to be a direct and intentional infringement of the combination patent — even though the minor assembly of unsubstantial elements might be omitted or intended for a later point in time.¹⁶³

The Court did not consider such factors as the patentable essence of the combination, often called the “heart of the invention.” Instead, it cited *Mercoïd Corp. v. Mid-Continent Investment Co.*¹⁶⁴ and *Aro I* as authority for an absolute principle that only the totality of elements is protected by a combination patent. This theory is, however, now subject to exceptions carved out by Congress and the case law. First, the strict holdings of the *Mercoïd* cases were expressly overruled by the enactment of § 271 of the Patent Act of 1952.¹⁶⁵ Second, the *Aro II* case expressly revived the “heart of the invention” analysis, particularly in the area of contributory infringement.¹⁶⁶

Although it might be pointed out that Deepsouth’s liability, to the extent that it should have been found to exist, would not have resulted from contributory infringement,¹⁶⁷ it is highly significant that the Court majority so blatantly showed its tendency to ignore any patent law developments, legislative or judicial, that expand protection of the patentee from the misappropriation of the fruits of his labor.

On the question of sales liability, Deepsouth argued that there was no unauthorized sale of a patented device because only components were sold here and the “making” occurred outside the United States.¹⁶⁸ This position was adopted by the Court and was justified by a narrow construction of the term “makes.”¹⁶⁹ However, this

¹⁶¹ 406 U.S. at 552.

¹⁶² 340 U.S. 147 (1950).

¹⁶³ See D. DUNNER, *et al.*, PATENT LAW PERSPECTIVES, *supra* note 160, at Dev. B.1(2)(a)-9.

¹⁶⁴ 320 U.S. 661 (1944).

¹⁶⁵ See text accompanying notes 68-70 *supra*.

¹⁶⁶ 377 U.S. at 491-92.

¹⁶⁷ 406 U.S. at 526.

¹⁶⁸ *Id.* at 523-24.

¹⁶⁹ *Id.* at 528.

aspect of the decision adds little to its weight because the Court relied entirely on *Andrea I* where Judge Swan stated that something is "made" when it reaches a state of final "operable" assembly. The Court disregarded the effect of *Andrea II* which conspicuously omitted the word "operable" from the same court's re-analysis. Of significance in *Andrea II* was the fact that all elements of the combination were made, packaged together, and sold in the United States by the infringing manufacturer.

The last point to be considered by the Court¹⁷⁰ was legislative intent affecting this area of infringement. The majority felt that § 271 of the Patent Act of 1952 was a mere codification of existing patent laws and did not change them in any way.¹⁷¹ This reasoning was extended to encompass codification of the *Andrea I*¹⁷² holding for, it was argued, if Congress had intended to overrule that doctrine, it would have done so expressly just as it had expressly overturned the *Mercoid* holdings. However, it is contended by this author that at the time section 271 was adopted, *Andrea II*,¹⁷³ not *Andrea I*, represented the courts' latest expression on the law of infringement applicable to the export of elements of a substantially assembled patented combination.¹⁷⁴ *Andrea II* so limited the Second Circuit's earlier ruling that the *Deepsouth* majority's argument on this point is wholly lacking in persuasive value.

In its final discussion, the Court appeared to recognize the weakness of some of its arguments and to reveal the true reason for its holding. Justice White indicated that it was the majority's opinion that a contrary decision would constitute an overruling or modification of prior case law, it being felt that such a modification should be based on an argument stronger than Laitram's demand for recognition of the equities of its situation.¹⁷⁵ As a result, the Court permitted an unauthorized manufacturer to take advantage of another's disclosure of an

¹⁷⁰ The Court also touched upon the availability of foreign patents to protect the American patent holder beyond the territorial limits of the original patent. *Id.* at 531. Foreign patenting is not always a practical solution. In countries with patent laws like those of the United States, a patent application would be barred if made more than one year after the same patent application was filed in any other country. Thus, an American patentee would have to anticipate those foreign countries in which he would later need patent protection and apply immediately. Even if this course of conduct could be pursued, it would be financially burdensome in many instances. Many countries assess their patent holders an annual tax for the privilege of holding a patent monopoly. This tax is often substantial and is levied regardless of whether the patent is used or not.

¹⁷¹ 406 U.S. at 530 & n.10, citing the *Congressional Record* and a conversation between Senators Saltonstall and McCarran, Chairman of the Committee on the Judiciary.

¹⁷² 79 F.2d 626 (2d Cir. 1935).

¹⁷³ 90 F.2d 612 (2d Cir. 1937).

¹⁷⁴ *Accord*, 406 U.S. at 533 (Blackmun, J., dissenting). See Comment, *Tightening the Screws on Minor Assemblies Abroad: The Meaning "Makes" Under the Patent Infringement Statute*, 57 IOWA L. REV. 889, 895 (1972).

¹⁷⁵ 406 U.S. at 531.

invention in compliance with the patent laws, to appropriate the fruits of the patentee's labor without regard to patent law responsibility, and then to hide behind an unrealistic and highly technical interpretation of the same laws.

Conduct such as Deepsouth's is causing a failure of consideration in the patent system. The consideration given to a patentee in exchange for his disclosure is the right to exclude others from the use, manufacture or sale of the disclosed invention in the United States. Much of the value of this consideration is lost when another is allowed to substantially manufacture that device without incurring liability.¹⁷⁶ The Court did not expressly state that such an interpretation of the Patent Act would be incorrect¹⁷⁷ but based its holding on a reluctance to overturn "strong" judicial precedents.¹⁷⁸ However, no such strong precedents existed. As has been discussed above, reliance on *Andrea I* is erroneous. *Cold Metal*¹⁷⁹ cited *Andrea I* without contributing any new development while *Hewitt-Robins*¹⁸⁰ simply cited *Cold Metal* and *Andrea I* and is, furthermore, distinguishable on its facts.¹⁸¹ Thus, to have overruled such weak precedent and affirmed the holding of the court of appeals would not have been a difficult step.

In its failure to recognize the possible consequences of its holding, the Court took refuge behind the assertion that such an expansion of the patent law as Laitram proposed is a legislative task not to be initiated by the courts in the absence of some "sign" of congressional approval.¹⁸² In so reasoning, the Court ignored the example of the doctrine of equivalents. That patent law doctrine is nothing more than a court-developed equity concept which has broadened the patent grant protection.¹⁸³ Under it, if an alleged infringer has changed one or more of the elements of a patented item to a substantially similar substance that performs substantially the same function in substantially the same way, he is held liable for infringement by equivalency.

This doctrine evolved in response to the moral and practical obligation to protect the patented item. Although a solid constituent of

¹⁷⁶ See note 141 *supra*.

¹⁷⁷ Although the Court did not argue that monopolies are per se undesirable, the majority referred to a suggestion to that effect in *Graham v. John-Deere*, 383 U.S. 1 (1966). 406 U.S. at 530 n.11, *et. seq.*

¹⁷⁸ See 406 U.S. at 528.

¹⁷⁹ *Cold Metal Process Co. v. United Eng'r & Foundry Co.*, 235 F.2d 224 (3d Cir. 1956). See note 126 *supra*.

¹⁸⁰ *Hewitt-Robins, Inc. v. Link-Belt Company*, 371 F.2d 225 (7th Cir. 1966). See note 127 *supra*.

¹⁸¹ *I.e.*, the substantial assembly overseas. *Id.*

¹⁸² 406 U.S. at 531-32.

¹⁸³ See text accompanying notes 34-37 *supra*.

patent jurisprudence, the rule has never received legislative recognition. Clearly, the failure to codify this rule in the Patent Act of 1952 cannot be construed as a legislative renunciation but, more properly, as an implied concurrence. If the courts had waited for a "sign" from the legislature before applying the doctrine of equivalents, the patent system would have all but disappeared in the 120 years since *Winans v. Denmead*.¹⁸⁴

Immediately after the district court holding in *Deepsouth*, some commentators¹⁸⁵ recognized the analogy between the doctrine of equivalents and substantial manufacture and export:

[The district court] ignore[d] the fact that sale of the unassembled parts of a patented combination — at least when most of the parts have no other substantial use or are clearly intended to be combined to create the patented combination — is fully the equivalent of selling the parts assembled. The unassembled subterfuge works the same kind of constructive fraud on the patentee that the Supreme Court refused to permit in its *Graver Tank* decision by invoking the doctrine of equivalents.¹⁸⁶

This statement assumes even greater significance when the degree of domestic assembly of the combination components in *Deepsouth* is considered. The final Brazilian assembly of the one and three quarter ton machine took *less than one hour*.

Contributory infringement also originated as a judicial concept. Until it was first recognized in *Wallace v. Holmes*,¹⁸⁷ there was no basis for the extension of infringement liability to a supplier of the elements of a patented combination. The *Wallace* holding operated to make the supplier of the almost complete combination liable. That doctrine survived the next 70 years with various expansions and narrowings¹⁸⁸ until it was effectively abolished by the *Mercoïd* cases in 1944. Only then did the legislature take the opportunity to place its imprimatur on the doctrine in § 271 of the Patent Act of 1952. The concept of contributory infringement was then codified as it existed prior to the *Mercoïd* cases. If the severe limitation by *Mercoïd* had not occurred, the legislature might not have expressly acknowledged the doctrine at all.

The "sign" sought by the Court has, in fact, already been manifested in the expressions of congressional intent leading to the enactments of the patent acts from the original act of 1790¹⁸⁹ to the present

¹⁸⁴ 56 U.S. (15 How.) 330 (1853).

¹⁸⁵ See D. DUNNER, *et al.*, PATENT LAW PERSPECTIVES, *supra* note 160, at Dev. B.1(2)(a)-2 (1969-1970 Annual Review).

¹⁸⁶ *Id.* (footnotes omitted).

¹⁸⁷ 29 F. Cas. 74, 80 (No. 17,100) (C.C.D. Conn. 1871).

¹⁸⁸ See Hildreth, *Contributory Infringement*, *supra* note 22, at 541-42.

¹⁸⁹ 1 Stat. 109 (1790).

act of 1952. The thrust of these acts has uniformly revealed the legislative intent to be the legal and moral protection of the inventor and the encouragement of full and frank disclosure of his invention.

PROPOSED TEST

A distinction must be made between the liability attaching to a *Deepsouth* situation and that applied to the conduct of a manufacturer who intends a bona fide sale of only some elements of a patented combination to a user outside the United States. In *Deepsouth*, the substantial manufacture and assembly of the combination in the United States was so complete that the complex machine could be finally assembled in just one hour.

To draw such a distinction, this author proposes that the courts use a test based on the essence of the combination, *i.e.*, *if there is such substantial manufacture of the elements of a patented combination in the United States that the patentable aspect of the combination is captured and no practical use can be made of the manufactured elements other than assembly into the patented combination, there is a direct infringement.* The element of knowledge becomes moot as it can easily be inferred from the conduct of an infringer meeting this test. If sales are significantly limited to users beyond the territorial bounds of the United States patent, it can be inferred that the seller knew of the existence of the protection within the United States.

This test, set out in statutory form in the introduction to this paper,¹⁹⁰ could also be added to section 271 by Congress in order to clarify the line of cases in the area. *Andrea I* would then be expressly overruled and *Andrea II* adopted. *Cold Metal* would become a question of fact as to the extent of the overseas assembly and *Hewitt-Robins* would be affirmed on its facts since the final assembly in Turkey took fully three months and was clearly not a "minor assembly abroad."

CONCLUSION

As the *Deepsouth* dissenters pointed out, the results of that holding will effectively frustrate the constitutional intent that shaped the patent system.¹⁹¹ The Supreme Court's refusal to apply a more realistic interpretation of the section 271 term "makes" is tantamount to a tacit approval of the type of "iniquitous and evasive"¹⁹² operation resorted to by *Deepsouth*. With the importance presently attached to world

¹⁹⁰ See text accompanying note 11 *supra*.

¹⁹¹ 406 U.S. at 534.

¹⁹² *Id.* at 533.

trade, it would seem that a broader interpretation of "makes" is necessary.

When the framers of the Constitution promised a limited monopoly to an inventor¹⁹³ and offered the United States as the territorial limit of its protection, world trade was certainly not the factor it is today. At that time, a monopoly in this country was very attractive to the inventor and effective in its purpose of encouraging disclosure. Today, with world trade such a tremendous consideration in marketing and sales,¹⁹⁴ it has become more important that the full breadth of patent protection be afforded the patentee.¹⁹⁵ It is an abuse of the patent system whose purpose it is to encourage the disclosure of invention to use that very system to assist a manufacturer who resorts to devious means to circumvent another's patent by substantial domestic manufacture of the same article. Condoning this practice obviates the need for the unauthorized manufacturer to qualify with the requisite patentable improvement intended to promote the growth of science and technology.

A test such as that formulated above would establish both a guideline for future conduct and a standard that can be uniformly and consistently applied.¹⁹⁶ If so much of the combination has been manufactured that the patentable aspect is present and no substantial use other than assembly into the patented combination can be found, equity concepts and substantial fairness¹⁹⁷ require that such manufacture

¹⁹³ U.S. CONST. art. I, § 8.

¹⁹⁴ The Court in *Deepsouth* stated that a judgment of affirmance would have given Laitram's patent extraterritorial effect. Such a statement is not absolutely accurate because Laitram sought to prohibit not foreign use, but domestic manufacture by a domestic corporation.

United States patents have indirectly been given extraterritorial effect in an analogous area. The Tariff Act of 1930, 19 U.S.C. § 1337A (1970), provides that the importation of goods made, produced, processed or mined by means of a process patented in the United States (although the goods themselves are not patented) will be forbidden when a showing can be made to the President of the United States that an established domestic industry will be damaged by such importation. In effect, the Tariff Act forbids use of the United States-patented process in a foreign country by prohibiting the importation of goods so made.

The Tariff Act proceeding is like an infringement action in the sense that the defense of patent invalidity is available to the importer.

See also, Comment, *Gottschalk v. Benson — The Supreme Court Takes a Hard Line on Software*, 47 ST. JOHN'S L. REV. at 635 n.85 (1973) where the "Paris Convention's" deliberations concerning a multi-national patent system are discussed.

¹⁹⁵ *Contra*, Comment, 29 WASH. & LEE L. REV. 173 (1972).

¹⁹⁶ Once a standard is established, the courts are properly left to determine the factual issue of liability. Such a fact-finding process, in the area of substantial manufacture, would be not unlike the questions considered by a court handling a doctrine of equivalents case.

¹⁹⁷ In the area of collateral estoppel affecting patent validity, the Supreme Court has demonstrated its willingness to rely on the trial court's sense of equity and justice. *Blonder-Tongue Corp. v. University of Ill. Foundation*, 402 U.S. 313, 349 (1971).

constitute an infringing "mak[ing]" under § 271 of the Patent Act of 1952. A more realistic holding would result from the application of this standard and would avoid what the minority¹⁹⁸ in *Deepsouth* cautions could be a trend that will "subvert the Constitutional scheme of promoting 'The Progress of Science and Useful Arts.'"¹⁹⁹

— Neil M. Zipkin

¹⁹⁸ Justices Blackmun, Powell, Rehnquist and Chief Justice Burger. Perhaps personnel factors alone will result in a change of the judicial attitude of the high Court as it did in the *Aro* cases. Significantly, the four newest appointees to the Supreme Court comprise the minority in this decision.

¹⁹⁹ 406 U.S. at 534, quoting U.S. CONST. art. I, § 8, and citing the unanimous opinion of the court of appeals per Judge Clark in *Laitram Corp. v. Deepsouth Packing Co.*, 443 F.2d 936, 939 (5th Cir. 1971).