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IN RE NEWMAN: THE FEDERAL CIRCUIT DISMANTLES AN OBSTACLE FOR PERPETUAL MOTION PATENT APPLICANTS

In re Newman¹ marks an important milestone in a controversial area of patent law — perpetual motion machines. The United States Court of Appeals for the Federal Circuit granted the patent applicant's petition for a writ of mandamus to compel the district court to vacate or modify its orders authorizing the dismantling and destruction of the applicant's machine.² The Court of Appeals held that while the Patent and Trademark Office (PTO) could conduct additional tests to determine whether the machine satisfies the statutory requirement of utility³ necessary for a patent, the PTO could not destroy the machine to discover why it works.⁴ The ruling by the Court of Appeals is a major step for perpetual motion proponents seeking to gain a level playing field with the PTO.

This note first gives a general background on perpetual motion, because a basic understanding of the subject is helpful in getting a good perspective on the case. Next, the note provides the factual setting of the case leading to the court's decision. Then, the note examines the rationale the court used in reaching its decision. Lastly, the note provides additional insight into the legal problems posed by perpetual motion, both in general and in the *Newman* case in particular.

GENERAL BACKGROUND

Before examining the *Newman* case in depth, it is useful to have a basic working knowledge of various aspects of perpetual motion. Perpetual motion has a long and colorful history.⁵ For hundreds of years, man has attempted to design a machine that would produce more energy than it would consume,⁶ yet

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¹⁷⁸² F.2d 971 (Fed. Cir. 1986).

² Id. at 972.

³35 U.S.C. § 101 (1982) provides the statutory requirement for utility:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

^{&#}x27;Newman, 782 F.2d at 974.

³Two excellent articles have been written recently on the history of perpetual motion. For a well-balanced treatment, see Gardner, *Perpetual Motion: The Quest for Machines that Power Themselves*, SCIENCE DIGEST, October, 1985, at 68. Gardner discusses the theories behind perpetual motion machines and analyzes numerous attempts at designing these devices. For a more cynical view, see Adler, *The Perpetual Search for Perpetual Motion*, AMERICAN HERITAGE OF INVENTION AND TECHNOLOGY, Summer, 1986, at 58. In this article, Adler describes many perpetual motion machines and exposes the "hidden cranks" that ran them.

⁶An early, comprehensive discourse on perpetual motion machines may be found in J. WILKENS, MATHEMATICAL MAGICK: OR, THE WONDERS THAT MAY BE PERFORMED BY MECHANICAL GEOMETRY (1691), available through Xerox University Microfilms, Ann Arbor, Michigan. Wilkens was an early proponent of perpetual motion and was probably the first person to design a perpetual motion device using the magnetic forces in nature.

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no one has been able to build such a device because, according to conventional science, perpetual motion of this kind is impossible. To understand why current scientific thinking views perpetual motion as impossible, it is necessary to delve into the elementary theories of perpetual motion.

There are three types of perpetual motion: perpetual motion of the first kind, perpetual motion of the second kind, and perpetual motion of the third kind.⁸ Perpetual motion of the first kind deals with a device which produces more energy than it uses.⁹ This clearly violates the first law of the thermodynamics, which states that energy is conserved.¹⁰ In other words, energy can neither be created nor destroyed, although it may be converted from one form to another.¹¹ Perpetual motion of the second kind relates to completely converting heat into another form of energy.¹² Although this kind of perpetual motion is consistent with the first law of thermodynamics, it violates the second law, one version of which says that there is no process which can extract heat from one source and convert it entirely into useful work.¹³ Perpetual motion of the third kind refers to motion which continues forever, as opposed to the goal of generating useful energy seen in the first two kinds.¹⁴ Although this kind of perpetual motion can actually occur (as in the phenomenon of superconductivity),¹⁵ it produces no useful output.

Joseph Newman's machine seems to fall into the first category of perpetual motion because he asserts that his device generates more energy than it takes in from an external source. ¹⁶ Newman claims that his invention is not a perpetual motion machine but rather a device which uses his newly-discovered gyroscopic particles of matter. ¹⁷ Despite Newman's assertions, the PTO and the courts treat his invention as a perpetual motion machine. ¹⁸

FACTS

Petitioner Newman applied for a patent on his "Energy Generation System Having Higher Energy Output than Input." The PTO rejected the

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<sup>7</sup>10 ENCYCLOPEDIA OF SCIENCE AND TECHNOLOGY 41 (5th ed. 1982).
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⁸ Id.

[°]Id.

¹⁰J.R. WALDRAM, THE THEORY OF THERMODYNAMICS, at 57 (1985).

¹¹⁵ ENCYCLOPEDIA OF SCIENCE AND TECHNOLOGY 561 (5th ed. 1982).

¹²10 ENCYCLOPEDIA OF SCIENCE AND TECHNOLOGY, supra note 7, at 41.

¹³ WALDRAM, supra note 10, at 60.

¹⁴10 Encyclopedia of Science and Technology, supra note 7, at 42.

¹⁵ Id.

¹⁶Peterson, A Patent Pursuit: Joe Newman's 'Energy Machine', SCIENCE News, June 1, 1985, at 342. This article gives a good overview of Newman's machine and the battle Newman has waged with the Patent Office.

¹⁷ Id.

¹⁸ Newman, 782 F.2d at 971.

application on the grounds that the device was a perpetual motion machine and thus impossible.²⁰

Newman then filed a civil action in the United States District Court for the District of Columbia under 35 U.S.C. Section 145.²¹ Due to conflicting representations before it, the district court appointed William E. Schuyler, Jr., a former Commissioner of Patents, as Special Master to evaluate the machine.²² Schuyler determined that although Newman's device seemed to conflict with recognized principles of thermodynamics, overwhelming evidence showed that the energy output from the device exceeded the external energy input.²³ Schuyler found no contradictory factual evidence and concluded that Newman's invention was patentable.²⁴

The PTO criticized Schuyler's findings, and the district court held some of them to be clearly erroneous.²⁵ At the PTO's request, the district court remanded Newman's patent application for a new examination.²⁶ The patent examiner then rejected Newman's invention under 35 U.S.C. Sections 101, 102, 103, and 112.²⁷

Meanwhile, Newman sought relief by writ of mandamus from the district court's remand.²⁸ The Court of Appeals for the Federal Circuit denied the writ because interlocutory review was unnecessary since the asserted errors could

An applicant dissatisfied with the decision of the Board of Appeals may unless appeal has been taken to the United States Court of Appeals for the Federal Circuit, have remedy by civil action against the Commissioner in the United States District Court for the District of Columbia if commenced within such time after such decision, not less than sixty days, as the Commissioner appoints.

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²⁰ Id.

²¹35 U.S.C. § 145 (1982) states in relevant part:

²²Newman, 782 F.2d at 972.

²³Smith, An Endless Siege of Implausible Inventions, SCIENCE, Nov. 16, 1984, at 817. A number of scientists have endorsed Newman's machine. One scientist who may have swayed Schuyler was Lawrence E. Wharton, a physicist at NASA's Goddard Space Flight Center. Wharton had initially volunteered his services to the PTO in this case but became convinced that the efficiency of Newman's device was substantially greater than 100 percent.

²⁴ Id.

²⁵ Newman, 782 F.2d at 972.

²⁶ Id

[&]quot;For 35 U.S.C. § 101 (1982), see note 3. 35 U.S.C. § 102 (1982) states a number of conditions required for patentability. These conditions relate to the concept of novelty, which requires an invention to be new. 35 U.S.C. § 103 (1982) provides in relevant part that "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole" must not have been obvious to a person of ordinary skill in the art at the time the invention was made for a patent to issue. 35 U.S.C. § 112 deals with the procedural requirement of the patent specification and states in relevant part:

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

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

²⁸Newman, 782 F.2d at 972. Published by IdeaExchange@UAkron, 1988

be corrected on appeal from the district court's final decision.²⁹

Shortly thereafter, the Commissioner served a request³⁰ requiring Newman to deliver working models of his invention to the National Bureau of Standards (NBS) for a seven-month testing period.³¹ The request also included among other things, that Newman and his counsel could observe the tests but no expert could be present on his behalf, and that the NBS could dismantle or destroy the machine after giving reasonable notice to Newman.³²

Newman objected to the PTO's request, and the district court subsequently modified the request.³³ The modifications included giving the NBS thirty days instead of seven months and allowing one person in addition to Newman and his counsel to observe any final tests.³⁴ The district court orders also expressly permitted the NBS to render the device inoperable in whole or in part if such action was necessary for its determination, and the orders did not require that any prior notice be given to Newman regarding the dismantling or destruction of his machine.³⁵ From this ruling, Newman again petitioned the appeals court for a writ of mandamus ordering the district court to vacate or modify its orders.³⁶

THE COURT'S ANALYSIS

In response to Newman's petition for the writ, the court looked to whether mandamus was appropriate in this situation.³⁷ The court noted that the petitioner alleged irreparable harm could occur if the court did not intervene.³⁸ The court concluded that a prima facie case had been made by the district court's authorization of the destruction of petitioner's machine.³⁹ The

²⁹ In re Newman, 763 F.2d 407 (Fed. Cir. 1985). *However, the actual wording in the text of this note comes from *Newman* 782 F.2d at 972.

³⁰Newman, 782 F.2d at 972-73. The PTO made the request pursuant to Rule 34 of the Federal Rules of Civil Procedure. Rule 34 states in relevant part:

Any person may serve on another party a request . . . to inspect and copy, test, or sample any tangible things which constitute or contain matters within the scope of Rule 26(b) and which are in possession, custody or control of the party upon whom the request is served. . . .

³¹ Id. at 973.

²Id. The request to dismantle or destroy the machine does not appear to address the issue of whether the machine operates, but rather why the machine operates. This distinction plays an important role later on in the court's analysis.

³³ Id.

³⁴ Id.

¹⁵ Id. The absence of a prior notice requirement in the court's orders does not comport with Rule 34 guidelines, which require "a reasonable time, place, and manner of making the inspection and performing the related acts."

³⁶ Id. at 972.

[&]quot;Id. at 973. The court noted that it had jurisdiction to hear and decide the petition for mandamus. In re Mark Industries, 751 F.2d 1219 (Fed. Cir. 1984); Mississippi Chemical Corp. v. Swift Agricultural Chemicals Corp., 717 F.2d 1374 (Fed. Cir. 1983).

³⁸ Id.

court held that mandamus was appropriate because "no subsequent appeal will necessarily redress any damage." 40

In reaching this decision, the court reviewed its position on cases involving inventions which were questionable in regard to operativeness.⁴¹ The court noted it had held that the PTO could reject any application for insufficient proof when the device "by its nature occasions reasonable skepticism as to its operativeness under Section 101."⁴² Since Newman's invention involved questionable operativeness, the court found no abuse of discretion on the part of the district court in its holding that additional tests of petitioner's device should be conducted.⁴³

Despite its approval of the additional testing, the appeals court rejected the district court's position that the unprecedented device required unprecedented "procedural adaptations of the Federal Rules." The appeals court stated that the Federal Rules of Civil Procedure "ensure that the proceedings are conducted fairly, with the objective of uncovering the truth, and in accordance with fundamental principles of due process." The court noted that the district court gave no reasons why Rule 34 safeguards had to be denied in this case, nor why it was necessary for the NBS to have the authority to destroy the machine in determining if it operates as described. The appeals court observed that the record did not indicate that petitioner's invention did not correspond with the specification in the patent application. Rather, the court remarked, the only asserted basis for rejection was lack of utility under \$101. Destroying Newman's invention would not prove a lack of utility; determining utility in this case is the domain of testing alone.

^{**}Old. The court noted Schlagenhauf v. Holder, 379 U.S. 104 (1964), in which a district court judge granted an order for mental and physical examinations of the petitioner under Rule 35(a) of the Federal Rules of Civil Procedure. The Supreme Court held that under the circumstances of the case, mandamus was an appropriate remedy to review the challenged power to order the examinations. Similarly, Newman's case involves unusual circumstances (testing a perpetual motion machine) and a question regarding the lower court's power to issue certain orders (dismantling or destroying the machine).

[&]quot;Id. Specifically, the court looked at Fregeau v. Mossinghoff, 776 F.2d 1034 (Fed. Cir. 1985) (using a magnetic field to enhance the flavor of beverages) and In re Langer, 503 F.2d 1380 (C.C.P.A. 1974) (an improvement in dentifrices).

⁴² Id. (citing Fregeau).

⁴³Id. at 973-974. The district court's order for additional testing was indeed reasonable because the invention appears to conflict with established scientific laws.

[&]quot;Id. at 974. The unprecedented "procedural adaptations" are the potential dismantling and destruction of the machine.

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^{*}Id. The Rule 34 safeguards include a reasonable manner of testing. The appeals court rightfully maintains that destroying the machine is unreasonable for purposes of testing the operativeness of the machine.

⁴⁷ Id.

⁴⁸ Id.

⁴⁹The main utility of Newman's machine is in its alleged ability to create a net outflow of energy. Destroying the machine has no relevance to determining whether the machine produces more energy than it uses. Only test measurements can serve to resolve the question of utility.

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The court continued by analyzing the PTO's representation in its brief that the NBS would not dismantle or destroy petitioner's invention until after it had determined that the device worked according to the specification. ⁵⁰ Based on this statement, the court reasoned that the purpose of destroying the machine would be to see how it works. ⁵¹ In regard to this purpose, the court stated that "the PTO is not a guarantor of scientific theory and, although the record shows that the laws of thermodynamics were debated before the district court, it is not the province of the PTO to ascertain scientific explanation." ⁵² Based on this analysis, the appeals court concluded that petitioner's invention should not be dismantled or destroyed without his consent. ⁵³

The court went on to discuss the testing process.⁵⁴ In particular, the court focused on the concept that "the objectivity of the tester is a fundamental rule not only of evidence but of conscience."⁵⁵ The court noted that although the NBS entered the case as an impartial laboratory of scientific renown, some of its employees criticized petitioner's invention before the NBS had tested it.⁵⁶ This obvious prejudice further supports the conclusion that procedural safeguards should not be denied in perpetual motion cases.

ADDITIONAL DISCUSSION

Applicants for patents on perpetual motion machines face a long uphill battle with the PTO. The *Manual of Patent Examining Procedure* provides grounds for rejecting perpetual motion machines on a basis of inoperativeness.⁵⁷ This rationale for rejection is evident in perpetual motion cases. In *Ex parte Payne*, ⁵⁸ the court held that where a claim is made to a perpetual motion machine, the examiner may reject the claim for inoperativeness without making a search through or citing prior art.⁵⁹ In *Ex*

⁵⁰ Newman, 782 F.2d at 974.

⁵¹ Id.

⁵² Id. The court noted in In re Aufhauser, 399 F.2d 275 (C.C.P.A. 1968), in which the patent applicant developed a process for coating paper but did not comprehend the underlying scientific principles, that an inventor is not legally required to understand the principles upon which the practical effectiveness of his invention rests.

⁵³ Id.

⁵⁴ Id. Here the court noted Wagoner v. Barger, 463 F.2d 1377 (C.C.P.A. 1972) and Congoleum Industries, Inc. v. Armstrong Cork Co., 319 F. Supp. 714 (E.D. Pa. 1970) aff'd, 510 F.2d 334 (3d Cir. 1975) cert. denied 421 U.S. 988 (1975) for a general principle of testing. The Wagoner decision stated that the results of testsmade by one party without notice to and in the absence of the other party are given little weight. The Congoleum Industries case also stated that experimental evidence from tests conducted by an interested party in the absence of the opposing party is given negligible probative value.

⁵⁵ Id.

^{*}Id. An NBS spokesman criticized the machine in front of the press prior to testing, while the affidavit of another NBS employee criticized the device even though the employee had neither seen nor tested it.

⁵⁷Manual of Patent Examining Procedure § 706.03(p) (1986) (supplement to E. Lipscomb, Lipscombs Walker on Patents, 3d ed. 1984).

⁵⁸¹⁹⁰⁴ Dec. Comm'r Pat. 42, 108 Off. Gaz. Pat. Office 1049 (1903).

parte Ackert, 60 the court stated that a bizarre arrangement of parts which allegedly gains power is fallacious and not patentable.61 The court noted that the prestige of the Patent Office must be protected against frivolous claims.62 In re Perrigo 63 is a perpetual motion case involving a "Method and Apparatus for Accumulating and Transforming Ether Electric Energy."64 The court in Perrigo stated that it is fundamental that an alleged invention be useful, and that it must seem capable of doing what is claimed in order to be a practical invention.65

There is good reason for the PTO and the courts to take a hardline approach in dealing with perpetual motion because the likelihood of fraud in these cases is high. In Estep v. United States, 1 the court found a scheme to defraud investors through the sale of stock in the Automotor Manufacturing Company, Inc., which was supposedly about to market a fuelless, self-energizing motor. The Ackert court recognized the value of a patent and the confidence which the public has in a patent. To preserve this status, it is clear that the PTO and the courts must be on guard to protect against fraud in perpetual motion cases.

Despite the need for extra care in dealing with patent applications involving perpetual motion machines, there is no valid reason for dismantling or destroying the applicant's invention as long as the PTO and the court are satisfied that the invention does not contain any concealed power sources. The *Newman* case is an excellent opportunity to analyze this proposition. As noted previously, the PTO stated that the NBS would not dismantle or destroy petitioner's device *until it first determined that the device worked according to the specification*. This means that the NBS would have already satisfied itself that no "hidden cranks" or secret energy sources were actually powering the machine. To dismantle or destroy the machine regardless indicates that the PTO and the NBS want to discover *why* the machine works. As the *Newman* court so ably pointed out, determining the scientific theory on which an invention operates is not within the PTO's domain. Rather, the mission of the PTO

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60 1872 Dec. Comm'r. Pat. 47, 1 Off. Gaz. Pat. Office 253 (1872).
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⁶¹ Id.

 $^{^{62}}Id$

⁶³⁴⁸ F.2d 965 (C.C.P.A. 1931).

⁶⁴ Id.

⁶⁵ Id. at 966.

⁶¹ E. LIPSCOMB, LIPSCOMB'S WALKER ON PATENTS, 5:14 (3d ed. 1984).

⁶⁷223 F.2d 19 (5th Cir. 1955), cert. denied, 350 U.S. 863 (1955).

⁶⁸ Id. at 20.

⁶⁹ Ackert, 1872 Dec. Comm'r Pat. at 47, 1 Off. Gaz. Pat. Office at 253.

¹⁰Newman, 782 F.2d at 974.

иId.

nId.

is to carry out the constitutional mandate of promoting the progress of science and useful arts by securing for limited times to inventors the exclusive right to their discoveries.⁷³

To accomplish the goal of promoting science and the useful arts, the PTO examines inventions for utility. Utility in patent law means a useful invention able to function as intended to produce results beneficial to the country. An invention lacks utility if it is wholly inoperative with respect to its claimed functions. In *Application of Chilowsky*, the court said that where the claimed operativeness "seems clearly to conflict with a recognized scientific principle as, for example, where an applicant purports to have discovered a machine producing perpetual motion, the presumption of inoperativeness is so strong that very clear evidence is required to overcome it."

Evidence of operativeness can come from testing. In *Field v. Knowles*, ⁷⁸ the court said that unless a machine is so simple that "its practical operativeness is manifest," it must be tested under actual working conditions in such a way as to show its intended purpose. ⁷⁹ Federal Civil Rule 34 has become the key discovery device for resolving complex scientific questions. ⁸⁰ Rule 34 applies in large part to the production of documents, ⁸¹ but it also includes tests to determine the operativeness of inventions. As the *Newman* court noted, such tests are conducted in the presence of the opposing party, and the test data are provided to all parties. ⁸² The results of the tests play a major role in determining whether the PTO will reject the application.

Conclusion

Joseph Newman's patent quest continued after the decision by the Court of Appeals. The NBS finally tested Newman's machine and determined that the device's efficiency ranged from twenty-seven to sixty-seven percent de-

⁷³U.S. CONST. art. I, § 8, cl. 8.

¹⁴1 Lipscomb, supra note 66, § 5:2, at 482.

¹⁵Coupe v. Royer, 155 U.S. 565 (1895); Mitchell v. Tilghman, 86 U.S. 287 (1874); Houston v. Brown Mfg. Co., 270 F. 445 (6th Cir. 1921).

⁷⁶229 F.2d 457 (C.C.P.A. 1956).

¹⁷ Id. at 462.

⁷¹⁸³ F.2d 593 (C.C.P.A. 1950).

[&]quot;Id. at 601. See also Ajem Laboratories, Inc. v. C.M. Ladd Co., 424 F.2d 1124 (6th Cir. 1970), cert. denied, 400 U.S. 830 (1970) (adopting the standard for satisfactory reduction to practice outlined in Field); Toledo Scale Corp. v. Westinghouse Electric Corp., 351 F.2d 173 (6th Cir. 1965) (satisfactory reduction to practice does not require proof of successful commercial use, but it does demand tests which successfully prove practical utility for intended use); Skil Corp. v. Lucerne Products, Inc., 489 F. Supp. 1129 (N.D. Ohio 1980), aff'd, 684 F.2d 346 (6th Cir. 1982), cert. denied, 459 U.S. 991 (1982) (invention is reduced to practice by building a working model and operating it under simulated field conditions, with tests successfully proving practical utility for the intended use.)

⁸⁰Underwood, Discovery According to Federal Rule 34, 26 PRAC. LAW., No. 2, at 55 (Mar. 1, 1980).

⁸¹ Id. at 57. The term "documents" is very broad, encompassing writings, drawings, graphs, charts, and photographs, among other things.

^{*2}Newman, 782 F.2d at 974. http://ideaexchange.uakron.edu/akronlawreview/vol21/iss1/8

pending on the test conditions.⁸³ The results were far below the 100 percent efficiency level at which perpetual motion begins. However, Newman and his backers contend that the NBS improperly tested the device, so Newman is taking his case to Congress.⁸⁴

If a true perpetual motion machine is actually ever built, it would rank as one of the greatest inventions of all time. Because of the Newman decision, the PTO will not be able to dismantle or destroy the device just to determine why it works. As the Court of Appeals correctly stated, it is not the province of the PTO to determine scientific theory. Otherwise, the successful perpetual motion machine inventor might not receive a patent solely because the PTO cannot understand why the device works. Skeptics can argue that the PTO should not waste its time on a device which, according to conventional science, cannot possibly work. But just think what an injustice that attitude would be causing if perpetual motion really is possible. After all, science has been wrong before...

BRUCE KRAMER

¹³Sun, Newman's 'Energy Output' Machine Put to the Test, Science, July 11, 1986, at 154 (using information from "Report of Tests on Joseph Newman's Device," U.S. Department of Commerce, National Bureau of Standards, NBSIR 866-3405, June 1986).

⁴⁴Legislation: Would-be Patentee Pleads Case Before Senate Panel, 32 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 792, at 378 (Aug. 14, 1986).

⁸⁵Sun, Newman's Motor: Does It Work or Doesn't It?, Science, Mar. 29, 1985, at 1558.

⁸⁶ Newman, 782 F.2d at 972.

⁸⁷ Id. at 974.