No. 15-1499

IN THE

Supreme Court of the United States

MACDERMID PRINTING SOLUTIONS, LLC,

Petitioner,

v.

E.I. DUPONT DE NEMOURS & COMPANY,

Respondent.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

PETITION FOR A WRIT OF CERTIORARI

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QUESTION PRESENTED

Whether the Federal Circuit has erred in holding that there "must" be a proven "reasonable expectation of success" in a claimed combination invention in order for it to be held "obvious" under 35 U.S.C. § 103(a).

RULE 29.6 CORPORATE DISCLOSURE STATEMENT

Petitioner identifies MacDermid, Inc. as a parent corporation owning 10% or more of Petitioner's stock. Petitioner identifies Platform Specialty Products Corporation as a publically held company indirectly owning 10% or more of the corporation's stock.

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MacDermid Printing Solutions, LLC respectfully petitions for a writ of certiorari to review the judgment of the U.S. Court of Appeals for the Federal Circuit.

OPINIONS BELOW

The opinion and judgment of the Court of Appeals for the Federal Circuit is unreported and is set forth in the Appendix ("App.") at 1a-2a. The opinions and final judgment of the Patent Trial and Appeal Board ("the Board") are unreported and appear in the Appendix at 3a-43a.

JURISDICTION

The judgment of the Court of Appeals was entered on March 16, 2016. No petition for rehearing or motion for extension of time to file the petition for certiorari was filed. This Court's jurisdiction is invoked under 28 U.S.C. § 1254(1). The United States Patent and Trademark Office, including the Patent Trial and Appeal Board, had jurisdiction to hear and adjudicate Petitioner's petition for *inter partes* reexamination under 35 U.S.C. § 311. The Court of Appeals for the Federal Circuit had jurisdiction to hear Petitioner's appeal under 28 U.S.C. § 1295(a)(4) (A) and 35 U.S.C. § 141.

STATUTORY PROVISION INVOLVED

This case concerns the standard of patentability set forth in § 103(a) of the Patent Act, 35 U.S.C. § 103(a), which provides:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

STATEMENT OF THE CASE

The Federal Circuit has confirmed DuPont's right to monopolize the use of a fan or a cooled drum in combination with a known machine, as claimed, where the prior art recognized that the machine overheated during use. The Federal Circuit did so by affirming the Patent Office's application of a rigid "reasonable expectation of success" test ("RES Test") for obviousness. Under this test, the Federal Circuit required Petitioner to prove that the person of ordinary skill in the art would have a reasonable expectation of success in making a combination even if (a) the combination was the joining known elements each performing known functions and (b) the person of ordinary skill in the art would have had a motivation to make the combination at the time of invention. Such a rigid conception of obviousness has no place in the flexible, statutory obviousness analysis described in *KSR International v. Teleflex, Inc.*, 550 U.S. 398 (2007), *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), and *Hotchkiss v. Greenwood*, 11 How. 248 (1851).

Obviousness is the single most important issue in patent law requiring the application of legal judgment. Obviousness analyses require flexibility and breath, corresponding to the flexibility and breath of science itself. Slogans and rigidly-applied legalistic "elements" and "tests" play no part in technology and must not play any part in the way the Patent Office or a court judges whether an invention represents a patentable innovation over the prior art. This case proves the wisdom of this Court's flexible approach to obviousness. The Federal Circuit and the Patent Office became so lost in the rigid application of its RES test that it allowed DuPont to patent the use of a fan, as claimed, in a known machine that was known to be getting too hot.

Prior to *KSR*, the Federal Circuit analyzed obviousness by applying its two rigid tests, the teaching, suggestion, or motivation test ("TSM test") and the RES test. *See Brown & Williamson Tobacco Corp. v. Phillip Morris, Inc.*, 229 F.3d 1120, 1124-25 (Fed. Cir. 2000) (Obviousness has "[t]wo requirements. ...The first requirement is ... a showing of a suggestion, teaching or motivation to combine the prior art references. ... The second requirement ... is a reasonable expectation of success"); *Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp.*, 320 F.3d 1339, 1354 (Fed. Cir. 2003) ("A showing of obviousness requires a motivation or suggestion to combine or modify prior art references, coupled with a reasonable expectation of success."); *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) ("[A]n obviousness determination requires not only the existence of a motivation to combine elements from prior art references, but also that a skilled artisan would have perceived a reasonable expectation of success in making the invention via that combination").

This Court granted certiorari in *KSR* because the Federal Circuit's "TSM test ... addressed the question of obviousness in a manner contrary to § 103 and [this Court's] precedents." *KSR*, 550 U.S. at 407. The Court explained that "[t]he diversity of inventive pursuits and of modern technology counsels against limiting" the obviousness analysis "by a formalistic conception of the words teaching, suggestion, and motivation." *Id.* at 419. "There is no necessary inconsistency between the idea underlying the TSM test and the *Graham* analysis. But when a court transforms the general principle into a rigid rule that limits the obviousness inquiry, as the Court of Appeals did here, it errs." *Id.* Notably, nowhere in *KSR* or this Court's other precedents on obviousness has this Court endorsed a RES test. Indeed, this Court has never even used the term "reasonable expectation of success" in an obviousness opinion in its entire history. Like the TSM test, the RES is one of the Federal Circuit's creation and is entirely divorced from the statutory language of § 103.

Nonetheless, after *KSR*, while the Federal Circuit relaxed its TSM test, it continued applying its formalistic conception of the words "reasonable expectation of success" despite *KSR*'s strong mandate not to confine obviousness to such rigid, linguistic formality. *See, e.g., Procter & Gamble Co. v. Teva Pharmaceuticals USA, Inc.*, 566 F.3d 989, 994 (Fed. Cir. 2009) ("A party seeking to invalidate a patent based on obviousness must demonstrate by clear and convincing evidence that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention and that the skilled artisan would have had a reasonable expectation of success in doing so."); *Amgen, Inc. v. F. Hoffman-La Roche Ltd.*, 580 F.3d 1340, 1362

(Fed. Cir. 2009) ("An obviousness determination requires that a skilled artisan would have perceived a reasonable expectation of success in making the invention in light of the prior art."). The Federal Circuit even contended that "[t]he Supreme Court's reference [in *KSR*] to 'predictable solutions' and 'anticipated success' accords with this court's longstanding focus on whether a person of ordinary skill in the art would, at the relevant time, have had a 'reasonable expectation of success' in pursuing the possibility that turns out to success and is claimed." *Institut Pasteur & Universite Pierre et Marie Curie v. Focarino*, 738 F.3d 1337, 1344 (Fed. Cir. 2013) (reversing the Board's finding of obviousness based on a failure to satisfy the RES test).

However, this Court's *Graham* factors are based in "the statutory language of § 103, language itself based on the logic of the earlier decision in *Hotchkiss v. Greenwood*, 11 How. 248, 13 L.Ed. 683 (1851) and its progeny." *KSR*, 550 U.S. at 406 (citing *Graham*, 383 U.S. at 15-17). The Federal Circuit's RES test is not based in Congress's language, *Graham*, or *Hotchkiss*. "The Hotchkiss formulation ... lies not in any label, but in its functional approach to questions of patentability." *Graham*, 383 U.S. at 12. The Federal Circuit has applied the RES test rigidly by over-focusing on the label "reasonable expectation of success" instead of the terms of § 103. This Court abrogated the TSM test in *KSR*. Petitioner requests that certiorari be granted so that this Court can abrogate the RES test, the Federal Circuit's other formalistic test that it had applied along with the TSM test pre-*KSR* and which it continues to apply today despite *KSR*'s wise warnings.

The 454 Patent and the Prior Art

The patent at issue in this case, U.S. Patent No. 6,797,454 ("the 454 Patent"), relates to machines for thermally developing flexographic printing plates. Flexographic printing plates bear relief images and are used for printing on various consumer goods. In order to make a plate, its photopolymers are first imaged by exposing the portions of the plate corresponding to the image with light, leaving the imaged areas polymerized and the areas not exposed to light un-polymerized. The plate is then developed by removing the un-polymerized areas of the plate to thereby form a relief image. Thermal development selectively removes the un-polymerized areas with heat and a blotter by exploiting the relatively lower melting/ softening point of the un-polymerized photopolymer.

The 454 Patent claims an alleged improvement on a specific thermal development machine and method patented in the early 1990s by 3M in U.S. Patent No. 5,279,697 ("Peterson"), in which the flexographic printing plate is thermally developed on a rotating drum. This Peterson machine was also the subject of improvement and development in the late 1990s in WO 96/144603 ("Bhateja") and WO 98/13730 ("Martens"). As found by the Examiner and the Patent Trial and Appeal Board, all of the elements of the claims of the 454 Patent are found in Bhateja and Martens with the alleged exception of the "cooling means" elements of the claims. The "cooling means" elements of the 454 Patent were found to encompass the use of a "blower" (i.e., a fan) or an air-cooled drum, as claimed.

Peterson, Bhateja, and Martens all recognized that, at times, the machine would overheat the flexographic

printing plates leading them to distort and thereby impairing the images. The prior art solved this known problem in a variety of ways, including restricting the temperatures used in the hot roller and pre-heater in the machine and using "specially annealed" substrates that are resistant to thermal distortion. As discussed above, the 454 Patent's claimed solution to this known thermal distortion problem was the use of an internally air-cooled drum on which the flexographic plate sits during thermal development or a fan directed at the plate.

MacDermid relied on two other prior art references that the Board found to be analogous: U.S. Patent No. 3,850,635 ("Leavitt") and U.S. Patent No. 4,198,145 ("Scott"). Leavitt and Scott relate to thermal development of photographic images on emulsion coated substrates. The preferred substrates are PET films, just as are used on flexographic printing plates. Leavitt and Scott recognize the problem that thermal distortion can be caused by overheating of the substrate during thermal development. Both disclose cooling means as solutions to this problem, and Leavitt in particular teaches the use of an air-cooled drum (on which the substrate is placed) to solve the problem of thermal distortion.

The Patent Trial and Appeal Board's Opinions

MacDermid successfully invalidated the majority of the claims in the 454 Patent during the Patent Office proceeding in view of the previously discussed prior art. The only claims confirmed by the Board were the ones that claimed the additional "cooling means" feature. However, the Board made the following factual findings, which should have established the obviousness of this feature.

"Bhateja and Martens recognize that a problem to be solved is the thermal distortion of the substrate." App. at 31a. "Bhateja and Martens teach two ways to alleviate the problem of thermal distortion of the substrate, namely [1] annealing the substrate in advance, and [2] providing a temperature differential between a heated drum and a heated development roll." App. at 31a. "Dr. Vest [MacDermid's expert] in his declaration provided sufficient reasons why a skilled artisan would have sought a different solution to the [thermal distortion] problem described in Bhateja." App. at 32a. "Each of Scott and Leavitt addresses the same problem of thermal distortion of a substrate as described in Bhateja. Accordingly, we agree with [MacDermid] that Scott and Leavitt are analogous art and thus relevant to the teachings of Bhateja and Martens." App. at 37a. Leavitt's solution to this problem "includes cooled air supplied via a drum." App. at 36a. These factual findings read almost as a syllogism to the conclusion that a cooling means would have been an obvious solution to the known problem of thermal distortion. Yet, the Board's application of the RES test precluded it from drawing this conclusion.

Moreover, with respect to the obvious use of a fan to solve the known problem of thermal distortion, the Board found that "it is common sense to cool something that is too hot" and that "it is well known that blowing air via a fan cools." App. at 7a. The Board also agreed that the ordinarily skilled person would understand that specific development temperatures "are not critical and that the skilled artisan could have adjusted temperatures routinely." App. at 13a.

Despite all of these factual findings, the Board nonetheless found that combination of a fan or a cooled drum with the known Bhateja and Martens machines was nonobvious because it found that the combination did not meet the Federal Circuit's "reasonable expectation of success" test. Specifically, the Board found that the person of ordinary skill in the art would be worried that the cooling means would over-cool and prevent thermal development from successful occurring. Therefore, the Board held as a matter of law: "[f]or a determination of obviousness, there must be both a reason why the skilled artisan would have made the combination and a reasonable expectation of success based on a preponderance of the evidence of record." App. at 37a. When MacDermid sought rehearing by arguing that this Court has eschewed any such rigid formulation of obviousness, such as the RES test, the Board reaffirmed: "we are not persuaded that the panel misapprehended or overlooked the requirements for a determination of obviousness. Requester's reasoning ignores the requirement that, for a determination of obviousness, the skilled artisan must have had both a reason to combine the reference and a reasonable expectation of success, i.e., reasonable predictability that the combination would lead to the desired result." App. at 11a.

The Federal Circuit's Opinion

The Board's remarkably rigid application of the Federal Circuit's RES test was summarily affirmed by that Court. App. at 2a. Thus, it is clear that the RES test is entrenched in the Federal Circuit and further development of the law in the Federal Circuit is unlikely. The RES test is ripe for this Court's consideration.

THE REASONS FOR GRANTING THE PETITION

The decision below and the Federal Circuit's RES test are in direct conflict with this Court's precedents and the text of § 103 itself. The combination of elements known in the prior art each performing the function they were known to perform is *prima facie* obvious, regardless of any "reasonable expectation of success" in their combination. Prior to *KSR*, the Federal Circuit's analysis for obviousness comprised two departures from this Court's precedents: (1) the TSM test and (2) the RES test. In *KSR*, the Court abrogated the TSM test and admonished lower courts and the Patent Office to avoid strict rules and over-reliance on formalistic conceptions. Nonetheless, while the Federal Circuit introduced flexibility into the issues of obviousness previously addressed by the TSM test, it continued to rigidly apply its RES test. Therefore, the Court should grant certiorari to finish the work it began in *KSR* by abrogating the second aspect of the Federal Circuit's pre-*KSR* rigidity. Finally, the Federal Circuit's RES test is in direct conflict, as conceded by the Federal Circuit, with the precedents of the regional circuits from before the Federal Circuit's creation. *Allen Engineering Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1356-57 (Fed. Cir. 2002). Contrary to the RES test, the regional circuits had uniformly required synergism or some new functionality when a patent's claim was directed to the mere combination of known elements. *See infra* at n. 2. The Court should grant certiorari to resolve this circuit-split.

I. THE FEDERAL CIRCUIT HAS DEPARTED FROM THIS COURT'S PRECEDENTS CONSTRUING § 103

This Court has applied the standard of patentability set forth in § 103 on seven occasions, none of which require or even use the term "reasonable expectation of success." Two of this Court's precedents are particularly analogous to the situation presented here.

In *Calmar, Inc. v. Cook Chemical Co.* (a companion case decided with *Graham*, *see* 383 U.S. at 26), this Court held obvious, and thus invalid, a patent on a "combination of admittedly old elements." *Id.* at 29. The obvious invention involved an overcap for use with a finger-operated pump sprayer on a can of insecticide. *Id.* at 26-27. The difference between the patented combination and the prior art finger-operated pump sprayer was that the patented cap included a rib seal. *Id.* at 35. However, such rib seals were known in prior art involving "liquid containers having pouring spouts rather than pump sprayers." *Id.* Therefore, the combination was held to be obvious. *Id.* at 35-37. The Court reasoned: "The problems confronting ... the insecticide industry were not insecticide problems; they were mechanical closure problems. Closure devices in such a closely related art as pouring spouts for liquid container are at the very least pertinent references." *Id.* at 35.

Calmar is particularly instructive for this case because the Court never required a showing that a person of ordinary skill in the art would have a "reasonable expectation of success" in adapting the rib seal from the liquid pouring container to the pump sprayer. Rather,

it was sufficient to show that the rib seal was used with success in an analogous art. Likewise, in this case, cooling means were successfully employed in Leavitt and Scott, which the Board found to be analogous and pertinent references. The problem confronted in the 454 Patent was not a flexographic printing plate problem; it was an overheating problem. Cooling means used to solve analogous overheating problems would be obvious to employ.

Second, the invention in *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 275 (1976) involved the use of flowing water to clean animal wastes from barn floors. The Court noted that such techniques date back to ancient times, including being one of the Labors of Hercules. *Id.* at 275 & n.1. However, the "only claimed inventive feature" of the particular combination claimed in the patent was "the provision for abrupt release of the water from the tanks or pools directly onto the barn floor, which causes the flow of a sheet of water that washes all animal waste into drains within minutes and requires no supplemental hand labor." *Id.* at 277. Nevertheless, all of the elements needed to accomplish this result were known in the art and the only issue of obviousness was one of combination. *Id.* at 278, 281. Therefore, this Court found it proper for the District Court to apply the principle of obviousness that "[c]ourts should scrutinize combination patent claims with a care proportioned to the difficulty and improbability of finding invention in an assembly of old elements." *Id.* at 281. "A patent for a combination which only unites old elements with no change in their respective functions obviously withdraws what already is known into the field of its monopoly and diminishes the resources available to skillful men." *Id.* The patent was obvious because it

"simply arrange[d] old elements with each performing the same function it had been known to perform." *Id.* at 282.

Notably, nowhere did the Court require proof that a person of ordinary skill in the art have a "reasonable expectation of success" in arranging the admittedly known elements. In the present case, the 454 Patent's alleged "invention" is simply the combination of a fan into a known machine that was known to cause overheating, as claimed. *Sakraida* emphasizes that a court should approach such combinations with deep skepticism of their patentability rather than relying on talismanic and rigid invocations of the RES test.

A combination of old elements must "produce a new or different function" as "the test of validity of combination patents." *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57, 60 (1969). The RES test as applied in this case is inconsistent with this requirement established by this Court's long line of obviousness precedents. The fan in this case simply performed its ordinary and customary function of cooling through convection and was used in a prior art machine known in the art to overheat printing plates. Likewise, a cooled drum had proven successful in analogous situations, such as the thermal development of photographic plates to prevent similar distortion. No further evidence of obviousness was required.

II. THE COURT SHOULD FINISH THE WORK IT BEGAN IN *KSR*

As discussed previously, prior to *KSR*, the Federal Circuit applied an extra-statutory two-element test for obviousness. These elements were the TSM test and the

RES test. *See Brown & Williamson Tobacco*, 229 F.3d at 1124-25; *Boehringer Ingelheim Vetmedica*, 320 F.3d at 1354 *Medichem*, 437 F.3d at 1165. The express purpose of the grant of certiorari in *KSR* was that the TSM test had no basis in the statutory text or this Court's precedents. *See KSR*, 550 U.S. at 407. However, by continuing to rigidly apply the RES test, the Federal Circuit did not accept *KSR*'s implications for the other half of its pre-*KSR* obviousness analysis: the RES test. As a result, *KSR* has become only a half-measure, and the time has now arrived to finish abrogation of the entirety of the Federal Circuit's extra-statutory and rigid obviousness test. *See* Douglas L. Rogers, *Federal Circuit's Obviousness Test for New Pharmaceutical Compounds: Gobbledygook*, 14 CHI.-KENT J. INTELL. PROP. 49, 73 (2014) ("[T]he Supreme Court in *KSR* did not cite or directly address the Federal Circuit's requirement that the skilled artisan possess a reasonable expectations of success in modifying/ combining the prior art disclosures."). Janice Mueller, *Chemicals, Combinations, and "Common Sense": How the Supreme Court's* KSR *Decision is Changing Federal Circuit Obviousness Determinations in Pharmaceutical and Biotechnology Cases*, 35 N. KY. L. REV. 281, 292, 308 (2008) ("The Supreme Court in *KSR* did not cite or directly address prong (2), the Federal Circuit's [RES test]. ... [Post-*KSR* decisions] signal that the reasonable expectation of success prong for combining or modifying prior art teaching is now pivotal in nonobviousness analysis.").

This case presents the issue squarely in view of the fact-finding by the Board. The Board found that there was a recognized problem of over-heating in the prior art and that analogous prior art recognized the cooling solutions

claimed by the 454 Patent as solutions to that problem. The Board also found that the person of ordinary skill in the art would have a motivation to make the claimed combination. The Board's only reason for failing to find the combination obvious was the Federal Circuit's rigid RES test. App. at 37a ("[f]or a determination of obviousness, there must be both a reason why the skilled artisan would have made the combination and a reasonable expectation of success based on a preponderance of the evidence of record."). When MacDermid pointed out on rehearing that the RES test is inconsistent with this Court's precedent, the Board reiterated its legally erroneous holding as its sole basis for rejecting MacDermid's claim. App. at 11a. Therefore, this case is a perfect vehicle to review the legality of the RES test.

III. THERE IS AN ACKNOWLEDGED CIRCUIT SPLIT

As described above, this Court's precedents clearly established a requirement of synergism or new functionality when a patent claims the simple combination of known elements.[1] Prior to the creation of the Federal Circuit, the

1. *See Anderson's-Black Rock*, 396 U.S. at 60-61 (where a patent covers merely a combination of old elements, the patent will not be valid unless the combination produces "a new or different function" or demonstrates a "synergistic result," which the Court defined as "an effect greater than the sum of the several effects taken separately"); *Sakraida*, 425 U.S. at 282; *Toledo Pressed Steel Co. v. Standard Parts, Inc.*, 307 U.S. 350, 356 (1939) ("mere aggregation of two old devices" is unpatentable where each part "served as separately it had done"); *Lincoln Engineering Co. v. Stewart-Warner Corp.*, 303 U.S. 545, 549 (1938) ("mere aggregation of a number of old parts or elements which, in the aggregation,

regional Courts of Appeals faithfully applied the Court's synergism test.[2] However, the Federal Circuit's RES test

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perform or produce no new or different function or operation than that theretofore performed or produced by them, is not patentable invention"); *Adams v. Bellaire Stamping Co.*, 141 U.S. 539, 542 (1891) (holding that non-obviousness "something more than a mere aggregation of old results"); *Reckendorfer v. Faber*, 92 U.S. 347, 357 (1876) (a "combination, to be patentable, must produce a different force or effect, or result in the combined forces or processes, from that given by their separate parts"); *Hailes v. Van Wormer*, 87 U.S. 353, 368 (1874) ("bringing old devices into juxtaposition, and there allowing each to work out its own effect without the production of something novel, is not invention").

2. *See Scully Signal Co. v. Electronics Corp. of Am.*, 570 F.2d 35, 360 n.5 (1st Cir. 1977) ("a combination patent must achieve an effect greater than the sum of the several effects taken separately"); *Shakelton v. J. Kaufman Iron Works, Inc.*, 689 F.2d 334, 339 (2d Cir. 1982) ("[t]he starting point for a court's judgment on the obviousness of a combination patent is to examine the function of the components in their prior context alongside the functions they perform in their new combination ... [a] change of function for a well known element of a combination patent is a benchmark of nonobviousness"); *John Zink Co. v. National Airoil Burner Co.*, 613 F.2d 547, 551 (5th Cir. 1980) ("The combined elements must perform a new or different function, produce 'unusual or surprising consequences,' or cause a synergistic result"); *American Seating Co. v. National Seating Co.*, 586 F.2d 611, 620 (6th Cir. 1978) ("the combination, in order to be patentable, must produce a synergistic effect or result"); *Reinke Mfg. Co. v. Sidney Mfg. Corp.*, 594 F.2d 644, 648 (8th Cir. 1979) ("if the claims cover a structure that combines old and well known elements, one of the factors this court must look for in determining whether the patents meet section 103 requirements is synergism: that which results in an effect great than the sum of the several effects taken separately"); *Carson Mfg. Co. v. Carsonite Int'l Corp.*, 686 F.2d 665 (9th Cir. 1981) ("A combination patent will be upheld only

is fundamentally inconsistent with the "synergism" or "new functionality" guidelines and with the precedents of the regional Courts of Appeals that universally applied them. The Federal Circuit expressly rejected "synergism" and "new functionality" as the touchstone for patentability of a combination of known elements shortly after that court was created in *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.3d 1530, 1540 (Fed. Cir. 1983). Additionally, the Federal Circuit recognized that its holding in this regard was in direct conflict with the holdings of the regional circuits in *Allen Engineering*, 299 F.3d at 1356-57. Thus, there is an acknowledged circuit split as to the Federal Circuit's RES test.

This difference is not one of mere semantics. Under the Federal Circuit's "reasonable expectation of success test," showing that each element in a claimed combination was known and performs the same function it had been known to perform is not enough to establish a *prima facie* legal conclusion of obviousness. This case illustrates the conflict between these approaches well. The Board, in this case, found that well-known thermal developer machines for flexographic printing plates were known to overheat and distort the plates. The Board found that cooling is a common sense solution for overheating and that fans and cooled drums were known cooling elements and were found in analogous prior art performing this precise function. DuPont made no claim that the fans or cooled drums in its patent produced some sort of

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if it produces an 'unusual' or 'surprising' result"); *Deere & Co. v. Hesston Corp.*, 593 F.2d 956, 962 (10th Cir. 1979) ("in order for the combination of old elements to prevail, there must be a synergistic effect").

synergism or new functionality above and beyond simple cooling. Nonetheless, the Board and Federal Circuit found that, due to a potential worry that the thermal developer machine would overcool there was no reasonable expectation of success in the combination.

Thus, the Federal Circuit's reasonable expectation of success test is the opposite of the analysis required by this Court and the regional Courts of Appeals. The "synergism" and "new functionality" criteria perform the analysis from the perspective of "why not?" Why not make a combination of known elements in view of a motivation to do so? If it works, it was the result of ordinary skill, not innovation. *See KSR*, 550 U.S. at 421 ("When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense."). Only if the prior art elements are performing new functions or producing unexpected results would the combination naturally be considered inventive. On the other hand, the RES test performs the analysis from the perspective of "why?" It requires up-front evidence that prior art elements will be able to perform their known functions when combined, even if, as it turned out here, there was no reason to worry in the first place because the combination would work if empirically tested.

This Court's approach recognizes that ordinary artisans use experimentation to test hypotheses. If there is a known problem of overheating and cooling means that

were successful in analogous situations, the ordinarily skilled artisan will perform an experiment to see if the combination could be incorporated and adapted to work. If it works, as it did here, the combination is not inventive. *See KSR*, 550 U.S. at 421.

On the other hand, the Federal Circuit's approach believes that ordinary artisans use abstract conjecture to reject potentially promising avenues for experimentation out of hand. If there is a known problem of overheating and cooling means that were successful in analogous situations, but the ordinary artisan would be concerned about the combination working, then the ordinarily skilled artisan would stop right there and abandon the proposal. The ordinary artisan would perform no empirical test to see if the abstract conjecture that the combination might not work was empirically verifiable. Thus, this Court's approach fits the obviousness analysis correctly within the scientific method; while the Federal Circuit's approach rejects the scientific method in favor of an abstract philosophical approach to science.

There is an avowed, recognizable, and real split between the precedents of the various circuits of the Court of Appeals as to the extra-statutory RES test. A writ of certiorari would be appropriate to bring needed clarity to the law.

CONCLUSION

It is fundamentally wrong that the Federal Circuit has allowed DuPont to retain a patent monopoly on the incorporation of a fan, as claimed, into a known device, which was known to overheat. The Federal Circuit's overly

rigid and formalistic RES test is to blame and must be abrogated. For the reasons stated herein, this petition for a writ of certiorari should be granted.

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Respectfully Submitted,

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