

No. 23-

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IN THE  
**Supreme Court of the United States**

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FICEP CORPORATION,

*Petitioner,*

*v.*

PEDDINGHAUS CORPORATION,

*Respondent.*

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

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**PETITION FOR A WRIT OF CERTIORARI**

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## **QUESTIONS PRESENTED**

Ficep invented and claimed a method of manufacturing components (like steel beams) of a larger structure (like the skeleton of a building). The claims specifically recite a method of manufacturing the component and a manufacturing line for doing so.

That the invention was an important real-world manufacturing innovation was, as a factual matter, thoroughly established. The improvement was touted as enabling vastly more efficient and superior manufacture of components – not just by Petitioner’s experts, but also in the defendant’s advertising. There was industry recognition applauding the “innovation.” There was copying by competitors. There was successful litigation and licensing. And there was specific customer demand for the improvement to the manufacturing process. That is, every objective indicium of inventiveness that this Court has identified was present in the technological, traditionally patent-eligible, setting of manufacturing lines.

The Federal Circuit nevertheless invalidated the patent claims as “abstract” and refused to consider evidence of inventiveness. This petition therefore addresses the following questions:

1. Does a claim directed to patent-eligible subject matter (here, manufacturing) nevertheless become ineligible as “abstract” if the process is improved using automation?

- a. Should an “abstract-idea” behind a claim to a patent-eligible process be identified and, if so, how and at what level of abstraction?
2. What is the appropriate standard for determining whether a claim is “inventive,” conferring eligibility under *Alice* Step 2, including whether objective evidence of inventiveness and technological improvement is relevant?
3. Is either what a claim is “directed to” and whether that is abstract, or whether a claim is “inventive” as articulated in *Alice* step 2, only for a judge to decide as a legal matter or does it include fact issues and, if the latter, are they for a jury?

**PARTIES TO THE PROCEEDING**

Petitioner is Ficep Corporation.

Respondent is Peddinghaus Corporation.

**CORPORATE DISCLOSURE STATEMENT**

Pursuant to this Court's Rule 29.6, petitioner Ficep Corporation states that its parent, Ficep S.p.A., an Italian company, owns 10% or more of its stock.

*v*

## **RELATED PROCEEDINGS**

The following Proceedings are directly related to this case within the meaning of this Court's Rule 14.1(b)(iii):

*Ficpe Corporation v. Peddinghaus Corporation*, Case No. 1:19-cv-01994-RGA (D. Del.), judgment entered on February 28, 2022.

*Ficpe Corporation v. Peddinghaus Corporation*, Case No. 2022-1590 (Fed. Cir.), judgment entered on August 21, 2023.

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## PETITION FOR A WRIT OF CERTIORARI

Petitioner Ficep Corporation (“Ficep” or “Petitioner”) respectfully submits this petition for a writ of certiorari to review the judgment of the U.S. Court of Appeals for the Federal Circuit.

### OPINIONS BELOW

The court of appeals’ opinion in *Ficep Corp. v. Peddinghaus Corp.*, Case No. 2022-1590 (Fed. Cir. Aug. 21, 2023) (App. 1a-18a) is not published in the Federal Reporter but is reprinted at 2023 WL 5346043. The court of appeals’ order denying panel rehearing *en banc* is unreported but is reproduced at App. 70a-71a. The opinion of the district court granting Peddinghaus Corporation’s (“Peddinghaus”) motion for summary judgment is *Ficep Corp. v. Peddinghaus Corp.*, 587 F. Supp. 3d 115 (D. Del. 2022) (App. 19a-40a). The opinion of the magistrate judge recommending denial of Peddinghaus’s motion to dismiss on the same issue is at Case No. 19-1994-RGA, 2021 WL 254104 (D. Del. Jan. 26, 2021) (App. 44a-69a). The opinion of the district court accepting the recommendation and denying the motion to dismiss is at Case No. 19-1994-RGA, 2021 WL 979564 (D. Del. Mar. 16, 2021) (App. 41a-43a).

### JURISDICTION

The Federal Circuit entered judgment on August 21, 2023. Ficep filed a petition for rehearing *en banc*, which the court denied on October 23, 2023 (App. 70a-71a). This Court has jurisdiction under 28 U.S.C. § 1254(1).



## STATUTORY PROVISIONS INVOLVED

Section 101 of Title 35 of the U.S. Code provides: “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.”

Section 112(b) of Title 35 of the U.S. Code provides: “The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.”

Section 103 of Title 35 of the U.S. Code provides: “A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.”

## PRELIMINARY STATEMENT

In *Alice*, this Court declined “to delimit the precise contours of the ‘abstract ideas’ category.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 221 (2014). In the ensuing ten years, the ability to secure patents in the “useful arts” has not just eroded but become a panel-dependent game of chance.

Historically, and under all of this Court's precedent, patents "directed to" patent-eligible processes like manufacturing remain patent-eligible whether improved through an abstract idea or otherwise. This is reflected in *Diehr* holding patent-eligible an improvement to a conventional rubber curing process, with the change consisting of opening the press when the Arrhenius equation indicates to do so.

Recent Supreme Court jurisprudence did not change this, as confirmed by this Court's citing *Diehr* with approval, while cautioning that Section 101 does not preclude patenting an invention "designed to solve a technological problem in 'conventional industry practice.'" *Alice*, 573 U.S. at 223 (quoting *Diamond v. Diehr*, 450 U.S. 175, 177, 178 (1981)).

Federal Circuit precedent has diverged from this Court's guidance. The Federal Circuit (or at least some of its panels) searches for some underlying essence of the invention, whether or not "designed to solve a technological problem in conventional industry practice," seeks to characterize that essence at some level of abstraction, and then decides whether that level of abstraction is too high to be patent-eligible.

This cannot be the law. The purpose of the Patent Act is to promote science by encouraging disclosure. Consider a manufacturing process that was improved using a concept, equation, algorithm or some other abstract idea, and the result was avoiding hazardous, catastrophic failures at manufacturing plants. The Federal Circuit would rule that ineligible for patent protection, because the improvement to the statutory process could be characterized as an abstract idea. And the improvement would instead be held as a trade secret, outside of the public eye.

Moreover, the Federal Circuit’s process of abstracting every claim has been widely recognized as creating uncertainty and providing seemingly arbitrary results.

Business method patents raise “special problems” as this Court observed in *Bilski*. *Bilski v. Kappos*, 561 U.S. 593, 608 (2010). It has been ten years since *Alice* addressed the abstract-idea exception to eligibility for business methods, and decades since the abstract-idea exception has been addressed by this Court outside of that context.

Eligibility of patents directed to improving statutory processes, like manufacturing, needs further Supreme Court guidance. It is time for this Court to better “delimit the precise contours of the ‘abstract ideas’ category.” *Alice*, 573 U.S. at 221.

## STATEMENT OF THE CASE

### I. PATENT ELIGIBILITY

#### A. Statutory Requirements of Eligibility (Section 101) and the Patent Claims Define the “Invention”

Congress specifically set forth what subject matter can be patented in the first section of the 1952 Patent Act:

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.

The “conditions and requirements” for a patent include statutory sections defining what is new (Section 102), what is inventive (Section 103) and whether the patent teaches enough to justify or “enable” the full breadth of a claimed invention (Section 112(a)).

Section 101 is understood to define what types of things may be patented, specifically any “process, machine, manufacture, or composition of matter” and any “improvement thereof.” 35 U.S.C. § 101. The plain statutory language was intended to be broad, i.e., “anything under the sun made by man” was intended to be patent-eligible, subject to the other requirements of the 1952 Patent Act. S. Rep. No. 1979, 82d Cong., 2d Sess., 5 (1952); H. R. Rep. No. 1923, 82d Cong., 2d Sess., 6 (1952); *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) (quoting legislative history).

At least since the Patent Act of 1870, the “invention” to be tested for infringement and validity is not some abstract notion or “essence” articulated in a patent document – it is the patent claim(s). *Hilton Davis Chemical Co. v. Warner-Jenkinson Co., Inc.*, 62 F.3d 1512, 1526 (Fed. Cir. 1995) (“The claiming requirement ... was contained in the Patent Act of 1870.”), subsequent proceedings, *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17 (1997); Patent Act of 1870, ch. 230, § 26, 16 Stat. 198–217 (“particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery”).

As stated by the late Giles Sutherland Rich, a member of the two-person committee that drafted the 1952 Patent Act, “the name of the game is the claim.” Giles S. Rich,

The Extent of the Protection and Interpretation of Claims—American Perspectives, 21 Int’l Rev. Indus. Prop. & Copyright L. 497, 499, 501 (1990).

**B. Supreme Court “Exceptions” to Patent Eligibility and, Particularly, the Abstract-Idea Exception**

This Court has identified three “exceptions” to eligibility of a patent claim, exceptions which “are not required by the statutory text” – “laws of nature, physical phenomena, and abstract ideas.” *Bilski*, 561 U.S. at 601. (One might question whether these are truly “exceptions,” as none are “made by man.”)

Any physical patent claim will involve a “law of nature.” It is the laws of nature and physics that provide for gravity and that allow one object to sit on top of another. Such uses of laws of nature, of course, underlie every patent claim and have never been invoked to deny eligibility. It is a different matter if the claim itself invokes a law of nature.

When a “law[] of nature” is involved *in a patent claim*, the natural law is generally easy to identify – though the relationship to the patent claim and eligibility may be more nuanced. Recent examples include *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72 (2012) (relationship between identified metabolites and dosage of drug) and *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013) (isolated natural DNA ineligible; synthesized cDNA eligible because it is man-made).

Originally, the abstract-idea exception also concerned easy to identify concepts, i.e., patent claims reciting algorithms or mathematical equations. For decades, the leading Supreme Court precedents on what constituted an “abstract idea” were *Benson*, *Flook* and *Diehr*.

*Benson*’s patent claim consisted of an algorithm for converting one form of binary code (binary coded decimal) to another (straight binary encoding), and no more.<sup>1</sup> There was no change in the real world, the claims were entirely computational/theoretical, and the claims were ineligible. *Benson*, 409 U.S. at 71.

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1. The claims in *Benson* are included in an Appendix to the Supreme Court opinion. Claim 8 reads:

The method of converting signals from binary coded decimal form into binary which comprises the steps of-

- (1) storing the binary coded decimal signals in a reentrant shift register,
- (2) shifting the signals to the right by at least three places, until there is a binary ‘1’ in the second position of said register,
- (3) masking out said binary ‘1’ in said second position of said register,
- (4) adding a binary ‘1’ to the first position of said register,
- (5) shifting the signals to the left by two positions,
- (6) adding a ‘1’ to said first position, and
- (7) shifting the signals to the right by at least three positions in preparation for a succeeding binary ‘1’ in the second position of said register.

*Gottschalk v. Benson*, 409 U.S. 63, 73-74 (1972).

*Flook* similarly claimed calculating (or “adjusting”) a number using a recited equation – **and no more.**<sup>2</sup> *Flook*, 437 U.S. at 594-95. The claim limitations were “directed” only to a calculation, and not even an automated one.

*Diehr* was directed to (no more than) using the known Arrhenius equation to determine when to *automatically* open a press when curing rubber.<sup>3</sup> That the alleged

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2. The *Flook* claim (emphasis added):

***A method for updating the value of at least one alarm limit*** ... which comprises:

...[performing identified calculations]...

determining an updated alarm limit which is defined as  $B1 + K$ ; and thereafter

adjusting said alarm limit to said updated alarm limit value.

*Parker v. Flook*, 437 U.S. 584, 596-97 (1978).

3. The *Diehr* claim (emphasis added):

***A method of operating a rubber-molding press*** for precision molded compounds with the aid of a digital computer, comprising:

providing said computer with a data base ...,

repetitively calculating in the computer, at frequent intervals during each cure, ***the Arrhenius equation*** ...,

repetitively comparing ... each said calculation... and said elapsed time, and

opening the press automatically when a said comparison indicates equivalence.

*Diehr*, 450 U.S. at 179 n.5.

abstract idea was an equation was again easy to identify. The claim recited “the Arrhenius equation.”

Because the claim (and its limitations) was for a “method of operating a rubber-molding press,” however, it was statutory. *Diehr*, 450 U.S. at 191-93. Automating part of a statutory manufacturing process (opening the press) using an abstract idea (mathematical Arrhenius equation) did not remove the process from eligibility.

Thus, under this Court’s precedent, where the “abstract idea” involves automation of eligible matter using abstract ideas, the context *in the patent claim* determined eligibility. If the *claimed* subject matter is statutory, as curing rubber plainly is, the claim is eligible and patentable (to the extent provided in the remainder of the Patent Act, e.g., it must be inventive), even if it invokes automation or an abstract idea such as the Arrhenius equation. Merely performing a calculation like the Arrhenius equation is not statutory nor is it “under the sun made by man.” Curing rubber, whether or not improved using an abstract idea, is statutory subject matter “made by man.”

Unlike abstract ideas in the form of mathematical algorithms and equations, some business method patents pose unique problems in assessing eligibility. *Bilski*, 561 U.S. at 608 (“some business method patents raise special problems”); *see also Alice*, 573 U.S. 208.

Those cases address claims that are fully outside what was contemplated as a statutory process, product or machine when the 1952 Act was adopted. Those cases do not involve industrial technology or improvements to it.



In *Bilski*, the opinion begins with the claim limitations, specifically “initiating transactions,” “identifying market participants” and “initiating [other] transactions.”<sup>4</sup> On the face of it, none are “directed to” statutory subject matter. The *Bilski* opinion concludes that the claim is “directed to” hedging risk, the claim limitations involve nothing more, and the claim was therefore ineligible. *Bilski*, 561 U.S. at 611.

*Alice* involved a claim to a “method of exchanging obligations as between parties” that consisted entirely of manipulating information. *Alice*, 573 U.S. at 213 n.2. The opinion again begins with identification of the claim limitations – “creating ‘shadow’ credit and debit credit records (i.e., account ledgers)” and “updat[ing] the shadow records.” *Id.* at 213. Again, the 1952 Act plainly

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4. From the first page of the Supreme Court opinion:

Claim 1 consists of the following steps:

“(a) initiating a series of transactions between said commodity provider and consumers of said commodity wherein said consumers purchase said commodity at a fixed rate based upon historical averages, said fixed rate corresponding to a risk position of said consumers;

“(b) identifying market participants for said commodity having a counter-risk position to said consumers; and

“(c) initiating a series of transactions between said commodity provider and said market participants at a second fixed rate such that said series of market participant transactions balances the risk position of said series of consumer transactions.”

*Bilski*, 561 U.S. at 599.

did not contemplate the business method of “exchanging obligations” or “updating... records” as among the enumerated classes of patentable subject matter.

Thus, under *Alice* step one, the claim was held to be directed to nonstatutory subject matter. *Id.* at 219-21. “[U]pdating” records is no different than *Flook*’s claim for “adjusting” a limit or *Benson*’s claim to converting data format. The claim limitations were outside the technology or “useful arts” contemplated in the Patent Act and U.S. Constitution.

The patents in *Alice*, however, also included claims to automated systems for performing the nonstatutory method. *Id.* at 214. One might call a programmed computer for performing a nonstatutory method a Section 101 “machine.” Again, business method patents raised “special problems.”

Thus, in *Alice*, the Court ruled that automation (without more) did not *save* what would be an ineligible (business method) process from ineligibility. *Id.* at 226-27. As discussed below, this is very different than holding (as the Federal Circuit did in this case) that an *eligible* process is *converted* to being ineligible, if part of the process is automated or otherwise improved with an abstract idea.

To the contrary, *Diehr* held that a statutory rubber curing process remained statutory when part is automated with an abstract idea, and *Alice* expressly was not intended to alter the patent-eligible nature of historically eligible processes like manufacturing. *Id.* at 223 (Section 101 does not preclude patenting an invention “designed to solve a technological problem in ‘conventional industry practice’”) (quoting *Diehr*, 450 U.S. at 177).

Even for a nonstatutory process like the business method claims in *Alice*, technological inventions may occur and be eligible. Thus, under *Alice* step two, the claim is examined to see if the claim is limited to an eligible technological improvement. Under the facts of *Alice*, there was nothing alleged to be inventive outside of the nonstatutory concept – no real-world impact or improvement to technology, of the type contemplated by the authors of the 1952 Patent Act. And so the claims were held to be ineligible. *Id.* at 225-26.

### **C. Adoption of a “Nature of the Invention” Test, and Abstracting Statutory Claims, by Some Federal Circuit Panels**

Under *Diehr* and as described above, conventionally patentable technological processes like manufacturing remained patentable even if improved by an abstract idea. Under *Alice*, a nonconventional business method patent was examined for patentability and found to be “directed to” an overall ineligible process (of exchanging business obligations) and automation did not save it.

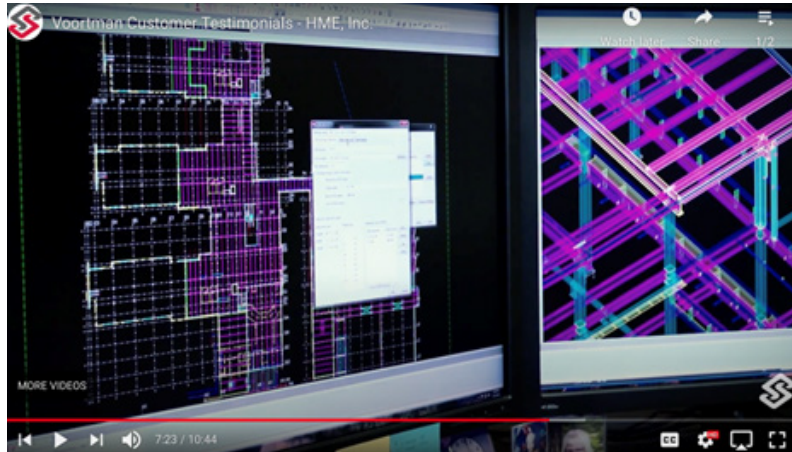
The Federal Circuit has turned that “directed to” language against what had been statutory processes and applied a test where an ill-defined level of abstraction of whatever is determined to be the underlying nature or essence of a patent claim is identified and tested for abstractness. Thus, a claim “directed to” to a statutory process (or in the words of *Alice*, “a technological problem in ‘conventional industry practice’”) becomes nonstatutory if improved by what might be characterized as an abstract idea. *E.g., Am. Axle & Mfg., Inc. v. Neapco Holdings LLC*, 967 F.3d 1285, 1298 (Fed. Cir. 2020) (“*Am. Axle*

1”) (improvement to dampen vibration in vehicle shaft ineligible because based on Hooke’s law); *Interactive Wearables, LLC v. Polar Electro OY*, 501 F. Supp. 3d 162, 174 (E.D.N.Y. 2020) (media (e.g., music or video) player reduced to ineligible abstract idea of “providing information in conjunction with media content”), *aff’d without opinion*, No. 2021-1491, 2021 WL 4783803 (Fed. Cir. Oct. 14, 2021).

## II. U.S. Patent No. 7,974,719

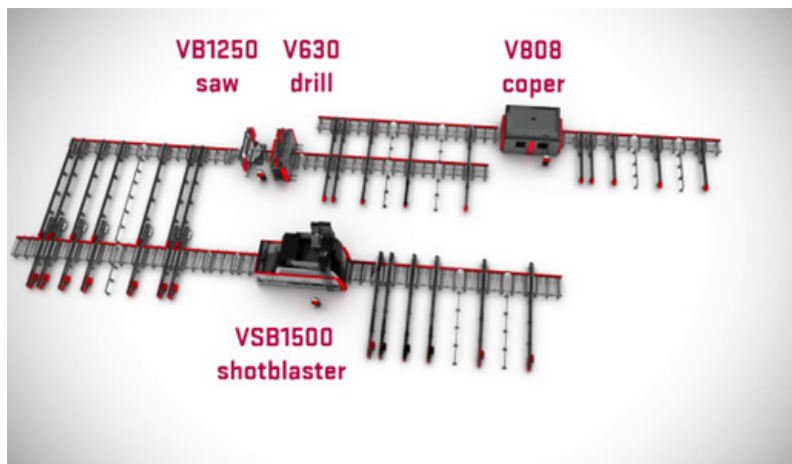
U.S. Patent No. 7,974,719 (“the ’719 patent”) is directed to manufacturing structural steel. Ficep’s fabrication systems practice the invention (C.A. App. 837-38 (Colombo Decl., ¶¶4-5)); Voortman’s fabrication lines were found to infringe in an earlier proceeding (C.A. App. 1564-1570 (Memo. and Order re: Summary Judgment in *Ficep Corp. v. Voortman USA Corp.*, Case No. MJG-13-429 (D. Md. Feb. 6, 2017)); Peddinghaus’s accused systems are for making structural steel (*e.g.*, C.A. App. 798-813 (Peddinghaus brochure); 39 (Complaint, ¶16); 52-56 (Complaint, ¶35); and the only discussion in the record of any “conventional” practice was manufacturing structural steel (*see, e.g.*, C.A. App. 781-782 (Chipman Decl., ¶16); 838-839 (Colombo Decl., ¶¶6-8); 819 (Faulkner Article Faulkner, L., “Automating Layout in Steel Fabrication,” *Modern Steel Construction*, Nov. 2011 (“Faulkner Article”)); 504-505 (Ficep’s Opp. to Peddinghaus’ Mot. for Summary Judgment); 802 (Peddinghaus brochure); App. 3a, 32a (citing D.I. 54, ¶24); 34a; 37a-37a).

Three-dimensional computer aided design (“CAD”) is used. C.A. App. 23 (‘719 patent at 1:20-25). E.g.:



C.A. App. 290.

The individual components (e.g., I-beams) of the structure (e.g., a building) are produced on massive manufacturing lines, e.g.:



C.A. App. 287.

Steel enters the line at the bottom-right, is automatically moved to the shot blaster which cleans the surface, then (automatically) from the lower to the upper track where the saw cuts the beam to length, and then to a drill. The copier then etches lines (“scribes”) onto the part.

Conventionally, scribing only placed an identification code on the beam. Voortman’s change to the line infringed, specifically, using a copier and controls to scribe the shape of an intersecting beam onto a beam being manufactured. C.A. App. 1569-1570 (Memo. and Order re: Summary Judgment in *Ficep Corp. v. Voortman USA Corp.*, Case No. MJG-13-429 (D. Md. Feb. 6, 2017)).

The ’719 patent first notes that some component parameters were included in CAD design models, like “dimensional references,” *but* they were not used to automatically control machines. C.A. App. 23 (’719 patent at 1:20-25). Rather, they were input by hand. *Id.* at 1:37-43.

The patent then separately identifies two things the invention addresses.

The first is the above issue – automating use of design parameters like length that were in conventional CAD models. *Id.* at 1:43-49. That was not inventive, and automated use of dimensions was not new.

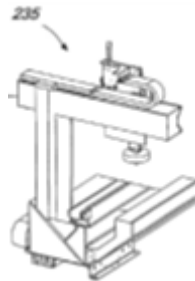
The second addresses something *not* in prior art CAD files – intersection parameters. C.A. App. 779-783 & 787 (Chipman Decl., ¶13, ¶¶16-17, & ¶24); 838-842 (Colombo Decl., ¶¶5-13); C.A. App. 23I (’719 patent at 1:49-55). Intersection parameters were not there to be read. C.A. App. 781 (Chipman Decl., ¶16); 838-840 (Colombo Decl.,

¶¶6-9). And there was no coper or other machine capable of receiving and using *the definition of an intersection* anyway. C.A. App. 787 (Chipman Decl., ¶24).

Thus it was identification and use of intersection parameters in manufacturing a component that led to the grant of the '719 patent. C.A. App. 1254-1262. And when Peddinghaus petitioned for *Inter Partes* Review, the petition was denied because the prior art again did not show identification and use of intersection parameters by manufacturing machines. C.A. App. 725-732.

An example in the patent of use of intersection parameters is to scribe lines onto steel to indicate where one steel beam “intersects” another. *See, e.g.*, C.A. App. 20 ('719 patent at Abstract) (“instructing a manufacturing machine to *mark out* the position of the components ....”) (emphasis added); C.A. App. 23 ('719 patent at 1:55-58) (“*marking-out* operations”).

The '719 patent shows a scribing tool to do so (C.A. App. 22 ('719 patent, FIG. 2)):



Scribing tools (like FIG. 2) are large industrial machines:



C.A. App. 801.





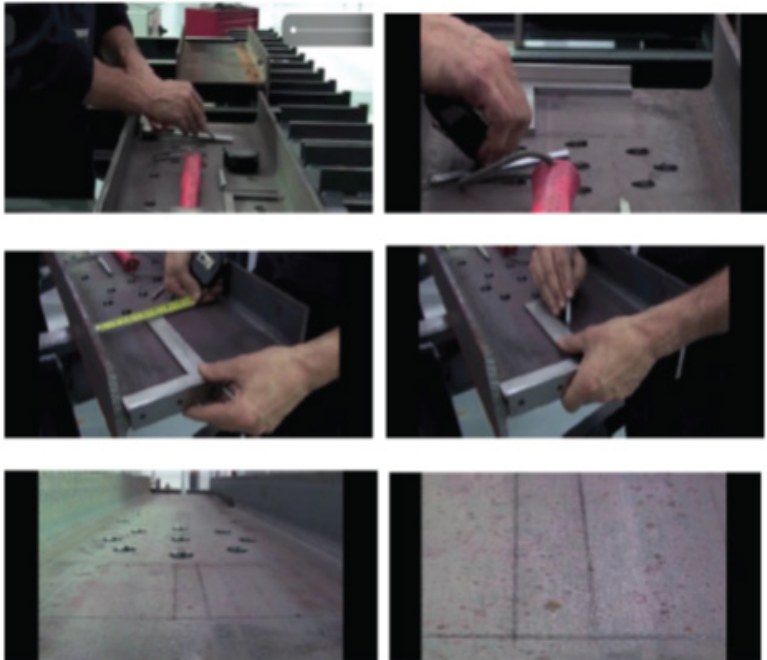
C.A. App. 837 (Colombo Decl., ¶14).

Examples of scribed intersections are:



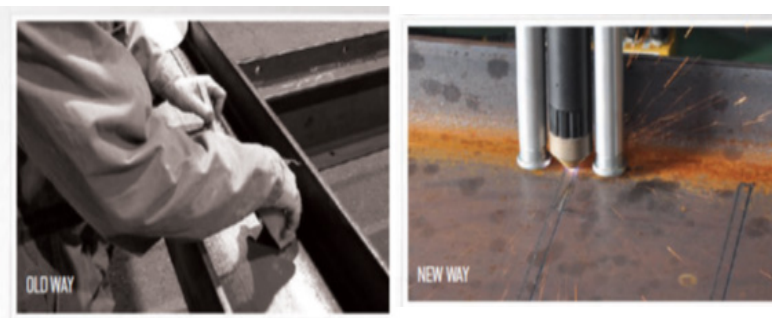
C.A. App. 294; 821. Both show the cross section of an intersecting I-beam scribed onto a part.

Intersection parameters did not exist in CAD files before Ficep's invention. C.A. App. 781 (Chipman Decl., ¶16); 838-840 (Colombo Decl., ¶¶6-9). So one had to take the component off the manufacturing line to mark it at separate layout stations. C.A. App. 838-839 (Colombo Decl., ¶¶6-8); 781-782 (Chipman Decl., ¶¶16-17). A skilled engineer would take a (2-dimensional) print-out and try to figure out what parts intersected, where and how. C.A. App. 838-839 (Colombo Decl., ¶¶6-8); 781 (Chipman Decl., ¶16). Using a ruler and a soapstone/marker, a person could then mark an intersection (C.A. App. 839 (Colombo Decl., ¶8); 781 (Chipman Decl., ¶16)), e.g.:



C.A. App. 839 (Colombo Decl., ¶8); 846-863; 819 (Faulkner Article).

Peddinghaus summed up the change in a brochure touting the very process that infringes Ficep’s patent. The brochure shows the “old way” (by hand, off-the-line, with a ruler) and the “new way” (automated by a scribe on the line):



C.A. App. 802 (Peddinghaus brochure); *see also id.* at 781 n.1 (Chipman Decl.).

Peddinghaus’s brochure explains the tremendous advantages (C.A. App. 802):

What's the Difference? Old Way vs. New Way

	MANUAL METHODS	PEDDIWRITER
Overall Speed	SLOW - Completely Manual	FAST - Fully Automatic
Slows Other Processes	YES - Requires Regular Crane Use	NO - Standalone
Accuracy	UNPREDICTABLE - Manual	SUPERIOR - CNC Controlled
Repeatability	UNPREDICTABLE - Manual	SUPERIOR - CNC Controlled
Labor Cost	HIGH - Multiple Employees	LOW - 1 Operator
Material Handling	HIGH - Requires Regular Crane Use	LOW - Roller Handling System
Labor Skill Level	HIGH - Skilled Trade	MINIMAL - Automated Program
Footprint	HIGH - Several Fitup Stations	MINIMAL - 1 Machine and Handling

And the benefits are not limited to manufacturing. The piece coming off the line is better than possible conventionally, allowing better and more reliable construction. C.A. App. 842 (Colombo Decl., ¶13); 786-787 (Chipman Decl., ¶21).

Thus, there was substantial, un rebutted proof of inventiveness. Ficep's technical expert and a named inventor both explained how the '719 patent contains a concrete inventive concept. They described how the process in the patent was not well known, routine or conventional, and was a concrete improvement to manufacturing technology. C.A. App. 787-789 (Chipman Decl., ¶¶23-26); 841-842 (Colombo Decl., ¶¶11-13).

Virtually every objective indicium of inventiveness was proved: industry recognition (including an article specifically lauding the invention), copying by competitors (including Voortman and Peddinghaus), commercial success (including demand for the patented feature), and litigation and licensing success. C.A. App. 787-792 (Chipman Decl., ¶¶24-30); 842 (Colombo Decl., ¶¶13-15); 819-822 (Faulkner Article); 179-180 (Consent Final Judgment in *Ficep Corp. v. Voortman USA Corp.*, No. MJG-13-429 (D. Md. Apr. 24, 2018)).

Claim 7 of the '719 patent recites:

An apparatus for automatic manufacture of an object, comprising:

a computing device adapted to create a design model of an object having multiple individual components, at least two of the individual

components defining an intersection at which the two components are in contact with one another;

at least one programmable logic controller in communication with the computing device and with at least one manufacturing machine;

a receiver associated with the programmable logic controller for receiving the design model of the object;

a database unit adapted to store the design model received at the receiver;

a processor which is associated with the programmable logic controller and extracts from the design model a plurality of dimensions of components which define a plurality of components of the object;

wherein the processor identifies a plurality of intersection parameters which define the intersection of the two components;

wherein the processor extracts from the design model the intersection parameters;

a transmitter associated with the processor for transmitting the intersection and machining parameters and the component dimensions from the programmable logic controller to the at least one manufacturing machine; and

wherein the at least one manufacturing machine manufactures the components based at least in part on the transmitted component dimensions and on the transmitted intersection and manufacturing parameters.

C.A. App. 26 (“719 patent, claim 1).

The claims are directed to a manufacturing line (“at least one manufacturing machine” for “manufactur[ing] the components”) (claim 7) and a corresponding process for manufacture requiring actual manufacture of a component (claim 1).

### III. Federal Circuit Decision

In an earlier unrelated case, a petition for rehearing *en banc* on a Section 101 invalidation as an “abstract idea” failed when in it split the Federal Circuit 6-6. *Am. Axle & Mfg. Inc. v. Neapco Holdings LLC*, 966 F.3d 1347 (Fed. Cir. 2020) (“*Am. Axle 2*”). There is an ideological split within the Federal Circuit. Over the last three years, not one of the six judges voting to deny *en banc* review has authored an opinion finding eligibility under Section 101.<sup>5</sup>

Unfortunately for Ficep, the panel for this case consisted of three Judges who voted “no.” The Federal Circuit affirmed summary judgment of patent invalidity under Section 101. App. 1a-18a.

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5. The only such decision the undersigned is aware of, since denial of rehearing, is *TecSEC, Inc. v. Adobe Inc.*, 978 F.3d 1278 (Fed. Cir. 2020), was over three years ago and very likely briefed and argued before *American Axle*.

For *Alice* step one, the Federal Circuit ruled as a matter of law that the claims are “directed to the patent-ineligible abstract idea of extracting and transferring information from a design file to a manufacturing machine.” App. 8a. There was no discussion as to why this level of abstraction, as opposed to one that incorporates the type of manufacturing data (intersection parameters) or that the claimed process requires (what was proved to be) a previously nonexistent manufacturing machine. Rather, the Federal Circuit said that the inquiry was “the focus of the claimed advance,” i.e., the essence of the invention, and by implication, not to what was being improved (manufacturing). *Id.*

This Court’s holding in *Diehr* would seem to provide a hard barrier to Federal Circuit’s ruling. The “essence” of the invention in *Diehr* was using the Arrhenius equation (abstract) to automate (unhelpful according to the Federal Circuit) a step in a conventional process for curing rubber. *Diehr*, 450 U.S. at 177-79.

The Federal Circuit (improperly) disposed of *Diehr* by purporting to distinguish it as pre-*Alice* (apparently questioning whether *Diehr* remains good law) and as showing a specific technical process (that was conventional, other than its improvement through use of the Arrhenius equation to automatically open the press). App. 13a-14a.

This Court in *Alice* observed that the touchstone of ineligibility is whether a claim preempts an abstract idea, *Alice*, 573 U.S. at 217. Here, the Federal Circuit also left unaddressed whether the claims could even remotely preempt its identified idea – plainly the claims do not preempt “extracting and transferring information from a design file to a manufacturing machine.” App. 8a.

The Court then stated that the patent was automating what had been done before by deriving then transferring data to a manufacturing machine. App. 8a-9a. That would appear to say that the abstract idea was “automating” rather than “extracting and transferring.” Of course, the claims could not preempt that “idea” either.

Either way, unless one calls a human – with a soapstone marker deriving parameters from a paper print-out using a ruler and drawing them onto a part – a “manufacturing machine,” this fact-finding was plain error. The only evidence before the court was that no machines capable of using such extracted information existed in the prior art, let alone were conventional. *See* pp. 15-16, *supra*. More important for this Petition, however, the finding was done at summary judgment, by a judge, rather than by a jury.

For *Alice* step two, the Court ruled that automating a step is not a technical improvement, *even if inventive under the Patent Act*. App. 16a-18a. With respect to the volume of evidence that the claims represented technical advantages, the Federal Circuit ruled that the claims were not limited to the context of marking beams – without commenting on the extensive evidence that the claimed process is what results in the improvement in that context (as well as in other contexts). App. 17a. For the evidence that the claims exhibit *every* objective indicium of nonobviousness – solving a long-felt need, industry acclaim, prompt copying by competitors, customer demand, and litigation and licensing success, all in an industrial setting – the Federal Circuit held it to be “irrelevant” to whether the patented claim was a technological innovation. App. 17a.



## REASONS FOR GRANTING THE PETITION

### I. THE SUPREME COURT NEEDS TO PROVIDE GUIDANCE DEFINING “DIRECTED TO” UNDER STEP ONE OF *ALICE*

In *Alice*, this Court declined “to delimit the precise contours of the ‘abstract ideas’ category.” *Alice*, 573 U.S. at 221. Presumably, and as occurs in many areas of the law, this Court deferred further explanation to permit further refinement in the lower courts.

Unfortunately, ten years later, the result has been chaos rather than refinement. There is remarkable unanimity that further guidance is needed on how to determine whether a claim is ineligible under the abstract idea exception. The appeals court, Patent Office and the Solicitor General agree.

As noted above, the Federal Circuit has split 6-6 on Section 101. In dissent several judges observed that the Federal Circuit’s “rulings on patent eligibility have become so diverse and unpredictable as to have a serious effect on the innovation incentive in all fields of technology.” *Am. Axle 2*, 966 F.3d at 1357 (Newman, J., dissenting, joined by Moore, O’Malley, Reyna, and Stoll, JJ.). Former Chief Judge of the Federal Circuit, the Honorable Paul Michel, wrote that:

Federal Circuit guidance on saying “directed to” means putting a “focus on the claimed advance,” *see, e.g., Training Techs. Int’l v. IBG LLC*, 921 F.3d 1378, 1384 (Fed. Cir. 2019), and the Supreme Court’s varying formulations

(e.g., “recited,” “drawn to,” “cover,” “directed essentially to,” “focus on,” “involved in,” “described”), have quite arguably rendered the “directed to” formulation overly subjective and panel-dependent at the Federal Circuit.

Judge Paul Michel (Ret.) & John Battaglia, *Flaws in the Supreme Court’s § 101 Precedent and Available Ways to Correct Them*, <https://ipwatchdog.com/2020/04/27/flaws-supreme-courts-§-101-precedent/id=121038/> (April 2020) (advising practitioners to return to looking at the underlying facts of Supreme Court precedent rather than Federal Circuit interpretation of Supreme Court language).

The Patent Office similarly notes the doctrinal gnarl we are in. *See, e.g.*, U.S. Patent & Trademark Office, *Patent eligible subject matter: Public views on the current jurisprudence in the United States*, 18-41 (June 2022) (many stakeholders find the current state of 35 U.S.C. § 101 law unclear and unpredictable, with consequences for American innovation investment, competition, and even national security).

Accordingly, the Solicitor General recently urged this Court to grant *certiorari* over the abstract-idea exception to patentability twice. In *American Axle*, the United States observed that “[t]he *Mayo/Alice* framework has given rise to substantial uncertainty” (Brief of the United States as Amicus Curiae<sup>6</sup> at 10), “fractured the Federal Circuit” (*id.* at 19), and that the Federal Circuit’s

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6. *Am. Axle & Mfg., Inc. v. Neapco Holdings LLC*, No. 20-891, 2021 U.S. Dist. Ct. Briefs LEXIS 6689 (May 24, 2022).

application of that framework has left the Patent & Trademark Office with little guidance to apply Section 101 in a consistent manner (*id.* at 19-20.)

In two more cases, the Solicitor General further urged this Court to grant review. *See* Brief for the United States as Amicus Curiae, *Interactive Wearables, LLC v. Polar Electro Oy* and *Tropp v. Travel Sentry, Inc.*, Nos. 21-1281 and 22-22, 2023 U.S. S. CT. BRIEFS LEXIS 1123 (April 5, 2023) (arguing for eligibility in *Interactive Wearables* and ineligibility in *Tropp*). In doing so, the Solicitor General observed that “[r]ecent Federal Circuit precedent reflects significant confusion over the application of this Court’s Section 101 decisions.” *Id.* at \*29.

This Court needs to further “delimit the precise contours of the ‘abstract ideas’ category.” *Alice*, 573 U.S. at 221. The lower courts are not getting there alone.

**A. This Court Needs to Confirm (or Overrule) *Diehr*’s Holding That Patent Claims “Directed To” Statutory Subject Matter Are Statutory, Whether or Not Improved With Supposedly Nonstatutory Matter**

*Diehr* unambiguously holds that incorporating a nonstatutory idea into a statutory process remains statutory/patent eligible. *Diehr* reproduced the text of the patent claim in the body of the opinion (also reproduced at p. 8 n.3, *supra*). *Diehr*, 450 U.S. at 179 n.5. The **only** claim step that does not involve measuring elapsed time and calculation of the Arrhenius equation is:

opening the press automatically when a said comparison [of elapsed time and the required

cure time calculated using the Arrhenius equation] indicates equivalence.

*Id.* The invention was nothing more than using the Arrhenius equation to determine when to automatically open the press. Opening the press without using the Arrhenius equation was conventional to say the least – one cannot get a cured rubber object out without opening the press.

The logic behind this Court’s ruling in *Diehr* is undeniable. Under the 1870 and 1952 Patent Acts, the claims define the invention and the claims need to be patent eligible – not some abstraction of the idea behind the claim. *See* p. 5, *supra*.

A “method of operating a rubber-molding press,” that includes “opening the press” is a manufacturing process that is both conventional and plainly eligible under Section 101. Such a claim may be invalid under Section 102 (novelty) or Section 103 (obviousness), but those are separate requirements for patentability.

Adding the Arrhenius equation to the process *does* add an abstract idea (in the form of a mathematical equation) to the statutory process. But adding additional steps to a statutory process should not remove eligibility – the claimed invention is still to a manufacturing process. And so *Diehr* held.

As this Court noted in *Alice*, any claim can be described at an abstract level. *Alice*, 573 U.S. at 217. A telephone merely reproduces sound using electrical signals. *Ipsa facto*, every claim necessarily incorporates

an abstract idea at some level. Incorporating an abstract idea alone cannot render a patent claim ineligible or there would be no eligible claims. As *Alice* cautioned the exceptions should not be too broadly applied “lest [the exceptions] swallow all of patent law.” *Id.* (citing *Mayo Collaborative Servs.*, 566 U.S. at 71). The inquiry must be whether the claim is limited to statutory subject matter, not whether it includes an abstract idea at some level.

Section 103 confirms this. According to Section 103, “[p]atentability shall not be negated by the manner in which the invention was made.” 35 U.S.C. § 103. If a statutory process is improved by application of an abstract idea, like the Arrhenius equation, application of the abstract idea does not negate patentability. Again, the judicial exception was not intended to remove improvements to statutory processes from eligibility.

Put another way, the 1870 and 1952 Patent Act required that the scope of the invention be claimed. This Court’s instruction that the crux of the matter is whether an abstract idea is preempted by the claim. *Alice*, 573 U.S. at 217 (“The former ‘would risk disproportionately tying up the use of the underlying’ ideas..., and are therefore ineligible for patent protection. The latter pose no comparable risk of pre-emption, and therefore remain eligible....”).<sup>7</sup> In *Diehr*, the abstract idea of the Arrhenius equation was not preempted. The use of the Arrhenius equation in curing rubber was preempted, but curing

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7. One year after *Alice*, a Federal Circuit panel suggested that preemption is not relevant if a claim is drawn to ineligible subject matter. *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015). This is circular, in conflict with this Court’s ruling in *Alice*, and further reflects the need for this Court’s guidance.

rubber is statutory and that preemption is the very point of a patented right to exclude.

The very premise of the patent system – providing a limited right to exclude in exchange for public disclosure<sup>8</sup> – requires this outcome. Would it be preferable for use of the Arrhenius equation to remain a trade secret because the improvement to manufacturing/curing rubber could be characterized as abstract? The entire patent system is premised on answering “no” and encouraging disclosure.

This Court’s more recent jurisprudence does not suggest otherwise. As noted above (*see* pp. 10-11, *supra*), *Bilski* and *Alice* both involved claims generally directed to plainly nonstatutory subject matter (hedging risk and exchanging obligations). There was no attempt to limit the claims to a statutory category other than, in *Alice*, recitation of generic computer components.

To be sure, reciting generic computer components, or some other form of automation, will not *save* claims directed to nonstatutory subject matter. This Court so held in *Alice*.

If *Diehr* remains good law, however, the converse is not true. Reciting computer components, automation, or abstract ideas including mathematical equations, does not *remove* an otherwise statutory process from eligibility. This Court has never made such a ruling and this Court needs to correct the Federal Circuit’s error.

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8. *E.g., Graham v. John Deere Co.*, 383 U.S. 1, 9 (1966) (describing a patent as “a reward, an inducement, to bring forth new knowledge”).

The Solicitor General seems to agree. *Interactive Wearables* Brief, 2023 U.S. S. CT. BRIEFS LEXIS 1123 at \*20 (“The scope of the abstract-idea exception may be further clarified by what it does *not* include. An automobile is not an abstract idea. A remote control is not an abstract idea. ... Generally speaking, technologies and industrial processes are not abstract ideas.”).

Meanwhile, the Federal Circuit seems to improperly treat *Diehr* as bad law. In this case, the Federal Circuit distinguished *Diehr* as pre-dating *Alice* (as though *Alice* overruled *Diehr sub silentio*) and by citing a Federal Circuit opinion in *Thales Visionix* as characterizing *Diehr* as “recit[ing] specific means for technological improvements.” App. 14a & n.6. Neither the opinion, nor *Thales Visionix* which it cites, explain what those improvements might be ***other than application of the Arrhenius equation to achieve a better outcome***. *Thales Visionix* cites only footnote 15 of *Diehr*. See *Thales Visionix Inc. v. U.S.*, 850 F.3d 1343, 1348, 1348 n.2 (Fed. Cir. 2017). *Diehr*’s footnote 15 describes nothing different from the manual process, beyond automating by using the Arrhenius equation. *Diehr*, 450 U.S. at 193 n.15. *Diehr* Note 15 does cite that the rubber product “has been perfectly cured,” i.e., the superior outcome. *Id.* That is, superior technological outcome is a technological improvement and is not ineligible. Superior technical outcome was also proved for the ’719 patent. See pp. 19-21, *supra*.

In short, if *Diehr* remains good law and statutory processes should not be dissected for possible underlying improvement-by-abstract-idea (mathematical or otherwise), this Court needs to remind the Federal Circuit that this is the case. If *Diehr* has been overruled, patent

jurisprudence would greatly benefit from this Court expressly saying so.

Put another way, this Court observed in *Alice* that Section 101 does not preclude patenting an invention “designed to solve a technological problem in ‘conventional industry practice’” *Alice*, 573 U.S. at 223 (quoting *Diehr*, 450 U.S. at 177). Contrary to this Court’s instruction, the Federal Circuit’s approach of trying to distill an improvement to a technological problem to some arbitrary level of abstraction and then test it for abstractness would remove from patent eligibility (and therefore from public disclosure) swaths of improved industrial processes.

Here, the invention solved a technological problem in conventional industry practice. By abstracting claims to their “essence” irrespective of technological improvement (through abstract idea or otherwise) and treating *Diehr* as effectively overruled, the Federal Circuit is departing from this Court’s precedent. The Federal Circuit’s jurisprudence needs to be brought back in line.

**B. If This Court Overrules *Diehr*, This Court Needs to Provide Guidance on How to Abstract a Claim**

The Federal Circuit’s approach of defining an essence or idea of the claim to test for abstractness finds little guidance in this Court’s jurisprudence. The need is immediate.

Ideas involving laws of nature or mathematical equations involve “ideas” that are straightforward to identify, e.g., as in *Mayo* and *Diehr*. Not so, for abstract ideas not involving equations or algorithms.



For business methods, this Court has noted that “some business method patents raise special problems.” *Bilski*, 561 U.S. at 608. Unfortunately, difficult cases (business method patents) have led to bad law in traditionally eligible areas.

For business methods, this Court readily identified ideas of claims directed to nonstatutory matter, like hedging risk and exchanging obligations, e.g., *Bilski* and *Alice*. But this Court has not addressed how to abstract and test for eligibility a claim otherwise directed to a traditional statutory process like manufacturing – expressly leaving that to the future. *See Bilski*, 561 U.S. 609 (“Rather than adopting categorical rules that might have wide-ranging and unforeseen impacts, the Court resolves this case narrowly on the basis of this Court’s decisions in *Benson*, *Flook*, and *Diehr*”); *Alice*, 573 U.S. at 221 (“we need not labor to delimit the precise contours of the ‘abstract ideas’ category in this case. It is enough to recognize that there is no meaningful distinction between the concept of risk hedging in *Bilski* and the concept of intermediated settlement at issue here.”).

In the absence of this Court’s guidance, defining the “idea” of a claim has proved problematic for the Federal Circuit. Every claim involves an abstract idea. *Alice*, 573 U.S. at 217. So selecting a level of abstraction is difficult, there is little guidance on how to do it, and frankly, the result is highly panel dependent as Judge Michel observed in the quote above. *See, e.g., Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1299-1300 (Fed. Cir. 2016) (“What relative level of abstraction should we employ?”); *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240 (Fed. Cir. 2016) (“An abstract idea can generally be described at

different levels of abstraction.”); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337 (Fed. Cir. 2016) (“describing the claims at such a high level of abstraction and untethered from the language of the claims all but ensures that the exceptions to § 101 swallow the rule”).

The decision here illustrates the problem. The opinion describes the “idea” as “identifying, extracting and transferring data... for the purpose of manufacturing” (App. 8a) generically, but without discussing that “idea,” whether it is the right level of abstraction or why. At the district court level, the “idea” seemed to include solving for human error. App. 30a-31a. And on briefing before the Federal Circuit (quoted below), Peddinghaus alternatively described the idea as extracting intersection parameters (narrower than data generically) and converting that into instructions a machine can use.

After characterizing the idea as extracting and transferring data of any kind, the opinion analyzes a “claimed advance” of “automating a previously manual process of transferring information from a CAD design model to a manufacturing machine” (App. 8a) – which sounds like analyzing an “abstract idea” different than the one the opinion articulated a few paragraphs before. And the opinion fails to explain why this idea is abstract or ineligible. Generally, automating a known manufacturing process may be unpatentable as not inventive/obvious. *See, e.g.*, MPEP 2144.04[III]; *Soverain Software LLC v. Newegg Inc.*, 705 F.3d 1333, 1340 & 1344 (Fed. Cir. 2013) (“routine incorporation of Internet technology into existing processes” is obvious). A conventional manufacturing process fits within Section 101’s list of the type of things that can be patented. Automating a

conventional process might be unpatentable as obvious, but it is illogical to say that it is abstract.

Should this Court adopt the Federal Circuit's approach of trying to identify and test the abstractness of the idea behind an improvement to a statutorily eligible process, this Court should provide guidance on how to do so (and by whom).

**1. At a Minimum the Level of Abstraction Should Include the Reasons for Patentability**

As noted above, the purported definition of the "idea" by the Federal Circuit could not support invalidation. This Court has made plain that preemption is the touchstone of ineligibility. *Alice*, 573 U.S. at 216. As also noted above, the "idea" identified by the Federal Circuit – whether it is extracting and transferring data generically or automating a previously known manual process – is not even remotely preempted by the claims which, among other things, limits the data to intersection parameters defining an intersection.

But more fundamentally, the "idea[s]" that the Federal Circuit identified cannot be the essence or nature of the invention because they had literally nothing to do with patentability. These "ideas" are not patentable/inventive, irrespective of Section 101 and these "ideas" did not lead to the '719 patent.

In *Mayo* the law of nature was the relationship between concentrations of certain metabolites in the blood and the likelihood that a dosage of a thiopurine drug will

prove ineffective or cause harm, *Mayo Collaborative Servs.*, 566 U.S. at 1298, which was unknown and was what led to the patent being (incorrectly) granted by the USPTO – not some generic step of altering treatment based on the natural law. In *Bilski* and *Alice* it was not automation or computer systems that led to those patents being (incorrectly) granted by the USPTO; it was the particular (nonstatutory) business steps of acquiring interests (*Bilski*) or exchanging obligations (*Alice*).

Here, what led to the '719 patent being granted was automatic identification from a CAD model of *intersection parameters that define an intersection of two components one of which is being manufactured* and then using that on the manufacturing line with a machine capable of doing so.

Thus, Peddinghaus alternatively argued to the Federal Circuit that the “idea” of the claims is:

- (1) identifying the dimensions and intersections of the components of a three-dimensional design,
- (2) extracting that information from a [3D] design model, and
- (3) converting that information to instructions for manufacturing the object.

Peddinghaus Br. at 2. The shifting levels of abstraction reflect that it is done without principle or guidance.

Peddinghaus’s position on appeal was close, but Claim 7 further recites the machines, or:

(4) manufacturing machine(s) to make the component, which (unlike any conventional machine) can receive and use instructions about dimensions *and intersections* to manufacture the component.

C.A. App. 26 ('719 patent, claim 7). This characterization of the “idea” is closer to the nature of the invention, i.e., what made the claim patentable. And it is concrete rather than abstract. Certainly, the Federal Circuit did not explain why *this idea* is abstract or even hold it to be so abstract as to be patent ineligible.

In short, the Federal Circuit is adrift in how to identify the “idea” of a claim. The result is that definitions of the idea of a claim are made at arbitrary levels of abstraction.

If every claim to ostensibly statutory subject matter is to be distilled into an abstract idea behind the claim, this Court needs to explain (the tautological truth) that the “idea” of a patent claim is bound to the reasons why the claim/invention was patentable, i.e., new and not obvious from what came before.

## **2. The Nature of the Invention and Whether That is Too Abstract to Meet the Statute Are Fact Issues for a Jury**

The Federal Circuit opinion rests on its statement that:

the focus of the claimed advance, as the patent specification indicates, is automating a previously manual process of transferring

information from a CAD design model to a manufacturing machine.

App. 8a.

That is a misreading of the specification and a gross overgeneralization of the “claimed advance.” The specification identifies two issues – automated transfer and use of information like dimensions (which it turns out was not inventive irrespective of patent eligibility) and identification and use of intersection parameters on the manufacturing line, which had never been done before. *See* pp. 15-16, *supra*.

In fact, there was un rebutted evidence that there was no prior art “manufacturing machine” capable of using intersection parameters before Ficep’s invention, conventional or otherwise. *See* p. 16, *supra*. The above finding of the Federal Circuit is easily identified as having been made, and as being wrong.

Of course, incorrect fact-finding and error at summary judgment are not generally worthy of Supreme Court review. Whether this is a fact issue or question of law, and if a fact issue, whether there is a right to a jury determination, *are* issues worthy of this Court’s time.

In general, the teaching of a patent specification (to one of ordinary skill in the art) and the “scope and content of the prior art” are fact issues. *See, e.g., Teva Pharmaceuticals USA v. Sandoz, Inc.*, 574 U.S. 318, 326-27 (2015); *Retractable Tech. v. Becton, Dickinson and Co.*, 653 F.3d 1296, 1310 (Fed. Cir. 2011). The teaching of the patent specification has sometimes been held to

be for the court and sometimes for a jury. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 189-90 (1996) (for court during claim construction); *BJ Servs. Co. v. Halliburton Energy Servs., Inc.*, 338 F.3d 1368, 1371 (Fed. Cir. 2003) (“Although enablement is a question of law, ... it is amenable to resolution by the jury”); *see also Vas-Cath Inc. v. Mahurkar*, 935 F.3d 1555, 1563 (1991) (“compliance with the ‘written description’ requirement of § 112 is a question of fact”). The scope and content of the prior art has uniformly been held to be a fact question for a jury. *Retractable Tech.*, 653 F.3d at 1310.

Here, the Supreme Court needs to instruct the lower courts that the “essence” of the invention as it relates to “conventional” processes and machines is a fact question and that both its characterization, and whether it is so abstract as to be ineligible, it should be decided by a jury.

## **II. THE SUPREME COURT NEEDS TO PROVIDE GUIDANCE ON WHAT IS A TECHNICAL ADVANCE UNDER STEP TWO OF *ALICE***

The dangerous place to which the Federal Circuit’s jurisprudence leads is demonstrated with a simple hypothetical. Suppose that automation of part of an industrial process were inventive. At this point and in most settings, automation is an obvious thing to do. But in this hypothetical, automating is not obvious. That is, the automation is inventive. And in this hypothetical, the automation has technical advantages. To put a fine point on it, suppose that it dramatically reduces the risk of catastrophic failure.

According to the Federal Circuit, such an invention is not even eligible for patent protection. Automating,

according to the Federal Circuit, is irretrievably abstract whether or not it results in meaningful technical improvements beyond (the obvious improvement of) speed of processing. According to the Federal Circuit, automation is ineligible for protection, even if inventive as defined in the Patent Act under Section 103.

The purpose of the Patent Act is to encourage public disclosure in exchange for a limited period of monopoly. *Graham*, 383 U.S. at 9. Here, the Federal Circuit would tell inventors to keep these inventions as trade secrets – patent protection is unavailable. That runs counter to the purpose of the Patent Act and this Court should intervene.

**A. This Court Should Clarify That Inventions Resulting in Technology Improvements to Statutory Subject Matter Are Patent Eligible**

Although Peddinghaus should have the burden of proof, Ficep proved (without rebuttal) that:

- the prior art did not generate intersection parameters from a 3D model – rather, a paper (2D) print-out was made first and then analyzed and measured in 2D using a ruler;
- manual measurement of a print-out using a ruler, and hand marking with a ruler, is a completely different process than calculating the parameters in 3D and automatically using them within the line; and
- the result is a powerfully different and superior manufacturing process/line, beyond just speed of calculation.



See C.A. App. 838-842 (Colombo Decl., ¶¶6-13); 781-782 (Chipman Decl., ¶16).

For the latter, Ficep proved the claim here is:

- Meaningfully more accurate.
- Meaningfully more reliable.
- Requires less floor space (since layout stations are not required).
- Free of requiring a crane to move components back and forth from the manufacturing machines.
- Less expensive in labor cost by almost half.
- Meaningfully faster because components do not have to be taken on and off the manufacturing line.
- Meaningfully faster than humans trying to decipher 2D drawings.

C.A. App. 842 (Colombo Decl., ¶13); 786-787 (Chipman Decl., ¶21).

Moreover, Ficep proved industry recognition (including an article specifically lauding the claimed invention), copying of Ficep by others in the industry including Peddinghaus, commercial success including demand for the patented feature, litigation success and licensing success. C.A. App. 787-792 (Chipman Decl., ¶¶24-30); 842 (Colombo Decl., ¶¶13-15); 819-822 (Faulkner Article); 179-180 (Consent Final Judgment in *Ficep Corp.*

*v. Voortman USA Corp.*, No. MJG-13-429 (D. Md. Apr. 24, 2018)). And Ficep proved that all are tied to the claimed invention, i.e., there is a “nexus” between the objective factors and the claims.

The Federal Circuit found all this “irrelevant” (App. 17a), representing yet another split within the Federal Circuit on Section 101. *Compare with Internet Pats. Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1347 (Fed. Cir. 2015) (“analysis of § 101 is facilitated by considerations analogous to those of §§ 102 and 103”); *Trading Techs. Int’l, Inc. v. CQG, Inc.*, 675 F. App’x 1001, 1005 (Fed. Cir. 2017).

The notion that this Court’s standards for inventiveness are not even relevant for assessing inventiveness under Section 101 should not stand. This Court should grant review.

### **B. Technological Advance Is a Fact Question for a Jury**

The Patent Act created a right to a jury trial on the facts that underlie a determination of inventiveness. *Markman*, 517 U.S. at 377 (“there is no dispute that infringement cases today must be tried to a jury”); *Graham*, 383 U.S. at 17-18 (finding that obviousness, while a question of law, is based on underlying factual findings); *Patlex Corp. v. Mossinghoff*, 758 F.2d 594, 603 (Fed. Cir. 1985) (“The right to a jury trial on issues of patent validity... is protected by the Seventh Amendment.”). If left to stand, the Federal Circuit’s decision in this case takes away that right in favor of an “inventiveness” test unmoored from the patent claim limitations, unmoored

from any articulated standards or tests for deciding inventiveness, deprived of the constitutional right to a jury trial, and left to judicial whim. That cannot be the law.

At a minimum, there is a fact question as to the inventiveness of Ficep's claims. Ficep is entitled to a determination by a jury of whether Peddinghaus carried its burden to prove the claims not-inventive by clear and convincing evidence. *See Patlex Corp.*, 758 F.2d at 603; *In re Tech. Licensing Corp.*, 423 F.3d 1286, 1290 (Fed. Cir. 2005).

#### CONCLUSION

For the foregoing reasons, Ficep respectfully requests that this Court issue a writ of certiorari to review the judgment of the Federal Circuit.

Respectfully submitted,

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