2018-1763

In the United States Court of Appeals for the Federal Circuit

AMERICAN AXLE & MANUFACTURING, INC.,
Plaintiff-Appellant

V.

NEAPCO HOLDINGS LLC AND NEAPCO DRIVELINES LLC,
Defendants-Appellees

Appeal from the United States District Court for the District of Delaware in No. 1:15-cv-01168, Judge Leonard P. Stark

BRIEF OF 12 LAW PROFESSORS AS *AMICI CURIAE* IN SUPPORT OF PETITIONER-APPELLANT

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INTEREST OF AMICI CURIAE[1]

Amici curiae are 12 law professors who teach and write on patent law and policy. They are concerned that the law properly promotes and protects inventions in all sectors of the innovation economy, including in manufacturing fields like the automotive industry. They have no stake in the parties or in the outcome of the case. The names and affiliations of the members of the *amici* are set forth in Appendix A below.

SUMMARY OF ARGUMENT

This Court should grant the petition for rehearing *en banc* and reverse the panel majority opinion, *see American Axle & Manufacturing Inc. v. Neapco Holdings, LLC*, 939 F.3d 1355 (Fed. Cir. 2019), because it misapplies the two-step "*Mayo-Alice* inquiry" under § 101. *See Alice Corp. Pty. v. CLS Bank Int'l*, 566 U.S. 66 (2014); *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (2012). The parties address the relevant details of the innovation covered by Petitioner-Appellant's patent, as well as the Supreme Court's and this

[1] No party's counsel authored this brief in whole or part; no party or party's counsel contributed money intended to fund preparing or submitting this brief; and no person other than *amici*, their members, or counsel contributed money intended to fund preparing or submitting this brief. Pursuant to Federal Circuit Rule 27(a)(5), counsel for the *amici curiae* contacted counsel for the parties to ascertain whether the parties would oppose filing of its brief. Counsel for Petitioner-Appellant consented. Counsel for Neapco Holdings LLC and Neapco Drivelines LLC expressly withheld its consent and articulated no substantive reason for its objection. A motion for leave is being filed with this brief.

Court's recent § 101 jurisprudence. *Amici* offer additional insights concerning the panel majority dissecting Petitioner-Appellant's claim into particular elements and how this led to a conclusion of ineligibility that conflicts with Supreme Court precedent.

The panel majority's decision reflects a five-year trend of courts severely narrowing the range of inventions and discoveries eligible for patent protection under the two-step *Mayo-Alice* inquiry, contrary to historical practice and precedent. Here, the panel majority affirmed the district court's ruling that a claim covering a method of manufacturing components in a combustion engine—a classic example of nineteenth-century technology long secured by the U.S. patent system—to be an ineligible application of a "law of nature." But *all inventions* are applications of abstract ideas, laws of nature, and physical phenomena. As Judge Kimberly Moore recognized in her dissenting opinion, the panel's reasoning is "goulash [that] is troubling and inconsistent with the patent statute and precedent." *American Axle*, 939 F.3d at 1375 (Moore, J., dissenting).

The panel majority reached its decision by dissecting the claim into particular elements and focusing only on these individualized elements as representing the claimed invention as a whole. As a result, the panel majority opinion, as the district court below, concluded that the patented invention is ineligible as an application of the laws of thermodynamics. As Judge Moore

incisively observed in her dissenting opinion: "The majority worries about result-oriented claiming; I am worried about *result-oriented judicial action*." *Id.* (emphasis added).

The panel majority's decision confirms that the invalidity contagion under the *Mayo-Alice* inquiry is spreading. *Amici* once proposed as a *reductio ad absurdum* that even an automobile engine can be framed as a mere application of the laws of thermodynamics and thus deemed unpatentable. *See* Adam Mossoff, *A Brief History of Software Patents (and Why They're Valid)*, 56 Ariz. L. Rev. Syllabus 65, 71 (2014). The panel majority decision has made this absurdity a legal reality. This Court should correct this legal error and reverse the panel majority opinion.

ARGUMENT

I. A court must analyze a claim as a whole in assessing its validity, but the panel majority did not do this.

The panel majority, as the district court below, ignored the mandate from the *Alice* Court that "we consider the elements of each claim both individually *and* 'as an ordered combination.'" *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 79, emphasis added). This proposition—that courts should assess claim elements individually *and* as a whole—has been improperly construed by lower courts in the disjunctive, *i.e.*, as equally acceptable alternative approaches in construing claims under § 101. Thus, they believe it sufficient as in this case to dissect claims into

their individualized elements that are easily characterized as ineligible laws of nature or abstract ideas.

In considering Petitioner-Appellant's claims as "an ordered combination," *id.*, the patent covers a process for manufacturing a driveshaft in an automobile engine. This is a "useful Art" that the patent system is designed to promote and secure to innovators. It is an application of a law of nature: a human-created innovation of a new manufacturing process of an article of commerce.

The claim places *specific physical requirements* on the method of manufacturing the driveshaft. The claim instructs a manufacturer to tune the mass and stiffness of a liner, insert the liner into a hollow driveshaft, and require that the liner absorb two modes of vibrations (shell and bending) via two mechanisms (resistive and reactive absorption). *American Axle & Mfg, Inc. v. Neapco Holdings, LLC*, 309 F. Supp. 3d 218, 221 (D. Del. 2018). This is a specific, practical application of the laws of thermodynamics in an industrial process—an innovative process deemed patentable by the courts since the nineteenth century.

The Supreme Court specifically warned courts against ignoring express claim elements in dissecting a claim down to a law of nature or abstract idea. *See Diamond v. Diehr*, 450 U.S. 175, 187 (1981) ("[A]n application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection."); *see also Alice*, 573 U.S. at 215-17 (stating that "an invention

is not rendered ineligible for patent simply because it involves an abstract concept" in some of its distinct claim elements); *Mayo*, 566 U.S. at 71-72 (recognizing same); *Funk Brothers Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 130 (1948) ("If there is to be [patentable] invention . . . it must come from the application of the law of nature to a new and useful end"). The panel majority ignored this fundamental rule of claim construction.

II. The panel majority's analysis and decision that an industrial manufacturing process is unpatentable subject matter conflicts with Supreme Court precedents reaching back to the nineteenth century.

In the nineteenth century, the Supreme Court held that both the telegraph and the telephone were eligible for patent protection as inventive, real-world *applications* of laws of nature and physical phenomena. *See Dolbear v. American Bell Telephone Company*, 126 U.S. 1 (1888) (telephone); *O'Reilly v. Morse*, 56 U.S. 62 (1853) (telegraph). These are significant precedents that the modern Supreme Court continues to rely on in its § 101 jurisprudence today. *See Bilski v. Kappos*, 561 U.S. 593, 620 n.2 (2010); *Gottschalk v. Benson*, 409 U.S. 63, 68-69 (1972). The problem with the panel majority's eligibility analysis is that, if it were applied to these classic patented innovations, it inexorably produces the same result reached here: the telegraph and telephone inventions are unpatentable subject matter. Although we describe only these two cases to make clear the legal conflicts that now exist in patent law involving the district court's misapplication

of the *Mayo-Alice* inquiry, many others have been identified. *See* Michael Risch, *Nothing is Patentable*, 67 FLORIDA L. REV. F. 45 (2015) (identifying classic patents now called into doubt).

First, the panel majority's misunderstanding of the *Mayo-Alice* inquiry conflicts with the Supreme Court's decision affirming the validity of Samuel F.B. Morse's patent on the electro-magnetic telegraph. Many cite to *Morse* today because the Supreme Court invalidated Claim 8 of Morse's patent as an unpatentable abstract idea, *see, e.g.*, *Alice*, 573 U.S. at 216. More important, though, the Supreme Court affirmed the validity of the first seven claims in Morse's patent. *See Morse*, 56 U.S. at 112 ("We perceive no well-founded objection . . . to his right to a patent for the first seven inventions set forth in the specification of his claims."). Morse's Claim 1 recites a method of operating an electro-magnetic telegraph that would be invalid under the panel majority's application of the *Mayo-Alice* inquiry.

Claim 1 is not quoted in *Morse*, and so to understand this point, it is necessary to quote the relevant language:

> First. . . . what I specially claim as my invention and improvement, is making use of the motive power of magnetism, when developed by the action of such current or currents substantially as set forth in the foregoing description of the first principal part of my invention, as means of operating or giving motion to machinery which may be used to imprint signals upon paper or other suitable material, or to produce sounds in any desired manner, for the purpose of telegraphic communication at any distances.

U.S. Reissue Patent No. 117 (issued June 13, 1848).

According to the panel majority, this claim covers an unpatentable law of nature or at least merely a conventional application of a law of nature. Under step one of the *Mayo-Alice* inquiry, according to the panel majority, Morse's Claim 1 begins with a patent ineligible natural law ("the motive power of magnetism") and ends with the result that merely applies the natural law ("communication at any distances"). Under step two, according to the panel majority, each remaining element in Morse's Claim 1 recites merely conventional activity for the art in Morse's time. First, Morse explicitly acknowledges in his specification that, prior to his invention, "it had been essayed [sic] to use the currents of electricity or galvanism for telegraphic purposes," and he even acknowledges later in Claim 1 that "[t]here are various known methods of producing motion by electro-magnetism." U.S. Reissue Patent No. 117. Second, the elements in Claim 1 of "operating or giving motion to machinery," "imprinting signals upon paper or other suitable material," and "produc[ing] sounds," when *assessed individually* like the panel majority did to Petitioner-Appellant's claim in this case were undeniably routine and conventional in the 1830s when Morse invented his electro-magnetic telegraph

This is no different than the panel majority's conclusion in this case that Petitioner-Appellant's claim covered merely an application of laws of

thermodynamics and that the single claim limitation of inserting liners was routine and conventional. If this approach of disintegrating claims into individualized elements as reflecting the gist of the claimed invention as a whole were applied to Morse's Claim 1, it leads to the conclusion that Morse's Claim 1 is unpatentable subject matter, contrary to the Supreme Court's decision.

Another example of the panel majority's misunderstanding of the *Mayo-Alice* inquiry under § 101 is that its approach in this case would invalidate Claim 5 of Alexander Graham Bell's patent on the telephone. *See* U.S. Patent No. 174,465 (issued Mar. 7, 1876). The Supreme Court affirmed Bell's Claim 5 as patentable subject matter in *Dolbear v. American Bell Telephone Company*, 126 U.S. 1, 531-35 (1888). Bell's Claim 5 reads as follows:

> The method of and apparatus for transmitting vocal or other sounds telegraphically . . . by causing electrical undulations, similar in form to the vibrations of the air accompanying the said vocal or other sounds.

U.S. Patent No. 174,465 at 5.

In following the analysis of the panel majority, a court should break up Bell's claim into its separate elements, ignore some elements, and conclude that the remaining elements are merely an unpatentable application of a law of nature or are conventional activities. Under step one, Claim 5 begins and ends with "vocal and or other sounds," and concerns generally the mere transmission of those sounds by "electrical undulations." Vocal sounds and electrical undulations are

natural phenomena, and are thus patent ineligible on their own. Under step two, Claim 5 does not recite anything significantly more that was not routine, well-understood and conventional: telegraphic transmission of sounds and electrical undulation had been long known in the art by the time of Bell's invention. *See* CHRISTOPHER BEAUCHAMP, INVENTED BY LAW: ALEXANDER GRAHAM BELL AND THE PATENT THAT CHANGED AMERICA 58-85 (2014) (describing the many prior and existing uses of electrical currents in telegraphic communication).

The panel majority's conclusion was predicted by some of the *amici* here. *See* Risch, *Nothing is Patentable*, *supra*. Several years ago, one of the *amici* specifically responded to the argument that computer software programs are "just math" and thus are unpatentable abstract ideas "would invalidate all patents if applied equally to other inventions, especially processes and methods." Adam Mossoff, *A Brief History of Software Patents (and Why They're Valid)*, 56 Ariz. L. Rev. Syllabus 65, 71 (2014). Directly relevant to this case, *amici* explained: "All inventions of practically applied processes and machines are reducible to mathematical abstractions and algorithms; for example, a patentable method for operating a combustion engine is really just an application of the law of PV=nRT, the principles of thermodynamics, and other laws of nature comprising the principles of engineering." *Id.* In this case, the panel majority converted an academic's *reductio ad absurdum* argument into legal reality.

CONCLUSION

Amici urge this Court to grant the petition for rehearing *en banc* and reverse the panel majority's decision that Petitioner-Appellant's patent is ineligible under § 101.

Dated: December 12, 2019

Respectfully submitted,

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APPENDIX A

Appendix A — FULL LIST OF AMICI CURIAE*

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CERTIFICATE OF COMPLIANCE

I hereby certify that the above Motion contains 2,308 words, in compliance with Federal Rule of Appellate Procedure 29(a)(5). This brief also complies with the requirements of Federal Rule of Appellate Procedure 32(a)(5) as it has been prepared in a proportionally spaced typeface using Microsoft Word in a 14 point Times New Roman font.

/s/ Matthew D. Zapadka

CERTIFICATE OF SERVICE

I hereby certify that on December 12, 2019, an electronic copy of the foregoing was filed with the Clerk of Court for the U.S. Court of Appeals for the Federal Circuit, using the appellate CM/ECF system. I further certify that all parties in the case are represented by counsel who are registered CM/ECF users and that service will be accomplished by the appellate CM/ECF system.

/s/ Matthew D. Zapadka
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FORM 9. Certificate of Interest **Form 9**
Rev. 10/17

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

American Axle & Manufacturing, Inc. **v.** Neapco Holdings LLC and Neapco Drivelines LLC

Case No. 2018-1763

CERTIFICATE OF INTEREST

Counsel for the:
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certifies the following (use "None" if applicable; use extra sheets if necessary):

1. Full Name of Party Represented by me	2. Name of Real Party in interest (Please only include any real party in interest NOT identified in Question 3) represented by me is:	3. Parent corporations and publicly held companies that own 10% or more of stock in the party
See Appendix A	N/A	None

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court **(and who have not or will not enter an appearance in this case)** are:

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*Both counsel were previously with Porzio, Bromberg & Newman P.C. in this matter.

FORM 9. Certificate of Interest **Form 9**
Rev. 10/17

5. The title and number of any case known to counsel to be pending in this or any other court or agency that will directly affect or be directly affected by this court's decision in the pending appeal. *See* Fed. Cir. R. 47. 4(a)(5) and 47.5(b). (The parties should attach continuation pages as necessary).

None

12/12/2019
Date

/s/ Matthew D. Zapadka
Signature of counsel

Please Note: All questions must be answered

Matthew D. Zapadka
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