

No. 20-891

In the Supreme Court of the United States

AMERICAN AXLE & MANUFACTURING, INC.,
Petitioner,

v.

NEAPCO HOLDINGS LLC AND
NEAPCO DRIVELINES LLC.,
Respondents.

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

**BRIEF OF JEREMY C. DOERRE AS *AMICUS*
CURIAE IN SUPPORT OF PETITIONER**

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TABLE OF CONTENTS

TABLE OF CONTENTS.....	i
TABLE OF AUTHORITIES	ii
INTEREST OF AMICUS CURIAE	1
SUMMARY OF THE ARGUMENT	2
ARGUMENT	4
I. The majority’s broad approach to step one of the <i>Mayo/Alice</i> framework would, if universally applied, call into question the patent eligibility of method-of-treatment claims.	4
II. There is no need to resort to a broad construction of an atextual statutory exception to address the majority’s concern that the claimed method “merely claims the achievement of results.”	12
CONCLUSION.....	27

TABLE OF AUTHORITIES

Cases

<i>Alice Corp. Pty. Ltd. v. CLS Bank Int’l</i> , 573 U.S. 208 (2014)	<i>passim</i>
<i>Ariad Pharmaceuticals, Inc. v. Eli Lilly & Co.</i> , 598 F.3d 1336 (Fed. Cir. 2010).....	16
<i>Bostock v. Clayton County</i> , 140 S. Ct. 1731 (2020)	13-14
<i>Commissioner v. Clark</i> , 489 U.S. 726 (1989).	3, 12
<i>Diamond v. Diehr</i> , 450 U.S. 175 (1981)	9
<i>Endo Pharm. Inc. v. Teva Pharm. USA, Inc.</i> , 919 F.3d 1347 (Fed. Cir. 2019).....	7-8
<i>Enfish, LLC v. Microsoft Corp.</i> , 822 F.3d 1327 (Fed. Cir. 2016).....	5
<i>General Elec. Co. v. Wabash Appliance Corp.</i> , 304 U.S. 364 (1938)	17

<i>Halliburton Oil Well Cementing Co. v. Walker</i> , 329 U.S. 1 (1946)	17
<i>Henry Schein, Inc. v. Archer and White Sales, Inc.</i> , 139 S. Ct. 524 (2019)	13
<i>Holland Furniture Co. v. Perkins Glue Co.</i> , 277 U.S. 245 (1928)	16, 18
<i>Illumina, Inc. v. Ariosa Diagnostics, Inc.</i> , 952 F.3d 1367 (Fed. Cir. 2020)	11
<i>In re Donaldson Co., Inc.</i> , 16 F.3d 1189 (Fed. Cir. 1994).....	17
<i>Interval Licensing LLC v. AOL, Inc.</i> , 896 F.3d 1335 (Fed. Cir. 2018).....	22
<i>Le Roy v. Tatham</i> , 55 U.S. 156 (1852)	14
<i>Lizardtech, Inc. v. Earth Resource Mapping</i> , 424 F.3d 1336 (Fed. Cir. 2005).....	19
<i>Lorillard v. Pons</i> , 434 U.S. 575 (1978)	13
<i>Mayo Collaborative Servs. v. Prometheus Labs., Inc.</i> , 566 U.S. 66 (2012)	<i>passim</i>

Natural Alternatives Int'l, Inc. v. Creative Compounds, LLC,
918 F.3d 1338 (Fed. Cir. 2019)..... 8

O'Reilly v. Morse,
56 U.S. 62 (1853) 3, 8, 14-16, 18-21, *passim*

Parker v. Flook,
437 U.S. 584 (1978)2, 6-7, 10, *passim*

Phillips, Inc. v. Walling,
324 U.S. 490 (1945) 12

Vanda Pharm. Inc. v. West-Ward Pharm. Int'l Ltd.,
887 F.3d. 1117 (Fed. Cir. 2018)..... 7

Statutes

35 U.S.C. § 101.....*passim*

35 U.S.C. § 112.....17-20, 26, *passim*

Other Authorities

Brief for the United States as Amicus Curiae, <i>Hikma Pharmaceuticals USA Inc. v. Vanda Pharmaceuticals Inc.</i> , No. 18-817 (Filed Dec. 6, 2019)	2, 5-6, 10
Jean Demaison & Natalja Vogt, <i>Accurate Structure Determination of Free Molecules</i> (2020)	24
Jerry B. Marion & Stephen T. Thornton, <i>Classical Dynamics of Particles & Systems</i> (1988)	24
Peter J. Rousseeuw & Annick M. Leroy, <i>Robust Regression and Outlier Detection</i> (2005)	23-24

INTEREST OF AMICUS CURIAE¹

Amicus Curiae Jeremy C. Doerre is a registered patent attorney who practices before the United States Patent and Trademark Office, the Office's Patent Trial and Appeal Board, and the United States Court of Appeals for the Federal Circuit. Amicus has no stake in any party or in the outcome of this case. Amicus believes that this Court's guidance is needed regarding the implicit judicial exception to 35 U.S.C. § 101.

¹ No counsel for a party authored this brief in whole or in part, and no party or counsel for a party made a monetary contribution intended to fund the preparation or submission of this brief. No person or entity other than amicus curiae or amicus curiae's counsel made such a monetary contribution to the preparation or submission of this brief. Counsel for the Petitioner filed a statement of blanket consent. Counsel for the Respondents provided written consent to the filing of this brief. A copy of this written consent was provided to the Clerk upon filing. Counsel of record for each of the parties received timely notice of intent to file this brief.

SUMMARY OF THE ARGUMENT

The United States filing as Amicus Curiae has indicated that “the confusion created by this Court’s recent Section 101 precedents warrants review.” Brief for the United States as Amicus Curiae, *Hikma Pharmaceuticals USA Inc. v. Vanda Pharmaceuticals Inc.*, No. 18-817 at 8 (Filed Dec. 6, 2019) (U.S. *Hikma* Brief). In particular, the government has expressed concern, with respect to “method[s] of using a drug to treat a medical condition,” that “it is arguably unclear how the longstanding and entirely correct rule that method-of-treatment claims are patent-eligible can be reconciled with mechanical application of *Mayo*’s two-step framework.” U.S. *Hikma* Brief at 9, 10.

The majority’s broad approach to step one of the *Mayo/Alice* two-step framework directly implicates this concern, as its holding that a claim “is directed to a natural law [if] it clearly invokes a natural law, and nothing more, to accomplish a desired result” would seemingly encompass many method-of-treatment claims if universally applied. Pet. App. 21a. Such method-of-treatment claims would then be likely to fail to establish an “inventive concept” at step two under the rationale laid out in *Parker v. Flook*, 437 U.S. 584 (1978) that “once th[e] [underlying law of nature] is assumed to be within the prior art, the [claim], considered as a whole, contains no patentable invention.” *Flook*, 437 U.S. at 594.

Amicus raises this issue not to suggest that the Federal Circuit is likely to begin invalidating method-of-treatment claims, but rather to suggest that the majority's broad approach is inherently problematic if its application would result in a conclusion of ineligibility for method-of-treatment claims that are universally agreed to be eligible.

Amicus additionally suggests that the majority's broad approach to the implicit statutory exception to 35 U.S.C. § 101 also departs from this Court's "standard approach of construing a statutory exception narrowly to preserve the primary operation of the general rule." *Commissioner v. Clark*, 489 U.S. 726, 727 (1989).

Amicus urges that there is no need to resort to a broad construction of the implicit exception in order to address the majority's concern regarding claims that "merely claim[] the achievement of results." Pet. App. 24a. In this regard, such a claim can be invalidated under 35 U.S.C. § 112 as "too broad, and not warranted by law" because it "claims an exclusive right to use a manner and process which [the inventor] has not described and indeed had not invented, and therefore could not describe when he obtained his patent." *O'Reilly v. Morse*, 56 U.S. 62, 113 (1853).

ARGUMENT

This Court has “long held that th[e] provision of [35 U.S.C. § 101] contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable,” and recently “set forth a [two-step] framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 304, 305 (2014).

This framework involves first “determin[ing] whether the claims at issue are directed to one of those patent-ineligible concepts.” *Alice*, 573 U.S. at 305 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72-73 (2012)). If so, “[a]t [] step two, we must examine the elements of the claim to determine whether it contains an ‘inventive concept’ ‘sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 573 U.S. at 307.

- I. **The majority’s broad approach to step one of the *Mayo/Alice* framework would, if universally applied, call into question the patent eligibility of method-of-treatment claims.**

A. Recently, the United States filing as Amicus Curiae indicated that “the confusion created by this Court’s recent Section 101 precedents warrants review.” Brief for the United States as Amicus Curiae, *Hikma Pharmaceuticals USA Inc. v. Vanda Pharmaceuticals Inc.*, No. 18-817 at 8 (Filed Dec. 6, 2019) (U.S. *Hikma* Brief).

The government observed that “[t]he instruction that courts inquire at the first step whether a patent is ‘directed at’ a law of nature, natural phenomenon, or abstract idea provides little guidance.” *Id.* at 17-18. The government noted that “[a]ll inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas’,” and that “[i]f an invention’s dependence on one of those concepts were fatal, untold numbers of innovations would be patent-ineligible.” *Id.* at 18 (quoting *Mayo*, 566 U.S. at 71).

The Federal Circuit has expressed a similar concern, noting that “[t]he ‘directed to’ inquiry... cannot simply ask whether the claims involve a patent-ineligible concept, because essentially every routinely patent-eligible claim involving physical products and actions involves a law of nature and/or natural phenomenon—after all, they take place in the physical world.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016).

The government has highlighted “[t]he potential for rote application of the *Mayo* two-step framework to call into question [] bedrock understandings of the

patent system, in a way that the *Mayo* Court clearly did not envision.” U.S. *Hikma* Brief at 8.

In expressing this concern, the government has raised the specific example of “method[s] of using a drug to treat a medical condition,” observing that “it is arguably unclear how the longstanding and entirely correct rule that method-of-treatment claims are patent-eligible can be reconciled with mechanical application of *Mayo*’s two-step framework.” U.S. *Hikma* Brief at 9, 10.

The government has indicated that “it is arguably unclear whether even a method of treating disease with a *newly created* drug would be deemed patent-eligible under a mechanical application of *Mayo*’s two-part test.” *Id.* at 10. In particular, “[t]he proposition that a specified dosage of a new drug has therapeutic benefits for a particular class of patients would seem to constitute a ‘law of nature’ under *Mayo*’s expansive conception of that term, [a]nd once that therapeutic benefit has been identified, an instruction to administer the drug in the specified dosage to the relevant patients might be viewed as nothing more than routine and conventional activity.” *Id.*

Indeed, if a method-of-treatment claim is deemed to be directed to such a law of nature at step one, it is likely to fail to establish an “inventive concept in its application” at step two under the rationale laid out in *Parker v. Flook*, 437 U.S. 584 (1978) that “once that [law of nature] is assumed to be within the prior art,

the [claim], considered as a whole, contains no patentable invention.” *Flook*, 437 U.S. at 594.²

B. To circumvent this inability of many method-of-treatment claims to satisfy an inventive concept inquiry at step two of the *Mayo/Alice* framework, the Federal Circuit has repeatedly held such method-of-treatment claims to not be directed to a law of nature at step one. See, e.g., *Vanda Pharm. Inc. v. West-Ward Pharm. Int’l Ltd.*, 887 F.3d. 1117, 1134 (Fed. Cir. 2018) (“If the claims are not directed to a patent ineligible concept at step one, we need not address step two of the inquiry. ... That is the case here.”); *Endo Pharm. Inc. v. Teva Pharm. USA, Inc.*, 919 F.3d

² In *Flook*, this Court indicated that “the discovery of [] a phenomenon cannot support a patent unless there is some other inventive concept in its application,” *Flook*, 437 U.S. at 594, which is directly in line with this Court’s more recent indication that “[a]t *Mayo* step two, we must examine the elements of the claim to determine whether it contains an ‘inventive concept’ ‘sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 573 U.S. at 307. This Court in *Flook* explicitly outlined its reasoning for finding that there was no inventive concept sufficient to confer eligibility, making clear that the claimed “process [wa]s unpatentable under § 101, not because it contains a mathematical algorithm as one component, but because once that algorithm is assumed to be within the prior art, the application, considered as a whole, contains no patentable invention.” *Flook*, 437 U.S. at 594.

1347 (Fed. Cir. 2019); *Natural Alternatives Int'l, Inc. v. Creative Compounds, LLC*, 918 F.3d 1338 (Fed. Cir. 2019).

However, if the majority's broad approach in the present case to step one of the *Mayo/Alice* framework was applied universally, many method-of-treatment claims would likely be held to be directed to an underlying natural law.

Here, the majority has "conclude[d] that independent claim 22 of the '911 patent is patent ineligible under section 101 because it simply requires the application of Hooke's law to tune a propshaft liner to dampen certain vibrations." Pet. App. 10a.

At step one of the *Mayo/Alice* framework, the majority asserts that "claim 22 of the '911 patent is directed to the use of a natural law: Hooke's law." Pet. App. 23a.

The majority suggests that "claim 22, like claim 8 in *O'Reilly*, is directed to a natural law because it clearly invokes a natural law, and nothing more, to accomplish a desired result." Pet. App. 21a (referencing *O'Reilly v. Morse*, 56 U.S. 62 (1853)).

Notably, claim 8 in *Morse* explicitly recited "the use of the motive power of the electric or galvanic current, which I call electro-magnetism," *Morse*, 56 U.S. at 112, and came close to resembling this Court's paradigmatic example of "simply stat[ing] the law of nature while adding the words 'apply it.'" *Mayo*, 566 U.S. at 72. The majority lumps this claim together with claim 22 in the present case under the rationale

that both claims “invoke[] a natural law, and nothing more, to accomplish a desired result.” Pet. App. 21a.

Indeed, the majority blesses an even broader approach to the step one inquiry, indicating that “[i]f claim 22’s language could be properly interpreted in a way such that it invokes friction damping as it does with Hooke’s law, the claim would still on its face clearly invoke natural laws, and nothing more, to achieve a claimed result.” Pet. App. 35a. The majority at one point even appears to simply suggest that “claim 22 ... is [] directed to whatever natural laws make the result possible.” Pet. App. 13a.³

It is unsurprising that the claimed method can be characterized as “invok[ing] natural laws, and nothing more, to achieve a claimed result,” Pet. App. 35a, given that, as this Court has noted, “all inventions can be reduced to underlying principles of nature’.” *Mayo*, 566 U.S. at 90 (quoting *Diamond v. Diehr*, 450 U.S. 175, 189 n.12 (1981)).

The majority protests that “our holding should not be read as an invitation to raise a validity challenge against any patent claim that requires the

³ As the dissent notes, “[t]he prior majority opinion in this case explained that the claimed invention is ‘more complex than just a bare application of Hooke’s Law, and that other natural laws may be relevant.’” Pet. App. 41a-42a. In accord with this, the prior majority opinion asserted that “the claims are directed to ‘Hooke’s law and possibly other natural laws.’” Pet. App. 42a.

application of an unstated natural law.” Pet. App. 29a. However, its holding that a claim “is directed to a natural law [if] it clearly invokes a natural law, and nothing more, to accomplish a desired result” would seemingly encompass many method-of-treatment claims if universally applied. Pet. App. 21a; see also Pet. App. 29a (“[O]ur holding is limited to the situation where a patent claim on its face and as construed clearly invokes a natural law, and nothing else, to accomplish a desired result.”)

As noted above, such method-of-treatment claims would then be likely to fail to establish an “inventive concept” at step two under the rationale laid out in *Flook* that “once that [law of nature] is assumed to be within the prior art, the [claim], considered as a whole, contains no patentable invention.” *Flook*, 437 U.S. at 594.

Thus, the majority’s broad approach to step one of the *Mayo/Alice* framework triggers the exact concern that the government has cautioned against. Namely, under the majority’s approach, “it is arguably unclear whether even a method of treating disease with a *newly created* drug would be deemed patent-eligible.” U.S. *Hikma* Brief at 10.

Indeed, it is “unclear how the longstanding and entirely correct rule that method-of-treatment claims are patent-eligible can be reconciled with” the majority’s broad approach to step one of the *Mayo/Alice* framework. U.S. *Hikma* Brief at 10.

C. Amicus raises this issue not to suggest that the Federal Circuit is likely to apply the majority's broad approach to step one of the *Mayo/Alice* framework to a method-of-treatment claim to find it ineligible,⁴ but rather to suggest that the majority's broad approach is inherently problematic if its application would result in a conclusion of ineligibility for method-of-treatment claims that are universally agreed to be eligible. In this regard, "patent law's general rules must govern inventive activity in many different fields of human endeavor," *Mayo*, 566 U.S. at 92, and neither Congress nor this Court has given license to apply one eligibility standard to claims in one field of endeavor and another eligibility standard to claims in a different field of endeavor.

In essence, the holding below would allow a decision maker to selectively apply the majority's broad approach to invalidate patent claims which the decision maker subjectively feels are not worthy of patenting, and decline to apply this broad approach to other claims which are subjectively believed to be worthy of patenting. Amicus urges that this Court's

⁴ In accord with this Court's indication that "a typical patent on a new drug or a new way of using an existing drug... confine their reach to particular applications of [natural] laws," *Mayo*, 566 U.S. at 87, the Federal Circuit has consistently "held that method of treatment claims are patent-eligible." *Illumina, Inc. v. Ariosa Diagnostics, Inc.*, 952 F.3d 1367, 1371 (Fed. Cir. 2020).

guidance is needed to clarify the appropriate standard to be applied for all patent claims.

II. There is no need to resort to a broad construction of an atextual statutory exception to address the majority’s concern that the claimed method “merely claims the achievement of results.” Pet. App. 24a.

A. As noted above, this Court has “long held that th[e] provision of [35 U.S.C. § 101] contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice*, 573 U.S. at 304. Amicus urges that the majority’s broad approach to this implicit exception departs from this Court’s “standard approach of construing a statutory exception narrowly to preserve the primary operation of the general rule.” *Commissioner v. Clark*, 489 U.S. 726, 727 (1989).

In this regard, this Court has made clear that “[i]n construing provisions ... in which a general statement of policy is qualified by an exception, we usually read the exception narrowly in order to preserve the primary operation of the provision.” *Clark*, 489 U.S. at 739 (citing *Phillips, Inc. v. Walling*, 324 U.S. 490, 493 (1945)). This Court has proffered at least one rationale for why statutory exceptions should be narrowly construed, articulating in *Phillips* that: “[t]o extend an exemption to other than those plainly and unmistakably within its terms and spirit is to abuse

the interpretative process and to frustrate the announced will of the people.” *Phillips*, 324 U.S. at 493.

Amicus urges that, if this is true for explicit statutory exceptions enacted as part of a statute by legislative representatives of the people, it is even more true for atextual, implicit statutory exceptions inferred by the judicial branch.⁵ Indeed, this Court just recently confirmed that “[w]hen the express terms of a statute give us one answer and extratextual considerations suggest another, it’s no contest[, as] [o]nly the written word is the law, and all persons are

⁵ This Court has recently suggested that in at least some contexts, courts may not “may not engraft ... exceptions onto the statutory text,” and “may not rewrite [a] statute simply to accommodate [a] policy concern.” *Henry Schein, Inc. v. Archer and White Sales, Inc.*, 139 S. Ct. 524, 530, 531 (2019). To the extent that the longstanding implicit judicial exception to 35 U.S.C. § 101 can be implied to be accepted or adopted by Congress, e.g. because “Congress is presumed to be aware of a[] ... judicial interpretation of a statute and to adopt that interpretation when it reenacts a statute without change,” *Lorillard v. Pons*, 434 U.S. 575, 580 (1978), Amicus suggests that this only reinforces that the implicit statutory exception, like other statutory exceptions, should be narrowly construed. In this regard, the America Invents Act was signed into law on September 16, 2011, while this Court’s formulation of the current two-step eligibility framework occurred a year later.

entitled to its benefit.” *Bostock v. Clayton County*, 140 S. Ct. 1731, 1737 (2020).

B. Ultimately, the majority’s concern with the claims is that “insofar as claim 22 here merely claims the achievement of results, [it is] directed to ineligible matter.” Pet. App. 24a.

Amicus would urge, however, that there is no need to resort to an atextual exception to 35 U.S.C. § 101, much less a broad construction of that atextual exception, in order to address this concern.

This can be clearly seen in the very decision that the majority relies upon to support its holding: *O’Reilly v. Morse*, 56 U.S. 62 (1853).

As noted above, in *Morse*, this Court confronted a claim reciting “the use of the motive power of the electric or galvanic current, which I call electromagnetism, however developed for marking or printing intelligible characters, signs, or letters, at any distances, being a new application of that power.” *Morse*, 56 U.S. at 112.

In considering the relevant case law, this Court observed that “the discovery of a principle in natural philosophy or physical science is not patentable,” and similarly remarked upon the earlier case of *Le Roy v. Tatham*, 55 U.S. 156 (1852) where “the court held that [the inventor] was not entitled to a patent for th[e] newly discovered principle or quality in lead, and that such a discovery was not patentable.” *Morse*, 56 U.S. at 116, 117. These observations have quite naturally

and fittingly come to be viewed as foundational authority for subsequent eligibility law.

Notably, however, this Court did not conclude that claim 8 in *Morse* was invalid as claiming the principle of electromagnetism. Indeed, this Court actually noted that electromagnetism was only one of multiple known powers involved in Morse's invention: "it is the high praise of Professor Morse that he has been able, *by a new combination of known powers, of which electro-magnetism is one*, to discover a method by which intelligible marks or signs may be printed at a distance." *Morse*, 56 U.S. at 117 (emphasis added).

Instead, ultimately, this Court concluded that "the claim is too broad, and not warranted by law" because, "[i]n fine, [Morse] claims an exclusive right to use a manner and process which he has not described and indeed had not invented, and therefore could not describe when he obtained his patent." *Morse*, 56 U.S. at 113.

This Court noted that "Professor Morse ... has been able... to discover a method by which intelligible marks or signs may be printed at a distance[,] [a]nd for the method or process thus discovered he is entitled to a patent." *Morse*, 56 U.S. at 117. This Court observed, however, that "he has not discovered that the electro-magnetic current, used as motive power in any other method, and with any other combination, will do as well." *Id.* Accordingly, his claim encompassing methods and combinations other than the one he discovered was "too broad, and not

warranted by law” because it “claim[ed] an exclusive right to use a manner and process which he ha[d] not described and indeed had not invented, and therefore could not describe when he obtained his patent.” *Morse*, 56 U.S. at 113.

This Court even highlighted that “independently of judicial authority, we do not think that the language used in the act of Congress... can justly be expounded otherwise,” as “[t]he words of the acts of Congress ... show that no patent can lawfully issue upon such a claim ... [f]or he claims what he has not described in the manner required by law.” *Morse*, 56 U.S. at 118, 120.

Indeed, this Court has recognized this holding of *Morse* and cited to *Morse* for the “well understood” maxim that “the patentee may not, by claiming a patent on the result or function of a machine, extend his patent to devices or mechanisms not described in the patent.” *Holland Furniture Co. v. Perkins Glue Co.*, 277 U.S. 245, 257 (1928) (citing *Morse*, 56 U.S. at 112-113); see also *Ariad Pharmaceuticals, Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1346 n.4 (Fed. Cir. 2010) (en banc) (“*Morse*, decided under the 1836 Act, can also be interpreted as involving a separate written description inquiry.”)

This Court in fact developed an entire line of cases addressing the “vice” of functional claiming that operates to “extend the monopoly beyond the invention.” *Holland Furniture*, 277 U.S. at 258.

In *General Elec. Co. v. Wabash Appliance Corp.*, 304 U.S. 364 (1938), this Court noted that “Congress requires, for the protection of the public, that [an] inventor set out a definite limitation of his patent,” and that “[t]he difficulty of making adequate description ... cannot justify a claim describing nothing new except perhaps in functional terms.” *General Elec.*, 304 U.S. at 372-373.

This Court observed that “the vice of a functional claim exists ... when the inventor ... uses conveniently functional language at the exact point of novelty.” *General Elec.*, 304 U.S. at 371.

In *Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1 (1946), this Court famously confirmed that where “[t]he language of the claim [] describes th[e] most crucial element in the ‘new’ combination in terms of what it will do, rather than in terms of its own physical characteristics or its arrangement in the new combination apparatus ... a claim with such a description of a product is invalid.” *Halliburton*, 329 U.S. at 9.

In response, Congress provided language in 35 U.S.C. § 112 to create a safe harbor exception to *Halliburton*. See, e.g., *In re Donaldson Co., Inc.*, 16 F.3d 1189, 1194 (Fed. Cir. 1994) (en banc) (“In *Halliburton* ... the Supreme Court held that means-plus-function language could not be employed at the exact point of novelty in a combination claim. Congress enacted paragraph six, originally paragraph three, to statutorily overrule that holding.”)

Specifically, Congress has mandated that “[a]n element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” 35 U.S.C. § 112, paragraph 6 (pre-AIA); 35 U.S.C. § 112(f) (post-AIA).

Notably, however, this safe harbor exception to *Halliburton* which allows “[a]n element in a claim for a combination [to] be expressed as a means or step for performing a specified function” does not abrogate the written description requirement of 35 U.S.C. § 112, and an inventor still may not “claim[] an exclusive right to use a manner and process which he has not described and indeed had not invented, and therefore could not describe when he obtained his patent.” *Morse*, 56 U.S. at 113.

Thus, it is still true that “the patentee may not, by claiming a patent on the result or function of a machine, extend his patent to devices or mechanisms not described in the patent.” *Holland Furniture*, 277 U.S. at 257 (citing *Morse*, 56 U.S. at 112-113).

The safe harbor exception merely provides a saving construction where a claim for a combination that expresses “[a]n element ... as a means or step for performing a specified function” (35 U.S.C. § 112) will not simply be invalidated for “claim[ing] an exclusive right to use a manner and process which he has not

described,” *Morse*, 56 U.S. at 113, and will instead be “construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” 35 U.S.C. § 112, paragraph 6 (pre-AIA); 35 U.S.C. § 112(f) (post-AIA).

Indeed, well after enactment of the safe harbor exception, the Federal Circuit has cited to *Morse* and applied 35 U.S.C. § 112 to invalidate a claim where it concluded that “there is no support for such a broad claim in the specification.” *Lizardtech, Inc. v. Earth Resource Mapping*, 424 F.3d 1336, 1344 (Fed. Cir. 2005).

In particular, in *Lizardtech*, the Federal Circuit confronted a patent related to digital image compression which involved a methodology known as discrete wavelet transform (DWT). The court observed that “the specification provides only one method for creating a seamless DWT, which is to ‘maintain updated sums’ of DWT coefficients.” *Id.* The court noted that “because there are no limitations in claim 21 as to how the seamless DWT is accomplished, claim 21 refers to taking a seamless DWT generically,” and that “[t]he trouble with allowing claim 21 to cover all ways of performing DWT-based compression processes that lead to a seamless DWT is that there is no support for such a broad claim in the specification.” *Id.*

After citing to *Morse* for the maxim that the specification “must describe the invention sufficiently to convey to a person of skill in the art that the

patentee had possession of the claimed invention at the time of the application, i.e., that the patentee invented what is claimed,” *Lizardtech*, 424 F.3d at 1345 (citing *Morse*, 56 U.S. at 112-113), the Federal Circuit concluded that “[a]fter reading the patent, a person of skill in the art would not understand how to make a seamless DWT generically and would not understand LizardTech to have invented a method for making a seamless DWT, except by ‘maintaining updating sums of DWT coefficients.’” *Id.* at 1345; see also *Id.* at 1346 (“nothing in claim 21 or the specification constitutes an adequate and enabling description of all seamless DWTs.”)

Accordingly, the court held “that the description of one method for creating a seamless DWT [did] not entitle the inventor of the [subject] patent to claim any and all means for achieving that objective,” and affirmed invalidation of the claims under 35 U.S.C. § 112. *Id.* at 1346.

Thus, it is clear that 35 U.S.C. § 112 is available to invalidate a claim that “merely claims the achievement of results.” Pet. App. 24a. In particular, such a claim can be invalidated under 35 U.S.C. § 112 as “too broad, and not warranted by law” because it “claims an exclusive right to use a manner and process which [the inventor] has not described and indeed had not invented, and therefore could not describe when he obtained his patent.” *Morse*, 56 U.S. at 113.

C. Importantly, Amicus is not suggesting that the written description requirement of 35 U.S.C. § 112

can entirely replace the screening function of the implicit exception to 35 U.S.C. § 101, or that it obviates the need for an implicit judicial exception to guard against undue preemption of laws of nature.

In this regard, in *Mayo*, this Court noted that while “[s]ection 112 requires [] a ‘written description of the invention ... in such full, clear, concise, and exact terms as to enable any person skilled in the art ... to make and use the same[.]’ [i]t does not focus on the possibility that a law of nature (or its equivalent) that meets these conditions will nonetheless create the kind of risk that underlies the law of nature exception, namely the risk that a patent on the law would significantly impede future innovation.” *Mayo*, 566 U.S. at 90-91.

Amicus is merely urging that there is no need to resort to a broad construction of the implicit exception in order to address the majority’s concern regarding claims that “merely claim[] the achievement of results.” Pet. App. 24a. As outlined above, such a claim can be invalidated under 35 U.S.C. § 112 as “too broad, and not warranted by law” because it “claims an exclusive right to use a manner and process which [the inventor] has not described and indeed had not invented, and therefore could not describe when he obtained his patent.” *Morse*, 56 U.S. at 113.

D. Incidentally, Amicus would suggest that the present case exemplifies why the implicit judicial exception to 35 U.S.C. § 101 is often ill-suited to

address a claim that “merely claims the achievement of results.” Pet. App. 24a.

In particular, while the implicit exception for natural laws is well-suited to address the situation which involves “simply stat[ing] a law of nature while adding the words ‘apply it,’” *Mayo*, 566 U.S. at 72, it is ill-suited to address the situation of a claim that “merely claims the achievement of results,” Pet. App. 24a, because it is often very difficult, and sometimes impossible, to identify what natural laws are implicated or utilized for achieving the desired result. In some situations where “claim[s] [] encompass[] all solutions for achieving a desired result’,” it may even be that the result could be achieved using different solutions involving application of various different natural laws. Pet. App. 19a (quoting *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1343 (Fed. Cir. 2018)).

These problems are illustrated in the present case by the majority’s difficulty in articulating what natural law or laws claim 22 is directed to.

As noted above, “[t]he prior majority opinion in this case explained that the claimed invention is ‘more complex than just a bare application of Hooke’s Law, and that other natural laws may be relevant.’” Pet. App. 41a-42a. In accord with this, the prior majority opinion asserted that “the claims are directed to ‘Hooke’s law and possibly other natural laws.’” Pet. App. 42a.

Contravening this, the majority now alleges that “claim 22 ... is directed to the use of ... Hooke’s law,” Pet. App. 23a, and “simply requires the application of Hooke’s law to tune a propshaft liner to dampen certain vibrations.” Pet. App. 10a.

Notably, though, claim 22 can actually be practiced without using or applying Hooke’s law.

Claim 22 recites “[a] method for manufacturing a shaft assembly of a driveline system” which involves “tuning a mass and a stiffness of at least one liner, ... wherein the at least one liner is a tuned resistive absorber for attenuating shell mode vibrations and ... a tuned reactive absorber for attenuating bending mode vibrations.” Pet. App. 6a-7a. The majority characterizes the claim as “defining a goal” of “tuning a liner’ to achieve certain types of vibration attenuation.” Pet. App. 13a.

The majority acknowledges that “[c]laim 22 confers patent coverage if the attenuation goal is achieved by one skilled in the art using any method, including any method implemented by computer modeling and trial and error.” Pet. App. 13a.

Importantly, such computer modeling does not have to utilize Hooke’s law, and a process of tuning using trial and error certainly does not have to involve use of Hooke’s law.

Hooke’s law was articulated by the English scientist Robert Hooke in 1660, and was at the time believed to accurately describe physical interactions. However, “[n]owadays one realizes that Hooke’s law is

only a first-order approximation.” Peter J. Rousseeuw & Annick M. Leroy, *Robust Regression and Outlier Detection*, 188 (2005).⁶

Hooke’s law “calculations are only approximate, since essentially every real restoring force in nature is more complicated than the simple Hooke’s Law force.” Jerry B. Marion & Stephen T. Thornton, *Classical Dynamics of Particles & Systems*, 99 (1988). Indeed, “the actual computations in present-day mechanics have become much more laborious.” Peter J. Rousseeuw & Annick M. Leroy, *Robust Regression and Outlier Detection*, 188 (2005). For example, “[o]ne resorts to systems of differential equations instead, which are solved by computer simulations (the so called *finite element method*),” as “[t]hese intricate models give a more accurate description of reality.” *Id.*

That is, rather than using the simplified linear approximation that is Hooke’s law, these *finite element method* computer simulations solve systems of differential equations instead to provide a more accurate description of reality than one relying on Hooke’s law.

The Petitioner noted the potential use of just such a process below, “insist[ing] that the process of tuning a liner according to natural laws may involve extensive computer modelling, including finite

⁶ In particular, “Hooke’s law ... is a first-order linear approximation.” Jean Demaison & Natalja Vogt, *Accurate Structure Determination of Free Molecules*, 38 (2020).

element analysis ('FEA')." Pet. App. 15a. The majority recognized this, and even suggested that the Petitioner "may have discovered patentable refinements of the prior art process, such as particular uses of 'sophisticated FEA [finite element analysis] models during its design process.'" Pet. App. 16a.

Thus, in acknowledging that "[c]laim 22 confers patent coverage if the attenuation goal is achieved by one skilled in the art using any method, including any method implemented by computer modeling," Pet. App. 13a, the majority is acknowledging that the claim encompasses methods which do not even use Hooke's law. This in turn makes clear that the claim does not require use of Hooke's law.

Similarly, in acknowledging that "[c]laim 22 confers patent coverage if the attenuation goal is achieved by one skilled in the art using any method, including any method implemented by ... trial and error," Pet. App. 13a, the majority is acknowledging that the claim encompasses trial-and-error methods which do not even use Hooke's law. This in turn also makes clear that the claim does not require use of Hooke's law.

Further, because Hooke's law is only an approximation and does not govern, or even accurately describe, physical interactions that occur during performance of the claimed method, practicing the claimed method does not inherently involve or require use or application of Hooke's law.

Overall, although practicing the claimed method certainly involves underlying natural laws concerning mass and stiffness, the claimed method does not actually require use or application of Hooke's law at all.

Amicus makes this point not to urge that the decision must be set aside simply because the majority was unable to identify the precise natural laws at issue, but rather to urge that the majority's difficulty in articulating what natural law or laws the claimed method is directed to highlights the problem that it is often very difficult, and sometimes impossible, to articulate what natural laws are implicated or utilized for achieving a desired result if the means or process for achieving the result is not specified.

In contrast, as outlined above, the written description requirement of 35 U.S.C. § 112 can operate to invalidate a claim that "merely claims the achievement of results" without having to determine or identify what natural law enables the claimed result. Pet. App. 24a.

CONCLUSION

Amicus urges this Court to grant certiorari.

Respectfully submitted,

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