



Jackrel Consulting, Inc.

Patent Agent, Expert Witness and  
Consulting Services for companies  
and individual inventors.

# American Axle

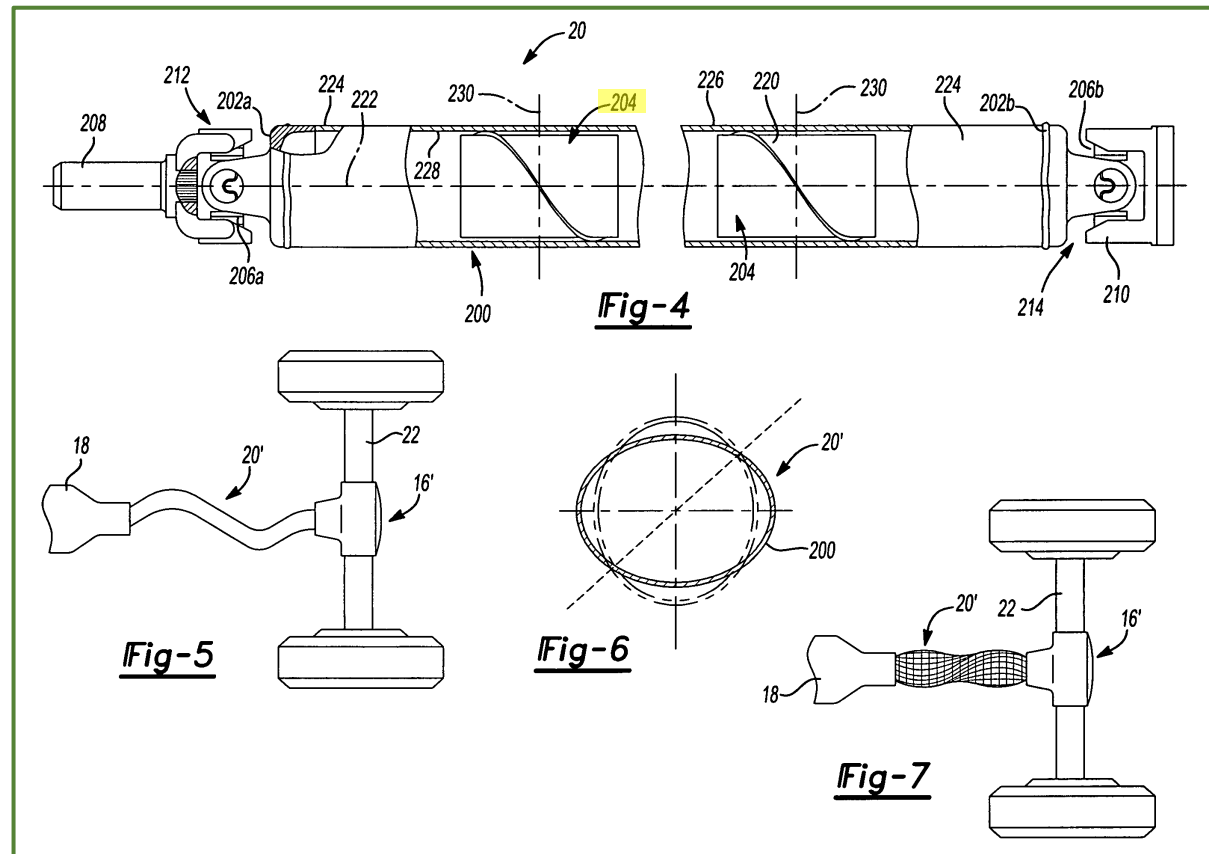
§ 101 Rejections of Mechanical Claims

# Overview

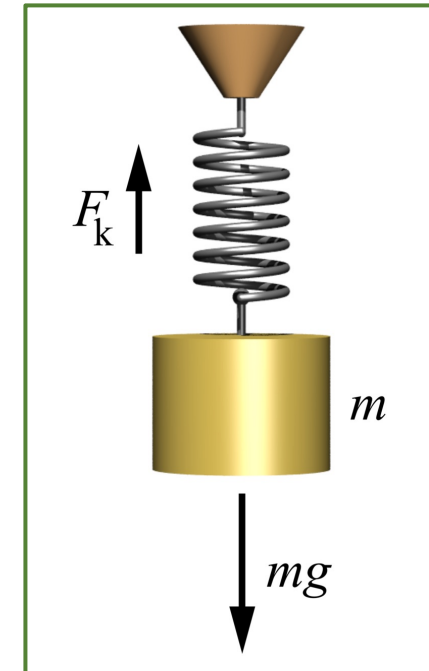
- '911 Claims 1 and 22
- Court Decisions
- Digging in to '911
- CAFC – Majority
- CAFC – Dissent
- Supreme Court – Declined to hear

Is '911 directed to:  
*a method for manufacturing a shaft assembly of a driveline system... -OR- just a Natural Law?*

'911 Patent



Hooke's Law



# 7,774,911 “Method for attenuating driveline vibrations”

1. A method for manufacturing a shaft assembly of a driveline system, the driveline system further including a first driveline component and a second driveline component, the shaft assembly being adapted to transmit torque between the first driveline component and the second driveline component, the method comprising:

providing a hollow shaft member;

**tuning** at least one liner to attenuate at least two types of vibration transmitted through the shaft member; and

**positioning** the at least one liner within the shaft member **such that** the at least one liner is **configured to** damp shell mode vibrations in the shaft member by an amount that is greater than or equal to about 2%, and the at least one liner is also **configured to** damp bending mode vibrations in the shaft member, *the at least one liner being **tuned** to within about  $\pm 20\%$  of a bending mode natural frequency of the shaft assembly as installed in the driveline system.*

## **How problematic is the word “tuning”?**

### **Claim construction → tuned == configured**

“The district court construed the claim 1 limitation “tuning at least one liner to attenuate at least two types of vibration transmitted through the shaft member” to mean “controlling characteristics of at least one liner to **configure** the liner to match a relevant frequency or frequencies to reduce at least two types of vibration transmitted through the shaft member.” J.A. 1046.”

# 7,774,911 “Method for attenuating driveline vibrations”

22. A method for manufacturing a shaft assembly of a driveline system, the driveline system further including a first driveline component and a second driveline component, the shaft assembly being adapted to transmit torque between the first driveline component and the second driveline component, the method comprising:

providing a hollow shaft member;

*tuning* a mass and a stiffness of at least one liner; and

*inserting* the at least one liner into the shaft member;

wherein the at least one liner is a *tuned* resistive absorber for attenuating shell mode vibrations and wherein the at least one liner is a *tuned* reactive absorber for attenuating bending mode vibrations.

## *How problematic is the word “tuning”?*

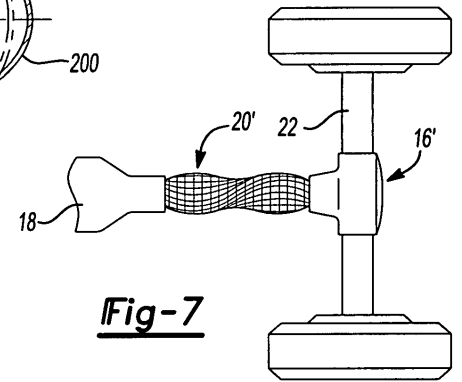
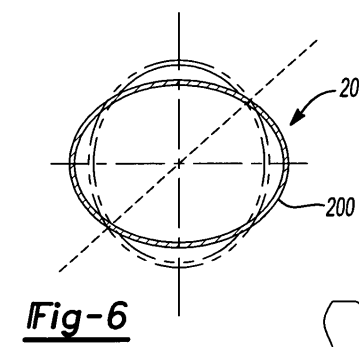
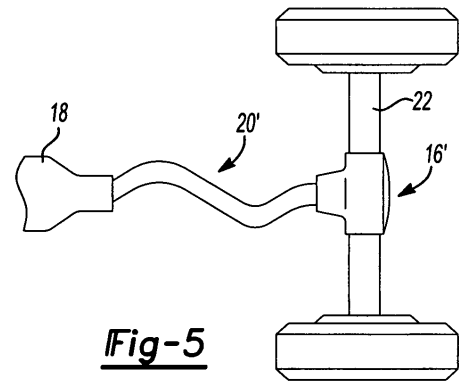
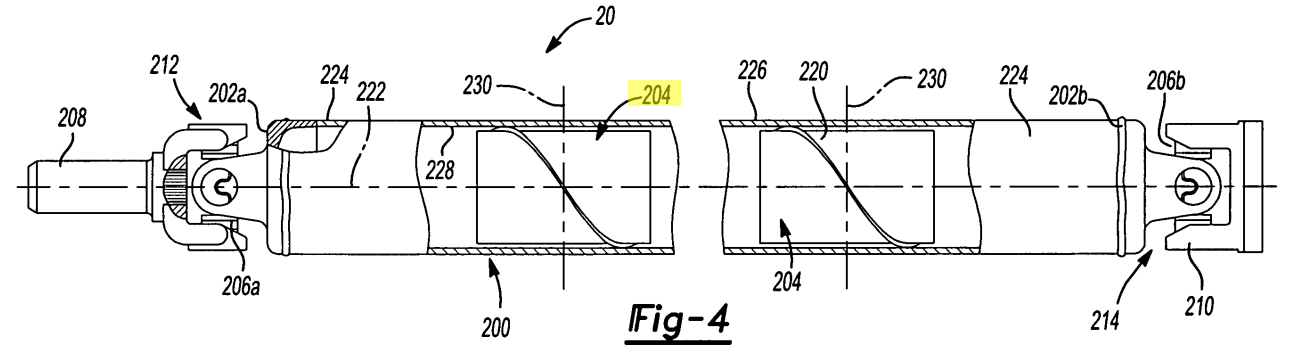
### **Claim construction → tuned == configured**

“The district court construed the claim 22 limitation “tuning a mass and a stiffness of at least one liner” to mean “controlling the mass and stiffness of at least one liner to **configure** the liner to match the relevant frequency or frequencies.” J.A. 15, 1047. No party contests the district court’s construction on appeal.”

[http://cafc.uscourts.gov/sites/default/files/opinions-orders/18-1763.OPINION.7-31-2020\\_1628791.pdf](http://cafc.uscourts.gov/sites/default/files/opinions-orders/18-1763.OPINION.7-31-2020_1628791.pdf)

# Court Decisions

- 8/11/17 – District Court
  - Claims 1 and 22 patent-ineligible
- 10/3/19 – CAFC
  - Claim 1 patent-ineligible (affirming previous decision)
  - Claim 22 patent-ineligible (affirming previous decision)
- 7/31/20 – CAFC (Opinion Modified)
  - Claim 1 **remanded** to the district court
  - Claim 22 **patent-ineligible**
- 6/30/22 – Supreme Court
  - Declined to hear



# Supreme Court

- President Joe Biden's administration in May urged the high court to take up the case, saying American Axle's invention was **a classic example of a patent-eligible industrial process**.
- The Federal Circuit decided, in a 6-6 deadlock, **not to rehear the case with all of its judges**. Dissenting judges said the panel's decision could threaten "most every invention for which a patent has ever been granted," and that the court's eligibility rulings had turned the patent system into a "litigation gamble."
- The dispute left the Federal Circuit "**bitterly divided**" and "**at a loss**" on how to apply the law, as one of its judges put it.
- The Supreme Court has also **denied several other petitions related to patent eligibility** since the Alice case. All 12 of the Federal Circuit's then-active judges asked the Supreme Court to hear a similarly divisive 2019 case that the high court rejected despite a recommendation by former President Donald Trump administration's to take it up.
- A U.S. Patent and Trademark Office spokesperson said after the ruling that **innovation "cannot thrive in uncertainty,"** and that the office is committed to "making every effort to ensure that the U.S. patent system is as clear and consistent as possible."

<https://www.reuters.com/legal/litigation/us-supreme-court-rejects-american-axle-case-patent-eligibility-2022-06-30/>

# CAFC – July 31, 2020

- CAFC focused on step one of the § 101 framework
  - Claim 22 – **ineligible** – “it simply requires the application of Hooke’s law to tune a propshaft liner”
  - Claim 1 – **remanded** – “claim 1 also requires “positioning” in addition to tuning and may reflect a broader definition of tuning”
- Step two of the § 101 framework → no inventive concept because the invention was a trial-and-error application of Hooke’s law
  - “What is missing [from claim 22] is any physical structure or steps for achieving the **claimed** result.”
  - “The **real inventive work** lies in figuring out **how** to design a liner to damp two different vibration modes simultaneously, and no such inventive work is recited in claim 22.”
  - “The **specification** describes tuning in terms of the result achieved, rather than the particular process by which the result is accomplished.”
- Dissent, Judge Moore → 3 main issues
  - Disagreed that the claims were directed to a **natural law**
  - Argued that there were **many articulated inventive concepts** that should have precluded summary judgment – ‘step two’ was not given sufficient weight
  - Argued that the majority was **conflating patent eligibility under § 101 with principles of enablement under § 112**. → “In Judge Moore’s view, the majority found the claims ineligible because the patent did ‘not teach a skilled artisan how to tune a liner.’”

***Since “tuned” == “configured” should they be construed as means-plus-function claims?***

# Hooke's Law

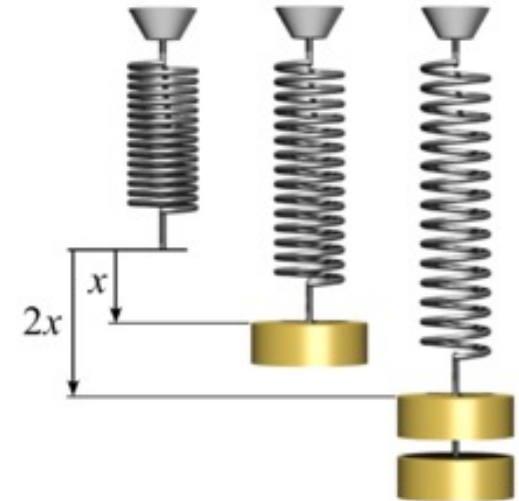
## Formal definition

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### For linear springs

Consider a simple **helical** spring that has one end attached to some fixed object, while the free end is being pulled. Suppose that the spring has reached a state of **equilibrium**, where its length is not changing anymore. Let  $x$  be the spring was displaced from its "relaxed" position (when it is not being stretched). Hooke's law states that

$$F_s = kx$$



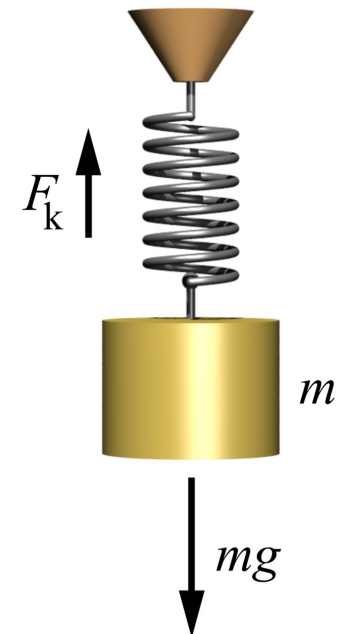
### Harmonic oscillator

See also: *Harmonic oscillator*

A mass  $m$  attached to the end of a spring is a classic example of a **harmonic oscillator**. By pulling slightly on the mass and then releasing it, the system will be set in **sinusoidal** oscillating motion about the equilibrium position. To the extent that the spring obeys Hooke's law, and that one can neglect **friction** and the mass of the spring, the amplitude of the oscillation will remain constant; and its **frequency**  $f$  will be independent of its amplitude, determined only by the mass and the stiffness of the spring:

$$f = \frac{1}{2\pi} \sqrt{\frac{k}{m}}$$

This phenomenon made possible the construction of accurate **mechanical clocks** and watches that could be carried on ships and people's pockets.





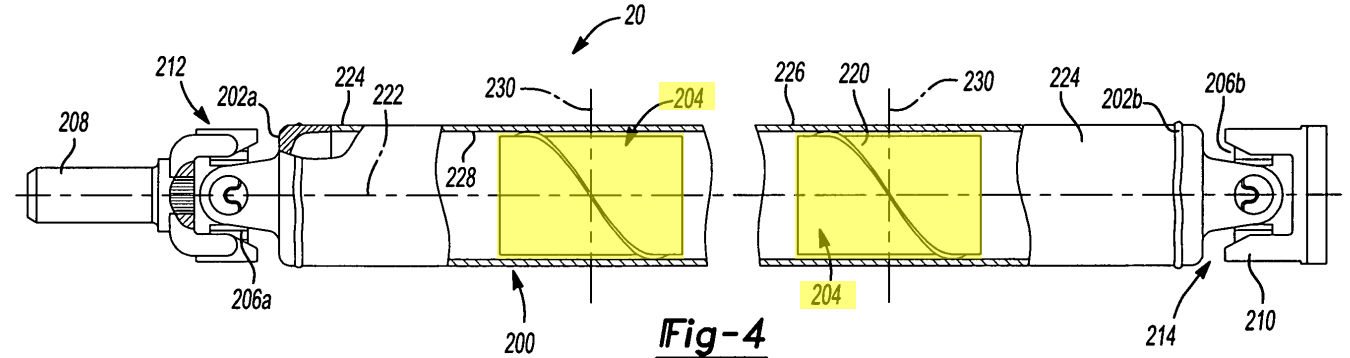
# 7,774,911 “Method for attenuating driveline vibrations”

“With reference to FIG. 4, the propshaft assembly 20 can include a shaft structure 200, first and second trunnion caps 202 a and 202 b, **at least one liner 204**, first and second spiders 206 a and 206 b, a yoke assembly 208 and a yoke flange 210...

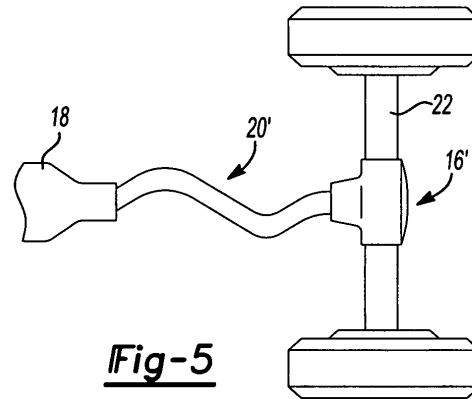
**With reference to FIGS. 5 through 7, it will be appreciated that an undamped propshaft assembly 20' (e.g., the propshaft assembly 20 without the at least one liner 204) could be susceptible to several types of vibration.** In FIG. 5, for example, the undamped propshaft assembly 20' is illustrated as vibrating at a **bending mode natural frequency** (i.e., a second bending mode ( $n=2$ ) natural frequency) of the propshaft assembly 20' as installed in the driveline 16'...

In FIG. 6, the propshaft assembly 20' is illustrated as vibrating at a **shell mode natural frequency** (i.e., a first ( $n=1$ ) shell mode natural frequency) of the shaft structure 200.

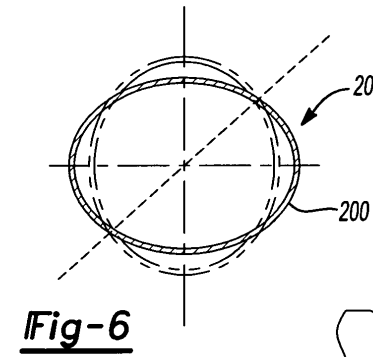
In FIG. 7, the propshaft assembly 20' is illustrated as vibrating at a **natural torsion frequency** of the driveline 16' in a torsion mode (i.e., a first ( $n=1$ ) torsion mode).”



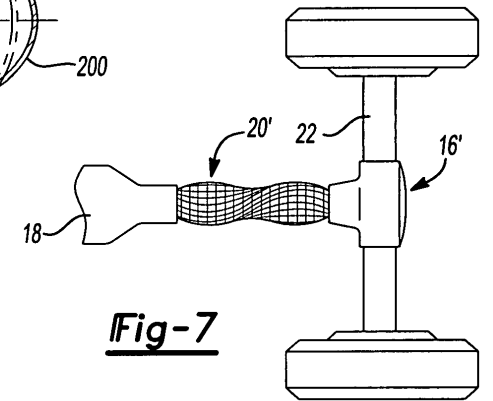
**Fig-4**



**Fig-5**



**Fig-6**



**Fig-7**

# 7,774,911 “Method for attenuating driveline vibrations”

It will also be appreciated from this disclosure that **various characteristics of the liner 204 can be controlled to tune its damping properties** in the shell mode and in one or both of the bending mode and the torsion mode. In the particular example provided, the following variables were controlled: **mass, length and outer diameter** of the liner 204, diameter and wall thickness of the structural portion 300, material of which the structural portion 300 was fabricated, the quantity of the **resilient members 302**, the material of which the resilient members 302 was fabricated, the **helix angle 330** and **pitch 332** with which the resilient members 302 are fixed to the structural portion 300, the configuration of the **lip member(s) 322** of the resilient member 302, and the location of the liners 204 within the shaft member 200. In the particular example provided:

the shaft member 200 can have an outside diameter of about 4.0 inches, a wall thickness of about 0.08 inch, a length of about 64 inches, and can have a mass of about 3.2 kg...

It will be appreciated that in certain situations it may not be possible to exactly tune the liner 204 to the two or more relevant frequencies associated with a given propshaft assembly 20, as when a particular liner 204 is used across a family of propshaft assemblies. **As such, it will be understood that a liner 204 will be considered to be tuned to a relevant frequency if it is effective in attenuating vibration at the relevant frequency.** For example, the liner 204 can be considered to be tuned to a relevant frequency if a frequency at which it achieves **maximum attenuation\*** is within **±20%** of that relevant frequency. Preferably, the liner 204 is considered to be tuned to the relevant frequency if the frequency at which it achieves maximum attenuation is within **±15%** of the relevant frequency. More preferably, the liner 204 is considered to be tuned to the relevant frequency if the frequency at which it achieves maximum attenuation is within **±10%** of the relevant frequency. Still more preferably, the liner 204 is considered to be tuned to the relevant frequency if the frequency at which it achieves maximum attenuation is within **±5%** of the relevant frequency.”

# 7,774,911 “Method for attenuating driveline vibrations”

12. The method of claim 3, wherein the at least one liner includes **a structural portion** and at least one **resilient member** that is coupled to the structural portion, the liner being **inserted** to the shaft member such that a wall of the shaft member **contacts** the at least one resilient member.

13. The method of claim 12, wherein the at least one resilient member **extends helically** about and along the structural portion.

14. The method of claim 12, wherein the at least one resilient member **extends longitudinally** along the structural portion.

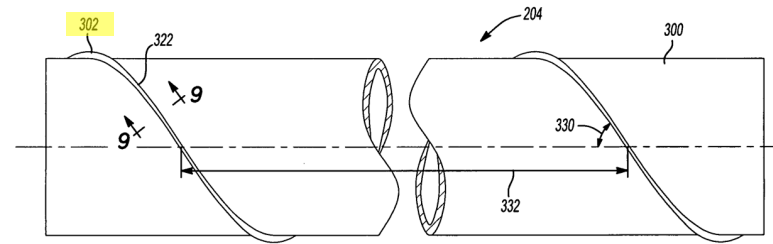
15. The method of claim 12, wherein the at least one resilient member **extends circumferentially** about the structural portion.

16. The method of claim 12, wherein a first one of the resilient members is formed of a **first material** and a second one of the resilient members is formed of a **second material that is different from the first material**.

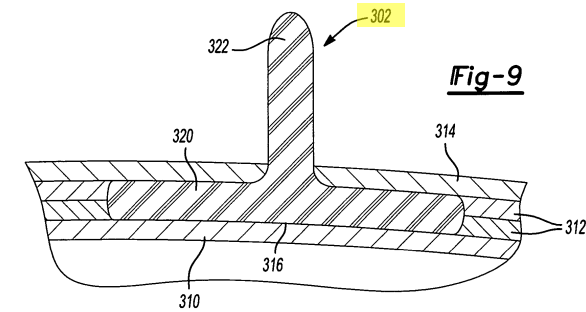
18. The method of claim 12, wherein the at least one resilient member includes a plurality of **fingers**, each of the fingers being disposed between the shaft member and the structural portion.

19. The method of claim 12, wherein the structural portion is formed of a material selected from a group consisting of **cardboard, plastic resin, carbon fiber, fiberglass, metal and combinations thereof**.

20. The method of claim 3, wherein a first one of the liners is **positioned** along the shaft member **symmetrically about a bending anti-node**.



**Fig-8**



**Fig-9**

“The district court treated independent claims 1 and 22 of the ’911 patent as **representative** of the asserted claims (claims 1–6, **12, 13, 19–24, 26, 27, 31, 34–36**).” - CAFC (July 31, 2020)

“I do not agree with the majority’s conclusion that claims 1 and 22 are representative or that AAM waived its arguments as to the dependent claims. First, **Neapco never argued that claims 1 and 22 are representative and in fact argued the dependent claims separately**. See Neapco SJ Br. at 32–33. Second, **AAM expressly argued that they are not representative**.” – CAFC, Dissent (July 31, 2020)

**Similar claims also depend on claim 22.**

# CAFC – July 31, 2020

- **Claim 22, Ineligible** → the explicit reference to mass and stiffness was directed to Hooke’s Law. Cannot claim a result.
  - “Claim 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... The claim on its face **does not identify the “particular [tuned] liners” or the “improved method” of tuning the liners to achieve the claimed result.**”
  - “AAM argued one could infringe claim 22 of the ’911 patent **by whatever means will achieve the result** “[e]ven if you didn’t try to [tune] and didn’t know you did it.”
  - “But neither established processes nor “improved” processes for implementing the underlying natural laws are **claimed**. While AAM 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,” id. at 45, **neither the specifics of any novel computer modelling, nor the specifics of any experimental modal analysis are included as limitations in claim 22.**”
  - “**The specification describes tuning in terms of the result achieved, rather than the particular process by which the result is accomplished.** For instance, the specification states that “a liner 204 will be considered to be tuned to a relevant frequency if it is effective in attenuating vibration at the relevant frequency.” ’911 patent, col. 8, ll. 28–31. Later in the same column, the patent gives an example of a “liner [that is] considered to be tuned to a relevant shell mode frequency if it damps shell mode vibrations by an amount that is greater than or equal to about 2%.” Id. at col. 8, ll. 44–47. **The specification’s concept of tuning is merely results-based.**”
  - “What is missing is any **physical structure or steps** for achieving the claimed result.”

[http://cafc.uscourts.gov/sites/default/files/opinions-orders/18-1763.OPINION.7-31-2020\\_1628791.pdf](http://cafc.uscourts.gov/sites/default/files/opinions-orders/18-1763.OPINION.7-31-2020_1628791.pdf)

<https://www.iptechblog.com/2020/08/the-federal-circuit-finds-a-hooke-to-patent-ineligibility/>

# CAFC – July 31, 2020

- Parker v. Flook compared to Duamond v. Diehr
  - Parker v. Flook (Supreme Court, 1978) – **Ineligible** – calculating and updating an alarm limit
    - “Like the claims in Flook, claim 22 of the ’911 patent is directed to the use of a natural law: Hooke’s law. **As in Flook, where the claimed method did not specify how variables were measured or how the alarm system functioned, claim 22 here does not specify how target frequencies are determined or how, using that information, liners are tuned** to attenuate two different vibration modes simultaneously, or how such liners are tuned to dampen bending mode vibrations.
  - Duamond v. Diehr – **Eligible** – a mold T calculation in a process to cure rubber
    - “Diehr, on the other hand, involved a situation in which a patent application claimed a new and specific process of molding rubber products “which incorporate[d] in it a more efficient solution of the [Arrhenius] equation” (a natural law). 450 U.S. at 188. Though the Supreme Court in Diehr explained that a mathematical formula itself was not patent eligible subject matter, it concluded that the alleged invention claimed in that case was patent eligible... **In Diehr, unlike this case, “[t]hese other steps apparently added to the formula something that in terms of patent law’s objectives had significance—they transformed the process into an inventive application of the formula.”**

[http://cafc.uscourts.gov/sites/default/files/opinions-orders/18-1763.OPINION.7-31-2020\\_1628791.pdf](http://cafc.uscourts.gov/sites/default/files/opinions-orders/18-1763.OPINION.7-31-2020_1628791.pdf)

<https://www.iptechblog.com/2020/08/the-federal-circuit-finds-a-hooke-to-patent-ineligibility/>

- “The Supreme Court’s analysis in **Parker v. Flook** reinforces our conclusion that **a claim to a natural law concept without specifying the means of how to implement the concept is ineligible under section 101**. In *Flook*, the Supreme Court considered the patent eligibility of a method for updating alarm limits during catalytic conversion processes. 437 U.S. at 585. The method involved an initial step of measuring temperature, a second step of using a formula to calculate an updated alarm-limit value, and a final step in which the alarm limit is adjusted to the updated value. *Id.* But the patent “d[id] not purport to explain how to select . . . any of the . . . variables” involved, nor did it “purport to contain any disclosure relating to the chemical process at work, the monitoring of process variables, or the means of setting off an alarm or adjusting an alarm system.” *Id.* at 586, 588. **The patentee argued that the inventive part of the patent was the mathematical formula used in the second step of the claimed method.** *Id.* at 588. The patentee further contended that his claimed invention should be patent eligible because it was limited to a **particular process** and involved post-solution activity that ensured that the patent did not “wholly preempt [use of] the mathematical formula.” *Id.* at 589–90.
- **Nevertheless, the Court held that the patent contained no patent-eligible invention.** *Id.* at 594. The Court explained that “**if a claim is directed essentially to a method of calculating, using a mathematical formula, even if the solution is for a specific purpose, the claimed method is nonstatutory.**” *Id.* at 595 (quoting *In re Richman*, 563 F.2d 1026, 1030 (C.C.P.A. 1977)). It first noted that limiting the law of nature described in the patentee’s mathematical formula to application in a specific process did not transform the subject matter to which the patent was directed into eligible matter. *Id.* at 593. Though the Court went on to state that the use of a mathematical formula or law of nature did not alone make a claim patent ineligible, it explained that what was required was “**an inventive application of the principle.**” *Id.* at 593–94. Such an inventive application, the Court concluded, was not present in the patented method. The process to which the claims were directed (catalytic conversion of hydrocarbons) was well known, as were the use of alarm limits to trigger alarms, repeated recalculation and readjustment of alarm limit values, and the use of computers for automatic monitoring-alarming. *Id.* at 594. Because the Court found that the purportedly new formula itself was only a mathematical one, which it deemed a “principle” akin for eligibility analysis to an existing natural relationship, *id.* at 589, and given that nothing else in the patent claims exhibited more than conventional pre- and post-solution activity, it concluded that the patent was directed to nonstatutory matter. *Id.* at 594–95.”

# Alice v. CLS Bank (Supreme Court 2014)

- “**Flook** is to the same effect. There, we examined a computerized method for using a mathematical formula to adjust alarm limits for certain operating conditions (e.g., temperature and pressure) that could signal inefficiency or danger in a catalytic conversion process. 437 U. S., at 585–586. Once again, the formula itself was an abstract idea, see supra, at 8, and the computer implementation was purely conventional. 437 U. S., at 594 (noting that the “use of computers for ‘automatic monitoring-alarming’ ” was “well known”). In holding that the process was patent ineligible, we rejected the argument that “implement[ing] a principle in some specific fashion” will “automatically fal[l] within the patentable subject matter of §101.” Id., at 593. Thus, **“Flook stands for the proposition that the prohibition against patenting abstract ideas cannot be circumvented by attempting to limit the use of [the idea] to a particular technological environment.”** *Bilski*, 561 U. S., at 610–611 (internal quotation marks omitted).”

<https://supreme.justia.com/cases/federal/us/573/208/>

# CAFC – July 31, 2020

- **Claim 1** – Remanded, since it was not adequately litigated
  - “The specification indicates or may suggest that the “characteristics” that can be “tuned” in claim 1 include variables **other than mass and stiffness**.
  - In light of the district court’s construction of claim 1, which requires only controlling characteristics and positioning the liner, we **cannot conclude that it is merely directed to Hooke’s law**...
  - The district court’s opinion suggests that the broader **concept of tuning is an abstract idea**, J.A. 16–17, and the same question may be raised about the broad concept of positioning...
  - **But the abstract idea basis was not adequately presented and litigated in the district court.** We think that it is appropriate to vacate the judgment as to claim 1 and its dependent claims and remand the case for the district court to address this alternative eligibility theory in the first instance.”



# CAFC – July 31, 2020

- **Dissent** – The majority’s holding that these claims to manufacturing an automotive drive shaft are ineligible has sent **shock waves** through the patent community.
  - “It’s unthinkable the courts found this invention, a manufacturing process for making a key automotive part, as patent ineligible.” Rep. Doug Collins.
  - American Axle is a “poster child for how the current test for patent eligibility is being applied to reach rather absurd results.” Perry Cooper, Ball in Federal Circuit’s Court on Patent Eligibility Clarity, Bloomberg News (Jan. 30, 2020) (quoting Professor David Taylor).
  - “[I]f ‘industrial-process,’ physically-based patents like these are ineligible under Mayo/Alice, then seemingly every patent is in ineligibility jeopardy.” Michel Br. at 7.
  - “‘The optics are challenging for this, because you’re talking about a way to make a drive shaft for a car, and that sounds like the kind of thing that’s been getting patented for 100 years,’ . . . The decision brings to the foreground an issue that has been bubbling in patent eligibility cases for some time, which is that every invention at some level operates according to natural laws.” Ryan Davis, Drive Shaft Ruling May Expand Challenges to Patent Eligibility, Law 360 (Oct. 24, 2019).
  - “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.” Law Profs. Br. at 4. See also Michael Cicero, Patent Ineligibility Defense Expands to Mechanical Subject Matter, Bloomberg News (Dec. 4, 2019);
  - Jonathan Osha, American Axle: The Latest Twist of Patent Eligibility Oshaliang Newsletter (Oct. 17, 2019) (American Axle is “a new low in patent eligibility jurisprudence . . . if a *method of manufacturing a propeller shaft* is not eligible subject matter, it is difficult to imagine where a future line might be drawn.”).

# CAFC – July 31, 2020

- **Dissent** – Natural Laws & ‘Step Two’

- **“A disturbing amount of confusion will surely be caused by this opinion, which stands for the proposition that claims can be ineligible as directed to a natural law even though no actual natural law is articulated in the claim or even the specification.** The majority holds that claims are directed to a natural law if performance of the claimed method would use the natural law. The majority has “open[ed] the door to countless challenges to mechanical inventions with underpinnings in one or more, potentially unnamed natural laws.” IPO Br. at 9. **Holding these claims ineligible under a purported natural law analysis “leaves patentees awash in a sea of uncertainty; how can one determine if a claim is directed to a natural law without a natural law being apparent either on the face of the claim, or under a proper claim construction?”** BIO Br. at 5. And the majority’s addition of its Nothing More test will add nothing more to the clarity. As we see in this case, the Nothing More test can be met even when all of the arguments and evidence are to the contrary and will not be finally resolved until we judges bring our scientific acumen to bear on the questions.”
- **“Goodness sakes, the dependent claims held ineligible by the majority specify the material the liner must be made of (cardboard or plastic or fiberglass or metal (claim 31)) and the actual physical form it must take (extending helically (claim 27), with fingers (claim 33), circumferentially wrapped (claim 29) or over-molded (claim 32)) and the place the liners must be positioned (“symmetrically about a bending anti-node” (claims 34, 35))... It is remarkable that the majority thinks that claims with all of these very physical, very concrete, very structural limitations are “missing any physical structure or steps.” A fiberglass liner with a helically shaped resilient member extending circumferentially around the liner or over-molded to the structural portion of the liner certainly feels like the “physical structure” that the majority says is missing from the claims.”**

# CAFC – July 31, 2020

- **Dissent** – Natural Laws & Conflating § 101 and § 112
  - “Despite the fact that no party has argued that the claims are not enabled or that a skilled artisan would not know how to design a tuned liner and insert it into a given propshaft to reduce vibration, the majority nonetheless concludes the claims are ineligible because they don’t teach how to tune a liner. **The majority’s concern is not preemption of a natural law (which should be the focus), but rather that the claims do not teach a skilled artisan how to tune a liner without trial and error.** The majority’s new blended 101/112 defense is confusing, converts fact questions into legal ones and eliminates the knowledge of a skilled artisan.”
  - “The majority states the claim “must identify ‘how’ that functional result is achieved by limiting the claim scope to structures specified at some level of concreteness.” Maj. at 27–28. **It is clear from the claims themselves that the functional result is a drive shaft assembly with reduced vibrations.** “The present invention relates to . . . a method for attenuating driveline vibrations transmitted through a shaft assembly.” ’911 patent at 1:4–7. **It is undisputed that there exist many different ways to attenuate vibrations in a drive shaft such as dampers, plugs, weights, liners, even wadded up cardboard. The ’911 patent claims one specific way to attenuate vibrations, a concretely identified physical structure—a liner inserted inside the propshaft.** It does not just claim a result (reducing vibration)—it claims a specific means of accomplishing the result—a liner positioned in the shaft.”
  - “The only remaining question (the majority’s true concern with these claims) is **would a skilled artisan know how to adjust the mass, stiffness, and positioning of the liner in order to damp vibration without undue experimentation...** This is the question the majority has and **this is a question of enablement, not eligibility.** ”

# CAFC – October 3, 2019

- **Dissent** – Natural Laws & Conflating § 101 and § 112

- “The **tuned liner element** is the crux of what bothers the majority in this case. The majority’s true concern with these claims is **not that they are directed to Hooke’s Law** (because this is clearly a much more complex system not limited to varying mass and stiffness), **but rather the patentee has not claimed precisely how to tune a liner** to dampen both bending and shell mode vibrations.”
- “Today, the majority concludes that the ’911 patent claims are not eligible because they do not teach a skilled artisan **how to tune a liner**. The majority holds that they are directed to some unarticulated number of possible natural laws apparently smushed together and thus ineligible under § 101. The majority concludes that the inventive concepts **“make no difference.” Section 101 simply should not be this sweeping and this manipulatable**. It should not be used to invalidate claims under standards identical to those clearly articulated in other statutory sections, but not argued by the parties. It should not subsume § 112. It should not convert traditional questions of fact (like undue experimentation) into legal ones. The majority’s validity goulash is troubling and inconsistent with the patent statute and precedent. The majority worries about result-oriented claiming; I am worried about result-oriented judicial action. I dissent.

**If Judge Moore is correct, then are they invalid due to lack of enablement under § 112?**

# CAFC – July 31, 2020

- **Response to the Dissent** – Conflating § 101 and § 112
  - “Third, the dissent criticizes our analysis as **improperly merging enablement and eligibility**, arguing that the failure of the claims to designate how to achieve the desired result is exclusively an issue of enablement. Dissent Op. 23–26. **But we think the criticism rests on a failure to distinguish two different “how” requirements in patent law.**
    - **The first such requirement, that of eligibility, is that the claim itself (whether by its own words or by statutory incorporation of specification details under section 112(f)) must go beyond stating a functional result;** it must identify “**how**” that functional result is achieved by limiting the claim scope to structures specified at some level of concreteness, in the case of a product claim, or to concrete action, in the case of a method claim. The Supreme Court has so required dating back at least to the Court’s rejection of Morse’s claim 8 in *O’Reilly v. Morse*, and this requirement is an eligibility requirement we have applied repeatedly, as explained above...
    - **The second, distinct “how” requirement applies to the specification, not the claim:** once the required concrete” physical structures or actions are set out in the claim, the specification must set forth enough information for a relevant skilled artisan to be able to **make and use** the claimed structures or perform the claimed actions. This is the enablement requirement, which is distinct from the eligibility requirement.”

**If these claims are means-plus-function claims, then is the specification sufficient?**



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Thank You