

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FOX Factory, Inc.,

Petitioner,

v.

SRAM, LLC,

Patent Owner.

U.S. Patent No. 7,147,207 B2

Case No. IPR2024-00492

PATENT OWNER SUR-REPLY

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I. INTRODUCTION

Although the Board instituted *inter partes* review of the ‘207 Patent, the Board recognized that there were multiple open issues regarding the asserted prior art compared to the invention of the Challenged Claims that would benefit from further development. In response, Patent Owner SRAM, LLC (“Patent Owner”) has provided detailed evidence, including the Declaration of a technical expert, Dr. Kim Parnell (Ex. 2016),¹ to show that the prior-art-at-issue does not anticipate or render obvious the Challenged Claims. Petitioner’s Reply does not substantively rebut Patent Owner’s evidence.

For example, the Board encouraged the parties to “further develop[] if one of ordinary skill in the art would understand Fox to be disclosing that rotating lever 60 to rotate camshaft 58 so that cam surface 56 can adjust shaft 34 is both moving to a ‘position’ and ‘adjusting the damping characteristics’ of one of the positions.” Institution Decision (“ID”), 19. As explained in the Patent Owner Response (“POR”), a POSITA would not understand Fox (Ex. 1005) in this way because Fox discloses nothing more than one of the then state-of-the-art suspension systems expressly criticized in the ‘207 Patent. POR, 6-7. Petitioner’s Reply is devoid of

¹ Fox falsely asserts that Dr. Parnell, a Ph.D. in Mechanical Engineering from Stanford University, lacks sufficient design experience in vehicle suspension technology (Reply, 3), when in fact Dr. Parnell testified extensively about his many years of experience in this area. Ex. 1018, 15:20-29:23.

substantive argument or evidence to the contrary. Rather, the Reply repeats Petitioner's flawed theory that the "adjuster assembly" and "valve actuating assembly" do not have to be "structurally distinct" and can have the "same mechanical interaction." *See* ID, 18-19; Reply, 6-8. Petitioner's inherently faulty argument contradicts the plain language of the Challenged Claims and the explicit disclosures of the '207 Patent.

The Board likewise encouraged the parties to further develop whether a POSITA would have been motivated to make the combination of the Yi (Ex. 1006) and JP'279 (Ex. 1007) references as advanced by Petitioner in Ground 3. *See* ID, 32. The POR did exactly that, explaining in detail the numerous flaws in Petitioner's arguments that were premised on nothing more than a single usage of the term "fine" in JP'279. And, again, Petitioner's Reply fails to counter Patent Owner's substantive arguments and evidence.

In short, neither of Petitioner's primary references, Fox and Yi, disclose both a "valve actuating assembly" and an "adjuster assembly for adjusting the damping characteristics corresponding to at least one of the positions of the valve actuating assembly." Petitioner's primary references disclose nothing more than examples of the prior art suspension systems specifically criticized and distinguished in the '207 Patent. Petitioner's flawed, illogical combinations of prior art references cannot recreate the inventions of the '207 Patent.

In sum, none of the prior art relied upon by Petitioner contains or suggests the ‘207 Patent’s novel concept of adjusting the damping characteristics of one valve actuating assembly position independent of another position’s damping characteristics. The Board should confirm the patentability of the Challenged Claims.

II. FOX DOES NOT ANTICIPATE ANY CHALLENGED CLAIM OF THE ‘207 PATENT (GROUND I)

A. Dr. Slocum’s “Two Position” Theory Confirms That Fox Is Merely Exemplary of the Prior Art Distinguished by the ‘207 Patent

Petitioner asserts that Fox discloses only two “clearly identifiable positions” for the “valve actuating assembly”—a closed position and an open position. Reply, 5-6, Ex. 1017, ¶11. This “closed” position is, per Dr. Slocum, when the “lever 60” is rotated “such that shaft 34 is engaged with the non-recessed portion of [the] camshaft 58” and “displaces shaft 34 such that **no damping fluid is allowed to pass through port 42.**” Ex. 1017, ¶11 (emphasis added). Dr. Slocum then postulates that **all other positions** of lever 60 actually correspond to a single “open position” and that any movement of the lever 60 permits the user to “adjust how much fluid is permitted to flow through port 42.” *Id.*, ¶¶11-12. Per Dr. Slocum, movement of lever 60 equates to use of both a “valve actuating assembly” and an “adjuster assembly.” *Id.* This theory lacks merit as it is contrary to the plain language of the Challenged Claims as well as the clear teachings of the ‘207 Patent.

Dr. Slocum's description of Fox confirms it is exemplary of the prior art specifically distinguished in the Background section of the '207 Patent:

A typical design for a damping adjuster uses an adjuster rod that extends down the center of the piston shaft and engages the valve mechanism or performs the function of the valve mechanism. ...For example, **a cam attached to a lever may be engageable with the adjuster rod to vary the axial position of the rod. One problem associated with this configuration is that any given angular position of the lever/cam corresponds to exactly one position of the adjuster rod.** This limits the ability of the rider to customize the damping characteristics of the suspension system to suit the terrain or the rider's particular riding style.

Ex. 1001, 1:30-43 (emphasis added). This “cam attached to a lever” system to “vary the axial position of the rod” to change the suspension's damping characteristics is the very type of suspension damping system disclosed by Fox. *See* Ex. 2016, ¶¶33–34. Dr. Slocum admitted as much in his above Supplemental Declaration quote as well as in his deposition testimony. *See* Ex. 2019, 84:20-87:3, 93:14-95:9; *see also id.*, 89:14-90:12 (Dr. Slocum acknowledging that turning lever 60 moves the “shaft 34” through “intermediary positions” to adjust the amount of damping in Fox); *see* Ex. 1017, ¶¶11-12; Ex. 2016, ¶¶32-35, 38.²

Petitioner's assertion that the Background of the '207 Patent does not distinguish such “a rotary cam surface” is plainly incorrect as seen in the emphasized

² Petitioner conclusorily asserts, without citation to any actual evidence, that Dr. Slocum did not “agree that Fox is the same as the prior art discussed in the background of the '207 Patent.” Reply at 9.

language in the quote from the ‘207 Patent above. *Compare* Reply, 9 (asserting that the background section of the ‘207 Patent does not “describe a rotary cam surface that allows customization of the damping characteristics.”) *with* Ex. 2016, ¶¶26, 32-34. And it is also evident that the exemplary system disclosed in Fox, which provides damping characteristics that can only be adjusted by changing the position of the shock absorber’s single lever 60, and by extension shaft 34, does not separately include an “adjuster assembly” as used in the Challenged Claims. *Id.*

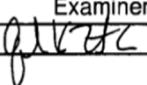
The prosecution history further demonstrates that Petitioner’s assertions are incorrect. The application that issued as the ‘207 Patent was filed on November 4, 2004. The inventors filed an invention disclosure statement (“IDS”) shortly thereafter on February 4, 2005. The first reference identified in Patent Owner’s first IDS is Fox, as shown below:

US Patent Documents							
Note: Applicant is not required to submit a paper copy of cited US Patent Documents							
init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
	1	6360857	2002-03-26	Fox			
	2	6279703	2001-08-28	Mete			
	3	4305483	1981-12-15	Cowan			
	4	2745517	1953-04-20	Zook			
Signature							
Examiner Name				Date			

Ex. 1004, 105 (highlighting added). The examiner considered the references identified in that IDS, including Fox, as shown below:

US Patent Documents							
Note: Applicant is not required to submit a paper copy of cited US Patent Documents							
init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
JKF	1	6360857	2002-03-26	Fox			
JCF	2	6279703	2001-08-28	Mete			
JCF	3	4305483	1981-12-15	Cowan			
JCF	4	2745517	1953-04-20	Zook			

Signature

Examiner Name	Date
	12/30/05

Id., 92 (highlighting added); *see also* Ex. 1001, 1. The examiner, however, did not reject any of the claims premised on Fox at any point. Neither the Petition nor the Reply provide any justifiable basis to depart from the examiner’s conclusion that the Challenged Claims are patentable over Fox.

B. Petitioner’s Reply Confirms That Fox Does Not Disclose Both a “Valve Actuating Assembly” and an “Adjuster Assembly Operatively Connected to the Valve Actuating Assembly”

As the Board previously noted, Petitioner’s invalidity theories premised on Fox rely on the “lever 60, camshaft 58, cam surface 56, and shaft 34 for both the ‘two positions’ of the valve actuating assembly and for ‘adjusting the damping characteristics’ of a position of the valve actuating assembly.” ID, 18-19. The Reply and Supplemental Declaration double down on this legally and factually flawed theory. Reply, 6 (identifying the “**camshaft 58, lever 60**, and shaft 34” as the “valve actuating assembly” and “**camshaft 58 and lever 60**” as the “adjuster assembly”) (emphasis added). There is thus, by Petitioner’s own words, a “complete overlap”

of the structures that Petitioner alleges is an “adjuster assembly”—camshaft 58 and lever 60—with the structures that Petitioner identifies as the “valve actuating assembly”—camshaft 58, lever 60, and shaft 34. *See Id.*

Despite this, Petitioner asserts there is actually only a “partial overlap” of structural features because the “valve actuating assembly” of Fox also includes shaft 34, and “adjuster assembly” must be interpreted “broadly.” *See Reply*, 8. But it is black-letter law that claim terms receive their “ordinary and customary meaning as understood by a person of ordinary skill in the art **when read in the context of the specification and prosecution history.**” *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc) (emphasis added). Contrary to Petitioner’s insinuations, nothing in the specification teaches that the entirety of the “adjuster assembly” can be nothing more than a subset of the components of the “valve actuating assembly.”

To the contrary, every embodiment in the ‘207 Patent has an “adjuster assembly” that includes additional structure specifically for adjusting the damping characteristics of a single position of the valve actuating assembly. Ex. 1001, 3:57-62, 4:38-50 (Figs. 1-6, adjuster assembly includes knob 70 separate from selector 20); *id.*, 5:48-53 (Figs. 7a-7c, adjuster assembly is “formed integrally with selector 20” but has threads specific to functionality of the adjuster assembly); *id.*, 6:10-31 (Figs. 8a-8c, 9a-9c, and 10a-10c, adjuster assembly includes cable adjustment device 98); *id.*, 7:7-37 (Figs. 11a-11g, adjuster assembly includes limit

screw and knob 132 that is separate from selector 20); *id.*, 8:5-19 (Fig. 12, adjuster assembly includes knob 150 separate from selector 20). This is true even of the single embodiment in Figures 7a-7c that Petitioner myopically focuses on.

Because Petitioner’s proposed reinterpretation of “adjuster assembly” is contrary to every teaching of the ‘207 patent (and even though Petitioner asserts no claim construction is necessary), it should be rejected as a matter of law. *See Netword, LLC v. Centraal Corp.*, 242 F.3d 1347, 1352 (Fed. Cir. 2001) (“The claims are directed to the invention that is described in the specification; they do not have meaning removed from the context from which they arose.”)); *Decisioning.com, Inc. v. Federated Department Stores, Inc.*, 527 F.3d 1300, 1308 (Fed. Cir. 2008) (rejecting a proposed broad claim construction that was not supported by the specification, although recognizing that the construction was plausible if “[d]ivorced from the specification.”).

Petitioner’s argument that its proffered construction of “adjuster assembly” must be adopted unless the specification and file history specifically and unequivocally state that there can be no “physical overlap” between the “valve adjustment assembly” and the “adjuster assembly” is also incorrect as a matter of law. *See, e.g., UltimatePointer, L.L.C. v. Nintendo Co., Ltd.*, 816 F.3d 816, 824 (Fed. Cir. 2016) (stating it was unnecessary to find an express disclaimer where “the ordinary meaning of ‘handheld device,’ when read in the specific context of the

specification...is limited to a direct-pointing device”); *On Demand Mach. Corp. v. Ingram Indus., Inc.*, 442 F.3d 1331, 1340 (Fed. Cir. 2006) (“[W]hen the scope of the invention is clearly stated in the specification, **and is described as the advantage and distinction of the invention**, it is not necessary to disavow explicitly a different scope.”) (emphasis added).

Petitioner’s focus on Patent Owner’s discussion of disavowal in the POR misses this point. *See* Reply, 9-10. The Petition asserts that none of the claim terms in the ‘207 Patent require construction and should be given their plain and ordinary meaning. Petition, 8. But, as discussed above, Petitioner necessarily advances a construction of “adjuster assembly” that would cover the exemplary prior art systems distinguished in the Background section of the ‘207 Patent. Patent Owner pointed out that such an “overbroad claim interpretation” of “adjuster assembly” could not be correct because criticized prior art systems having a lever/cam and adjuster rod combination like Fox extolled the benefits of the ‘207 Patent’s new and improved damping system. POR, 24-27. Patent Owner thus explained that the “plain and ordinary meaning” of “adjuster assembly” proffered by Petitioner, which would cover a structure that is coextensive structurally and functionally with the “valve actuating assembly,” could not be correct as such a purported “plain and ordinary meaning” would have been “disavowed.” *Id.* Despite Petitioner’s

protestations to the contrary, the Federal Circuit’s holding in *Poly-America* is entirely consistent with Patent Owner’s position. *See* Reply, 9-10.

Because a POSITA would not understand Fox to disclose that rotating lever 60 to rotate camshaft 58 to adjust the position of shaft 34 as both moving to a “position” and “adjusting the damping characteristics” of that position as required by Claim 1 (*see* Ex. 2016, ¶¶50-73), the Board should reject Ground 1 and find the Challenged Claims not anticipated by Fox.

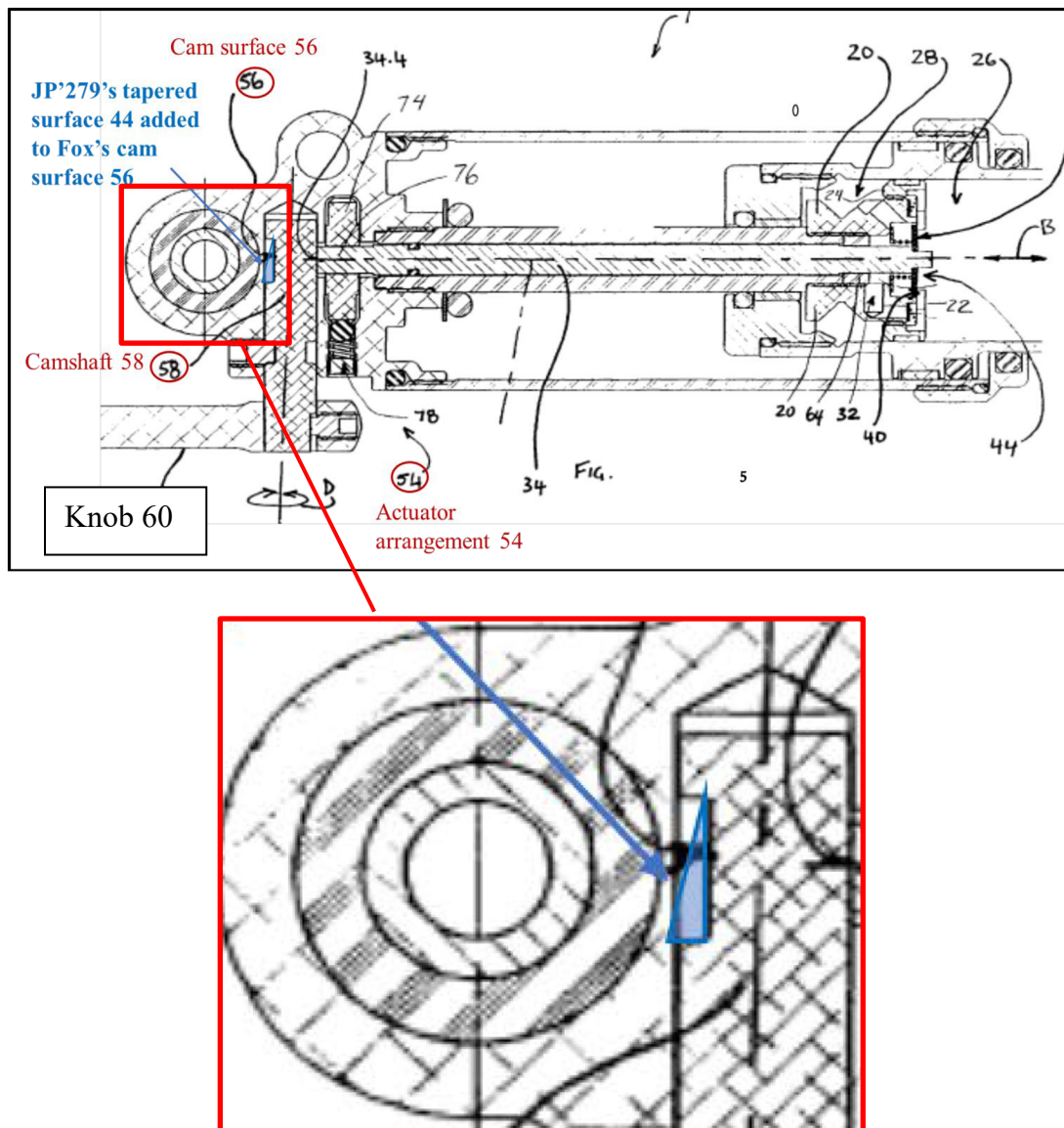
III. PETITIONER’S PROFFERED COMBINATION OF FOX, JP’279, AND NAGAI FAILS TO RENDER ANY CHALLENGED CLAIM OF THE ‘207 PATENT OBVIOUS (GROUND II)

The proffered combination of Fox, JP’279, and Nagai does not provide both a “valve actuating assembly” and an “adjuster assembly.” As the Board correctly noted, the Petition failed to identify a separate “adjuster assembly” in this purported combination. ID, 25 (“Petitioner’s proposed combination does not rely on an express disclosure of two means for adjusting damping characteristics.”).

A. Neither The Petition Nor the Reply Explains How a POSITA Would Allegedly Recreate the Inventions of the ‘207 Patent Using Fox, JP’279, and/or Nagai

As shown above in Section I, Fox does not disclose an “adjuster assembly” as a POSITA would understand the plain meaning of that term in the ‘207 Patent. In Ground II, the Petition proposed modifying the “valve actuating assembly” of Fox “by adding tapered surface 44 [of JP’279] to Fox’s cam surface 56” to purportedly

“achieve fine adjustment of the compression damping characteristics of Fox’s suspension system.” Petition, 49. The Petition states that this proffered combination is shown in the below figure taken from the Petition (with a label for knob 60 added for clarity):



Petition, 50. As seen in these images, there is no separate “adjuster assembly” included in Petitioner’s proffered combination. Rather, there is only the “knob 60”

of Fox, the rotation of which a POSITA would not understand as both moving to a “position” and “adjusting the damping characteristics” of that position as required by claim 1. *See* Section I, *supra*.

While the Reply asserts that the Petition “clearly” discussed including gear 49 and feed axle 50 of JP’279 in combination with the camshaft 58 of Fox, that is where Petitioner’s analysis ends. Reply, 11. The Petition itself cites the figure above as representing the combination and states only that the “tapered surface 44 [of JP’279]” is “add[ed]” to Fox’s “suspension system.” Petition, 49-50. No mention of the gear 49 or axle 50 was made in reference to Petitioner’s exemplary figure.

Furthermore, the Petition failed to explain how a POSITA would have attempted to incorporate the motorized “gear 49” and attached “axle 50” into the suspension system of Fox. *See* Petition, 50-51. Instead, the Petition and Dr. Slocum make the same conclusory assertions, namely that: (1) a POSITA “would have known how to axially move Fox’s camshaft 48 (modified to have JP’279’s tapered surface 44)...using gear 49 and feed axle 50”; and (2) a POSITA would have known to use a mechanism “such as Nagai’s stopper bolt 141 threaded into Fox’s camshaft housing to axially displace Fox’s camshaft 58” and “to simplify and combine implementations of the elements of JP’279’s ‘adjuster assembly’ and Nagai’s limiting mechanism.” *Id.*, 50; Ex. 1003, ¶97.

No further details are offered on how a POSITA would have achieved the incorporation of these elements of JP'279 and/or Nagai into the suspension system of Fox. *See also* Ex. 1017 (Slocum Supplemental Declaration), ¶16 (copying ¶97 from his original declaration). This complete lack of analysis is likely why no such combination is shown in the above figure from the Petition that, by Petitioner's own words, represents the proffered combination of JP'279 with Fox. This failure is also consistent with Dr. Slocum's admissions that the pertinent structures of JP'279 and Nagai are no different than the prior art already considered and distinguished in the '207 Patent and during prosecution. *See* Ex. 2019, 102:14-103:3; 108:21-110:15; *see also* Ex. 2016, ¶77.

Such conclusory expert testimony is insufficient to support a finding of obviousness. *See* IPR2022-00624, Paper 12, 5 ("I determine that the Board was correct in giving little weight to Petitioner's expert because the expert declaration merely offered conclusory assertions without underlying factual support and repeated, verbatim, Petitioner's conclusory arguments."); *TQ Delta, LLC v. Cisco Sys.*, 942 F.3d 1352, 1359 (Fed. Cir. 2019) ("This court's opinions have repeatedly recognized that conclusory expert testimony is inadequate to support an obviousness determination on substantial evidence review"). Dr. Slocum's supplemental declaration, which merely recites the conclusory statements from his original

declaration, does not remedy this shortcoming in the Petition. The Board should reject Ground II on this basis alone.

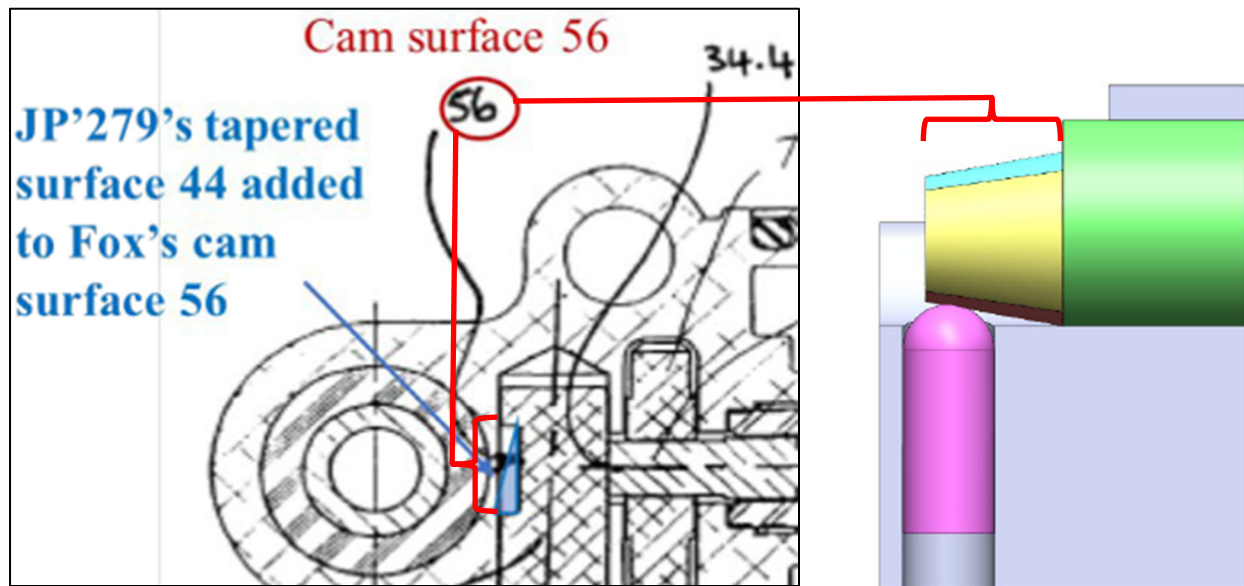
B. Petitioner’s Focus on the Concept of “Fine Tuning” to Justify Its Proffered Combination of Fox, JP’279, and Nagai Still Misses the Mark

Like its anticipation arguments based on Fox, Petitioner’s reply arguments regarding “fine tuning” are premised on the incorrect assumption that Fox has only two positions – closed and open (cam surface 56). Reply, 1 (“Fox discloses varying the damping characteristics of the open setting by **rotating cam surface 56 using lever 60.**”) (emphasis added); *id.*, 11 (“Fox’s **cam surface 56 (which corresponds to the open position)** would have been modified to include (1) JP’279’s tapered surface 44...” (emphasis added). However, the cam surface 56 in Fox is not, as Petitioner asserts, a singular position. Rather, cam surface 56 is rotationally displaced by lever 60 and provides all of the positions that alter the damping characteristics of the shock absorber:

The cam 56 is angularly displaceable relative to the shaft 34 in the direction of arrows D in response to angular displacement of the actuation shaft 58. ...[T]he shaft is axially displaceable along its longitudinal axis 38 relative to the piston in response to angular displacement of the cam 56 against the end 34.4 of the shaft 34. ...The actuation shaft 58 is angularly displaceable by operation of the lever 60. ...

Accordingly, **shaft 34 acts as a damping adjuster**, restriction component 44 acts as a variable restriction flow restrictor and **actuator arrangement 54 acts as a damping adjuster driver.**

Ex. 1005, 8:9-34 (emphasis added); *see also* Ex. 2016, ¶¶33-34. This also reveals the falsity of Petitioner’s assertion that its proffered addition of the tapered surfaces of slider 43 from JP’279 is not applied across the entirety of cam surface 56 (Reply, 14), as seen in the following images from the Petition and Dr. Slocum’s “exemplary” models of the proffered combination:



Petition, 65; Ex. 1003, ¶¶ 93-96 (red lines and brackets added for emphasis).

Regardless, the tapered surfaces of slider 43 in JP’279 simply provide the same full range damping functionality as the unmodified cam surface 56 of Fox, described in JP’279:

Rotationally driving motor 47 rotates feed axle 50 via gears 48, 49, therefore slider 43 moves in the radial direction, and push rod end 33, which contacts slider 43 tapered surface 44 at its back end, and push rod 34, which contacts tapered surface 45 at its back end, advance or retract; ...the advancement or retraction of push rod 34 causes needle 35 to advance or retract so that the extension-side damping force

changes, **permitting the compression-side damping force and extension-side damping force to be implemented by the movement of a single slider 43. ...**

As explained above, the hydraulic shock absorber damping force adjustment mechanism of Claim 1 disposes **a single slider...; two sloped surfaces of differing angles are formed on this slider; ...such that the amount of displacement of the two adjustment rods differs with the rotation of the motor, therefore there is no need to increase the number of motors or sliders, and the apparatus can be made compact without added complexity, making it advantageous in both weight and cost.**

Ex. 1007, 5-6 (emphasis added). As stated in JP'279, the slider 43 has two tapered surfaces: one for compression side damping force and the other for extension (rebound) side damping force. Those two tapered surfaces are presented as having differing angles (slope), such that incremental movements of the slider 43 will provide a different amount of damping force comparatively between the two sloped surfaces. *See* Ex. 2016, ¶84.

As previously noted, Petitioner incorrectly asserts that the “open” position of Fox corresponds to every position of the valve actuating assembly other than the closed position. This “open position,” as Petitioner and Dr. Slocum acknowledge, is tunable. *See, e.g.,* Petition, 11; Ex. 1003, ¶35. However, nothing in Fox or JP'279 (or, for that matter, nothing in the Petition, Reply, or Dr. Slocum's declarations) indicates that the sloped surfaces of slider 43 in JP'279 would provide “finer” adjustments that the entirety of cam surface 56 of Fox. *See generally* Exs. 1005,

1007; *see also* Ex. 2016, ¶86 (“the sizes of Fox’s camshaft **34** and JP’279’s slider **43** (and the slope of tapered surface **44**) *are unstated*. As a result, *neither Petitioner nor Dr. Slocum nor anyone else knows* what the relative levels of fineness of Fox’s and JP’279’s adjusters would be.”) (emphasis in original). Rather, Petitioner’s “fine tuning” argument is premised on nothing more than the single use of the term “fine adjustment” in JP’279. *See* Ex. 1007, 6; Petition, 66-67; Reply, 16.

As Dr. Parnell explained, the concept of “fine” tuning is a relative term. In the context of JP’279, the “fine” tuning refers only to the difference in the amount of tuning provided by the two adjuster rods moved by the sloped surfaces of slider 43. Ex. 2016, ¶87. As a result, injecting the tapered slider 43 of JP’279 to the cam surface 56 of Fox adds nothing meaningful to the functionality of Fox. Rather, doing so would serve only to provide two separate (and thus unnecessarily complex) ways to achieve the exact same full range of damping forces — *i.e.* all of the positions of the valve actuating assembly.

Dr. Slocum attempts to rectify the Petition’s shortcoming in his supplemental declaration, asserting for the first time that “a POSITA would have clearly understood from the disclosure of Fox, switching between the open and closed compression damping settings/positions would provide a coarse adjustment of damping characteristics.” Ex. 1017, ¶21. Beyond maintaining the false premise of Fox having only two (open and closed) positions, this is a wholly new argument not

found in the Petition. Indeed, the word “coarse” appears nowhere in Dr. Slocum’s original declaration. *See generally* Ex. 1003.

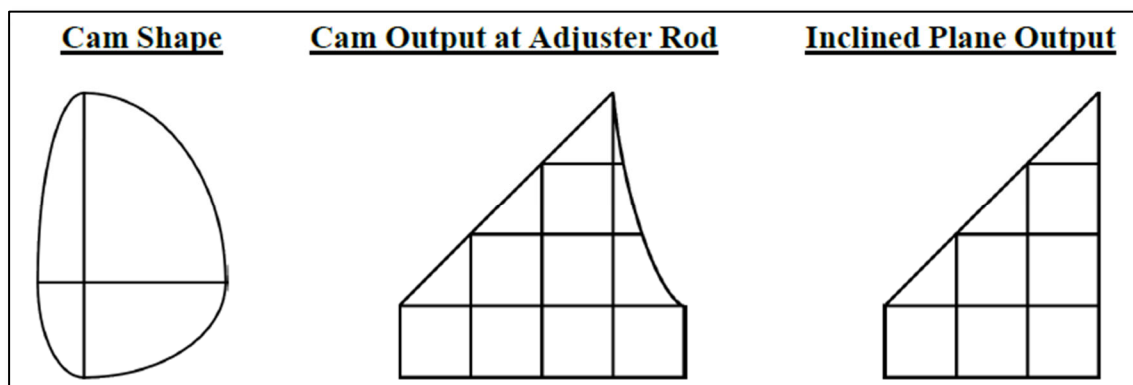
Regardless, Dr. Slocum provides no justification for his coarseness assertions beyond conclusory statements that “a POSITA would know.” Dr. Slocum never explains any differences between the purported “coarseness” of Fox’s cam surface 56 against the purported “fineness” of JP’279’s tapered slider, despite the fact that Dr. Parnell previously pointed out this shortcoming. *See* Ex. 2016, ¶¶86-87. Dr. Slocum’s supplemental declaration fails to correct this flaw in the Petition and the Board should reject Ground II for this reason as well.

C. Petitioner’s New Arguments in Support of Its Proffered Motivation to Combine Also Fail

As explained above and in Dr. Parnell’s Declaration (Ex. 2016), the size and shape of the cam surface 56 in Fox and tapered surfaces of slider 43 in JP’279 will directly affect the level of fineness of the damping characteristics. But the size and shape of those surfaces are unstated in the references. Ex. 2016, ¶86. The Petition wholly ignored this and failed to provide a justifiable basis to conclude a POSITA would somehow have been motivated to inject JP’279’s slider 43 onto Fox’s cam surface 56. *See* POR, 36-43; Ex. 2016, ¶¶81-88.

As explained in detail by Dr. Parnell, the size and shape and of the cam surface 56 of Fox and the slider 43 of JP’279 are not defined and thus can be adjusted such

that they “would provide the same linear ‘fine’ or ‘coarse’ tuning.” Ex. 2016, ¶¶85-87. Dr. Parnell further explained that, as a result, “there is no inherent benefit to using one adjuster over the other because each adjuster may be designed to provide the exact same (or nearly the same) output.” *Id.* Dr. Parnell provided the following drawings to demonstrate the relative “fineness” of the cam surface and slider adjustment mechanisms:



Id., ¶85.

In reply, Petitioner provides no substantive response or rebuttal of any kind. Instead, they present nothing more than conclusory and unsupported assertions regarding the purported “understanding[s]” of a POSITA about the “coarseness” of Fox’s cam surface. *See* Reply, 17. Indeed, Dr. Slocum merely restates verbatim the attorney arguments presented in the Reply regarding what a POSITA would “understand.” *Compare* Reply, 14 with Ex. 1017, ¶21, and Reply, 16-17 with Ex. 1017, ¶22. “Coarse” appears nowhere in Dr. Slocum’s original declaration or the

Petition and was thus clearly never part of Petitioner's originally proffered motivation to combine. The Board should therefore ignore these conclusory expert assertions, which are insufficient as a matter of law. *See, e.g.*, IPR2022-00624, Paper 12, 5; *TQ Delta*, 942 F.3d at 1359.

The plain language of JP'279 also contradicts the Reply's new assertion that both sloped surfaces of JP'279's slider 43 are providing a "fine adjustment capability" for compression and rebound damping characteristics, advantageous "over having no wedge." Reply, 16. The term "fine adjustment" appears but once in JP'279, and this singular usage is for the embodiment of claim 2 of JP'279. Ex. 1007, 6. In this embodiment, one adjustment rod is used to "adjust the bypass oil passage opening surface area of a hollow rod **at the needle portion[.]**" *Id.* (emphasis added). The "other adjustment rod" adjusts "the blowout load of a pressure-side valve disposed in an oil passage inside a piston at the tip portion thereof." *Id.* One of these adjustment rods contacts "**the more gently sloped surface** of the two sloped surfaces of the slider *relative to the back end of the other adjustment rod.*" *Id.* JP'279 then makes clear that "fine adjustment amounts **can be achieved at the needle portion**" because "**the adjustment range at the needle portion can be made smaller** than the adjustment range of the pressure-side valve blowout load"—*i.e.* the adjustment rod having the "needle portion" is characterized as providing "fine adjustment amounts" *relative to* the other adjustment rod. *Id.*

(emphasis added); Ex. 2016, ¶87. The Reply’s self-serving assertions that both sloped surfaces provide such “fine” adjustment are thus without merit and provide no support to Petitioner’s proffered motivation to combine.

In short, Fox and JP’279 each provide a full range of damping characteristics. The difference between the two references is that those damping characteristics are controlled in different ways — Fox by rotating a cam surface and JP’279 by linearly moving a tapered slider. The “fineness” of each method is unstated, and there is no basis in the record to assume one is “finer” than the other. To the contrary, as Dr. Parnell explained, the “fineness” of each is determined by the size and shape of the cam surface or slider, which is ultimately within the control of the manufacturer. Accordingly, Petitioner and its expert fail to establish a valid reason that a POSITA would have been motivated to inject the tapered slider of JP’279 into Fox’s valve actuating assembly. Ground 2 thus fails for these additional reasons.

IV. PETITIONER’S ALTERNATIVE PROPOSED COMBINATION OF YI, JP’279, AND NAGAI ALSO FAILS TO RENDER ANY CHALLENGED CLAIM OF THE ‘207 PATENT OBVIOUS (GROUND III)

Ground 3 effectively replaces the shock absorber structures of Fox relied upon in Ground 2 with the corresponding structures of Yi, another reference that the experts agree is exemplary of the prior art distinguished in the Background section of the ‘207 Patent. Ground 3 thus suffers the same infirmities as Ground 2. Like

Fox, Yi already provides a full range of damping characteristics and substitution of JP'279's sloped slider adds no meaningful functionality or damping abilities. As above regarding Ground 2, there is no lack of "fineness" in the damping characteristics of Yi, and a POSITA thus would not be motivated to inject the sloped slider of JP'279 and accompanying motors and gears into Yi. Ground 3 thus fails as well.

A. The Petition's Stated "Fineness" Motivation to Combine Is Without Merit

The Board previously noted that the Petition asserted only "implicitly" that the damping adjustments of Yi are "not as fine" as JP'279's. ID, 32. The Reply now asserts for the first time that a POSITA would have known that Yi provided only "coarse" adjustments of damping characteristics via three compression damping positions. Reply, 23 (citing Ex. 1017, ¶29). Once again, Dr. Slocum mirrors the words of the lawyers' arguments with no actual evidence or analysis. Ex. 1017, ¶29; *compare* Petition, 71 *with* Ex. 1003, ¶20. Such conclusory expert testimony is simply insufficient. *See, e.g., TQ Delta*, 942 F.3d at 1359.

In contrast, Dr. Parnell explained in detail why Dr. Slocum and Petitioner's "coarseness" assumptions (based on a single usage of the word "fine" in JP'279 regarding the differing slopes of slider 43) are incorrect. *See* Ex. 2016, ¶¶82–87.

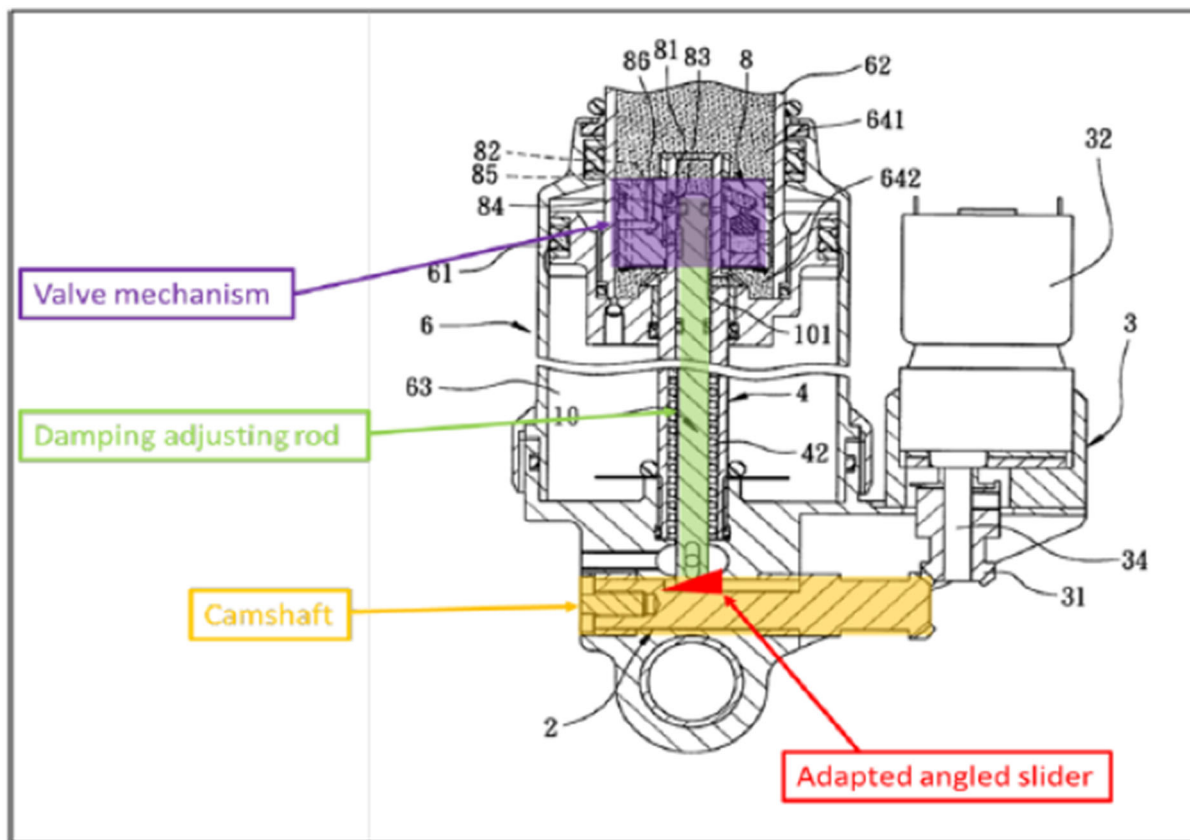
Moreover, Dr. Parnell explained that, like in Fox, the cam in Yi is capable “of providing the exact same...levels of tuning” provided by JP’279’s tapered surface 44. Ex. 2016, ¶105; Ex. 1018, 97:17-21, 101:22-102:6 (detent responsible for positioning of continuous cam). Yi’s cam and lever may position Yi’s adjusting rod 10 to any position between the “*at least* three compression damping positions corresponding to low-velocity (first), medium-velocity (second), and high-velocity (third) flows.” Reply, 20-21 (emphasis added). Nothing in Yi teaches that Yi’s cam has *only* these three positions. On the other hand, Dr. Parnell opined that Yi’s lever provides the same range of adjustment around the medium-velocity position as would the convoluted and unnecessary addition of a JP’279’s tapered surface 44. See Ex. 2016, ¶¶103-107, 115.

Ultimately, Petitioner provides no real evidence that a POSITA would have been motivated to recreate the inventions of the ‘207 Patent based on Yi, JP’279, and Nagai. Conclusory assertions from a paid generalist expert add nothing.³

³ Ironically, the portion of Yi relied upon by Petitioner to provide a purported motivation to combine is Yi’s description of the shortcomings of prior art shock absorbers that Yi specifically states were overcome by its invention. Ex. 1006, 1:10-21. Beyond that, Petitioner relies only on boilerplate language included in nearly every patent application that “modifications” can be made without “departing from the spirit of the present invention.” Such generic language would not provide a motivation for a POSITA to reconstruct the inventions of the ‘207 Patent.

B. The Proposed Injection of JP'279's Slider Would Render Yi's Shock Absorber Inoperable

Beyond Petitioner's failure to articulate and support a valid motivation to combine, Petitioner's final proposed combination fails for an additional reason—it would render the suspension system of Yi inoperable. In response to the shortcomings identified in the POR, Petitioner posited in the Reply that a POSITA could inject the sloped surface of JP'279's slider onto Yi's camshaft in Figure 6:

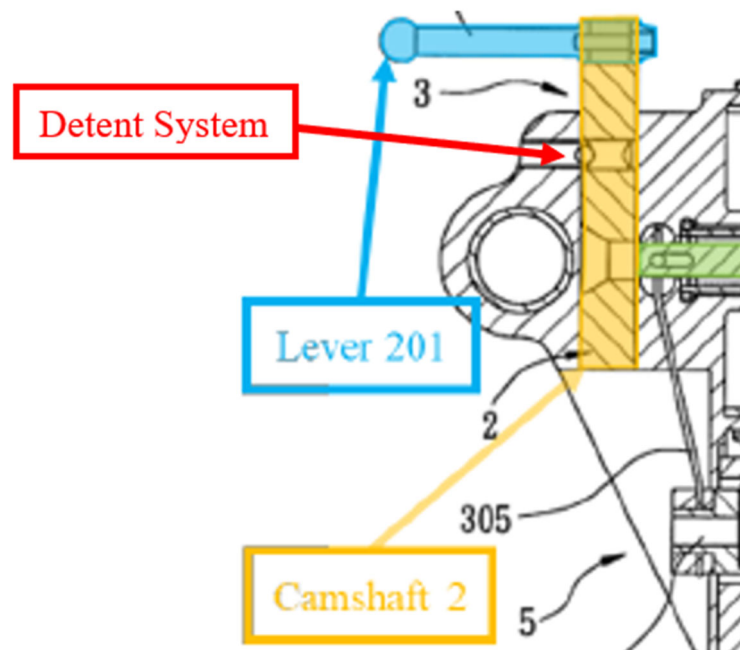


Reply, 22. Petitioner further asserts that a POSITA would have included a “mechanism for axially displacing Yi’s camshaft 2” to engage the “angled slider” in the above figure. Reply, 21 (citing Ex. 1003, ¶¶133-134). But neither the Petition

nor the Reply explains how a POSITA would do so. Instead, Petitioner and Dr. Slocum conclusorily state that a POSITA simply would have “known how” to do it. *See* Reply, 24; Ex. 1017, ¶26; Ex. 1003, ¶134. *See also* Ex. 2016, ¶¶109-110.

Petitioner’s lack of detail is readily explainable. The camshaft 2 **cannot** be moved axially (left or right) in the above figure as Petitioner posits, given the fixed location of Yi’s driving unit 32 and associated geared coupler 31. Axial movement of camshaft 2 would interfere with other parts and disconnect the driving unit from its coupler. The proffered combination would be inoperable.

Likewise, the Reply is silent as to how the detent system shown in Yi’s Figure 12 would operate if the camshaft 2 were axially displaced as Petitioner argued in the Petition, or how or why Figures 6 and 12 would be combined:



Petition, 65 (red annotation added); *see also* Ex. 1018, 97:17-21, 101:22-102:6. And, like the proffered combination premised on Yi's Figure 6 discussed above, the camshaft cannot axially move (up or down) given the structure and location of Yi's up-flow adjusting unit 5.

This is not the type of purported "automaton" or "ordinary creativity" problem Petitioner alleges in its Reply. Reply, 25. Stated simply, the proposed combination would be non-operable, and a POSITA would not be motivated to make such modifications. *See, e.g., McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1354 (Fed. Cir. 2001) (combination that produces a "seemingly inoperable device" insufficient). Ground 3 fails for this independent reason as well.

V. CONCLUSION

Patent Owner respectfully requests that the Board reject Grounds 1 through 3 and confirm the patentability of the Challenged Claims.

Date: March 20, 2025

Respectfully Submitted,

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CERTIFICATE OF SERVICE

The undersigned certifies that a copy of the foregoing Patent Owner Sur-Reply were served by email at the following address of record for the Petitioner's Counsel on March 20, 2024:

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CERTIFICATE OF COMPLIANCE

Under 37 C.F.R. § 42.24(d), the undersigned certifies that this Patent Owner Sur-Reply complies with the type-volume limitation of § 42.24(c) because Microsoft Word counts 5,577 words, excluding the parts of the Response exempted by § 42.24(c).

This paper also complies with the typeface requirements of 37 C.F.R. § 42.6(a)(2)(ii) and the type style requirements of 37 C.F.R. § 42.6(a)(2)(iii) and (iv).

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