

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SRAM, LLC,

Petitioner,

v.

FOX Factory, Inc.,

Patent Owner.

U.S. Patent No. 9,739,331 B2

Filing Date: August 10, 2015

Issue Date: August 22, 2017

Title: METHOD AND APPARATUS FOR AN ADJUSTABLE DAMPER

Case No. IPR2023-01301

PETITION FOR *INTER PARTES* REVIEW

TABLE OF CONTENTS

I.	PRELIMINARY STATEMENT	1
II.	PROSECUTION HISTORY	7
III.	CLAIM CONSTRUCTION	8
IV.	THE APPROPRIATENESS OF <i>INTER PARTES</i> REVIEW	12
A.	The Petition’s Reasonable Likelihood of Success	12
B.	The <i>Fintiv</i> Factors Weigh in Favor of Institution	13
C.	Institution Is Warranted Because the Prior Art Relied Upon by Petitioner Was Neither Considered Nor Used During Prosecution of the ‘331 Patent.	14
V.	CLAIMS 1-8 OF THE ‘331 PATENT ARE UNPATENTABLE	17
A.	Ground I: Claims 1 Through 3 and 5 Are Anticipated by <i>Kojima</i>	17
1.	<i>Kojima</i> discloses an air bleed assembly on a vehicle suspension fork located above an internal oil bath.	17
2.	Independent Claim 1	20
3.	Dependent Claim 2.....	31
4.	Dependent Claim 3.....	32
5.	Dependent Claim 5.....	34
B.	Ground II: Claims 1 Through 8 Are Rendered Obvious Under 35 U.S.C. § 103 by <i>Becker</i> in View of <i>Bruckbauer</i>	35
1.	<i>Becker</i> discloses a conventional suspension fork with an internal oil bath and air chamber.	35
2.	<i>Bruckbauer</i> discloses an air bleed assembly.....	38

3.	It would have been obvious to a POSITA to modify <i>Becker</i> with <i>Bruckbauer</i> , thereby yielding the subject matter of claims 1-8.....	40
4.	Independent Claim 1	47
5.	Dependent Claim 2.....	60
6.	Dependent Claim 3.....	60
7.	Dependent Claim 4.....	62
8.	Dependent Claim 5.....	63
9.	Dependent Claim 6.....	64
10.	Dependent Claim 7.....	66
11.	Dependent Claim 8.....	67
C.	Ground III: Claims 5 and 6 Are Rendered Obvious Under 35 U.S.C. § 103 by <i>Becker</i> in View of <i>Bruckbauer</i> , and Further in View of <i>Danter</i>	68
1.	<i>Danter</i> discloses a die-cast procedure.	68
2.	It would have been obvious to a POSITA to modify <i>Becker</i> and <i>Bruckbauer</i> with <i>Danter</i> 's die-cast procedure, thereby yielding the subject matter of claims 5-6.....	69
3.	Dependent Claim 5.....	69
4.	Dependent Claim 6.....	70
D.	Ground IV: Claims 1 Through 8 Are Rendered Obvious Under 35 U.S.C. § 103 by <i>Kojima</i> in View of <i>Bruckbauer</i> , and Further in View of <i>Danter</i>	70
1.	<i>Kojima</i> discloses a conventional suspension fork with an internal oil bath that includes a gas.....	70
2.	<i>Bruckbauer</i> discloses an air bleed assembly.....	70

3.	It would have been obvious to a POSITA to modify <i>Kojima</i> with <i>Bruckbauer</i> , thereby yielding the subject matter of Claims 1-8.	71
4.	Independent Claim 1	74
5.	Dependent Claim 2.....	80
6.	Dependent Claim 3.....	80
7.	Dependent Claim 4.....	83
8.	Dependent Claim 5.....	84
9.	Dependent Claim 6.....	84
10.	Dependent Claim 7.....	87
11.	Dependent Claim 8.....	88
E.	Ground V: Claims 3 Through 8 Are Rendered Obvious Under 35 U.S.C. § 103 by <i>Kojima</i> in View of <i>Huang</i>	89
1.	<i>Huang</i> discloses an air bleed assembly.....	89
2.	It would have been obvious to a POSITA to modify <i>Kojima</i> 's air valve with <i>Huang</i> 's air valve, thereby yielding the subject matter of claims 3-8.....	90
3.	Dependent Claim 3.....	91
4.	Dependent Claim 4.....	94
5.	Dependent Claim 5.....	95
6.	Dependent Claim 6.....	96
7.	Dependent Claim 7.....	101
8.	Dependent Claim 8.....	101

VI.	STATEMENT OF PRECISE RELIEF REQUESTED FOR EACH CLAIM CHALLENGED	102
VII.	MANDATORY NOTICES UNDER 37 C.F.R. § 42.8.....	103
A.	Real Party-in-Interest	103
B.	Related Matters.....	103
C.	Lead and Backup Counsel and Service Information.....	103
VIII.	GROUND FOR STANDING.....	104
IX.	CERTIFICATION UNDER 37 C.F.R. § 42.24(d).....	104
X.	CONCLUSION.....	104

APPENDIX OF EXHIBITS

Exhibit	Description
Ex. 1001	U.S. Patent No. 9,739,331 B2 to Becker (“the ‘331 patent”)
Ex. 1002	Declaration of Eric Wang, Ph.D.
Ex. 1003	Declaration of Kevin Wesling
Ex. 1004	File History of the ‘331 patent
Ex. 1005	Japanese Patent App. Pub. No. JP2004345366A to Kojima (“ <i>Kojima</i> ”)
Ex. 1006	U.S. Patent No. 1,174,168 to Kraft (“ <i>Kraft</i> ”)
Ex. 1007	U.S. Patent No. 7,624,752 B2 to Huang (“ <i>Huang</i> ”)
Ex. 1008	U.S. Patent No. 6,592,136 B2 to Becker (“ <i>Becker</i> ”)
Ex. 1009	U.S. Patent No. 7,231,939 B2 to Bruckbauer (“ <i>Bruckbauer</i> ”)
Ex. 1010	European Patent App. Pub. No. EP0979772A2 to Danter (“ <i>Danter</i> ”)
Ex. 1011	U.S. Patent Pub. No. 2012/0080279 A1 to Galasso (“ <i>Galasso</i> ”)
Ex. 1012	Fox Factory, Inc.’s Disclosure of Asserted Claims and Infringement Contentions Related to U.S. Patent Nos. 9,739,331 and 8,550,223, dated Dec. 23, 2022 (including Attachment A), <i>Fox Factory, Inc. v. SRAM, LLC</i> , Case No. 1:23-cv-00313-RM-KLM
Ex. 1013	Fox Factory, Inc.’s Amended Disclosure of Asserted Claims and Infringement Contentions Related to U.S. Patent Nos. 9,739,331 and 8,550,223, dated Mar.16, 2023 (including Attachment A), <i>Fox Factory, Inc. v. SRAM, LLC</i> , Case No. 1:23-cv-00313-RM-KLM

Exhibit	Description
Ex. 1014	Notice of Filing of Joint Disputed Claim Terms Chart, dated Aug. 3, 2023, <i>Fox Factory, Inc. v. SRAM, LLC</i> , Case No. 1:23-cv-00313-RM-KLM
Ex. 1015	Declaration of Michael Hickey

CLAIM LISTING

Claim Element	Claim Language
1[pre]	A lower fork and air bleed assembly combination comprising:
1[a]	a lower fork, said lower fork configured to have a first end coupled to a vehicle wheel, and a second end configured to be telescopically engaged with a first end of an upper fork, said lower fork further comprising:
1[b]	a lower leg seal located at an outermost edge of said second end of said lower fork tube, said lower leg seal configured for sealing closed a gap disposed between said upper fork tube and said lower fork tube when said lower fork is telescopically engaged with said first end of said upper fork, thereby preventing an oil bath lubrication occupying an area within said lower fork tube at a first end of said lower fork tube from leaking from said lower fork; and
1[c]	an upper bushing attached to and positioned adjacent to said lower leg seal; and
1[d]	an air bleed assembly disposed on said lower fork tube, said air bleed assembly configured for equalizing ambient pressure within said lower fork, said air bleed assembly comprising:
1[e]	a fluid passage disposed between an interior of said lower fork and an exterior of said lower fork; and
1[f]	a manually operable valve located in said lower fork and coupled to said fluid passage, said manually operable valve having a first position substantially closing said fluid passage and a second position allowing a fluid to flow between said interior and said exterior, said manually operable valve disposed between said lower leg seal and said first end of said lower fork, and

Claim Element	Claim Language
1[g]	wherein said fluid passage and said manually operable valve are located at a distance from an oil bath lubrication within said lower fork, such that when said manually operable valve is in said second position, most, if not all of said oil bath lubrication remains within said lower fork and such that when trapped air pressure inside said lower fork, that is higher than a local ambient air pressure outside of said suspension fork or shock absorber, is relieved most, of said oil bath lubrication that is within said lower fork remains within said lower fork.
2	The lower fork and air bleed assembly combination of claim 1, wherein said fluid comprises: a gas.
3[pre]	The lower fork and air bleed assembly combination of claim 1, said air bleed assembly further comprising:
3[a]	a valve activator coupled with said manually operable valve, said valve activator comprising:
3[b]	an activation position placing said manually operable valve into said first position; and
3[c]	a deactivation position placing said manually operable valve into said second position, and whereupon when in said activation position, the trapped air pressure in said lower fork is equalized with the local ambient air pressure.
4	The lower fork and air bleed assembly combination of claim 3, wherein said valve activator comprises: a button to select said activation position and said deactivation position.
5	The lower fork and air bleed assembly combination of claim 3, wherein said valve activator is located on a die-cast feature of said lower fork.

Claim Element	Claim Language
6[pre]	The lower fork and air bleed assembly combination of claim 5, further comprising:
6[a]	a diametrical recess; and
6[b]	a sealing o-ring comprising:
6[c]	a sealed position; and
6[d]	an unsealed position,
6[e]	wherein said sealed position seals between said die-cast feature and said lower fork, whereupon when said valve activator is moved from said activation position to said deactivation position, said sealing o-ring moves into said diametrical recess, thereby attaining said unsealed position and letting air pressure by-pass into or out of said lower fork via a vent hole.
7	The lower fork and air bleed assembly combination of claim 3, wherein said manually operable valve comprises: a spring coupled with said valve activator, whereupon when said valve activator is moved into said deactivation position, said spring biases said valve activator toward said first position.
8	The lower fork and air bleed assembly combination of claim 7, wherein said second position comprises: a sealing engagement between said sealing o-ring and a seal bore, wherein when in said sealing engagement, said trapped air pressure does not by-pass into or out of said lower fork.

Petitioner SRAM, LLC (“Petitioner” or “SRAM”) requests IPR of claims 1-8 of the ‘331 patent (Ex. 1001), assigned on its face to Patent Owner Fox Factory, Inc. (“Patent Owner” or “Fox”).

I. PRELIMINARY STATEMENT

The claimed technology of the ‘331 patent is not really “technology” at all – it is simply a hole that can be opened or closed in a suspension device. This is something that has been around for many decades before the filing of the ‘331 patent application. Indeed, motorcycles, bicycles, vehicles, artificial limbs, and other devices have had such holes or openings in their suspension systems for many years, used for purposes of equalizing air, inserting and removing lubricant, and controlling sag, among other things. Obviously, methods of opening and closing those holes have also been around for many decades (e.g., screw plugs, Schrader valves).

Fox’s ‘331 patent labels this hole and associated means for opening/closing the hole with the technical title of an “air bleed assembly” with a “valve”, as if Fox invented something special, which it did not. Ex. 1001 at Abstract, 4:39-6:29. For convenience, throughout this Petition, SRAM uses the same labels utilized by applicant Fox, but there can be no question that what is claimed in the ‘331 patent is simply a small hole or opening in a vehicle suspension fork along with something that helps open and close that hole.

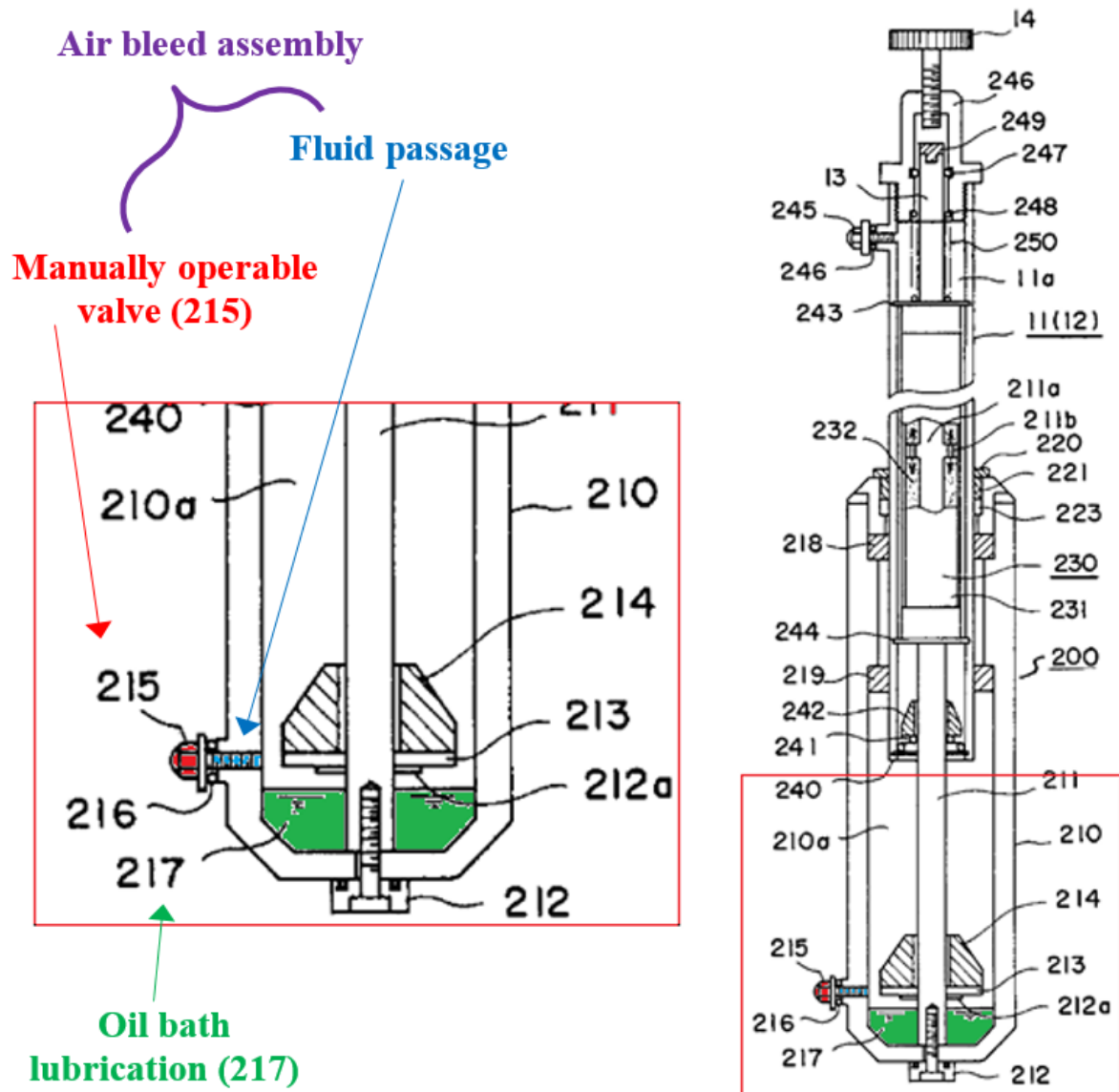
Air bleed systems for releasing trapped air pressure within systems were invented and patented long ago, at least as early as the turn of the 20th century. *See, e.g.*, Ex. 1006. Having such systems on vehicle suspension forks (such as for motorcycles and bicycles) was done for many years before the filing of the ‘331 patent. *See, e.g.*, Exs. 1005 & 1009. As just one example, motorcycles had air bleed holes in the outer/larger tubes of suspension forks for many years. Ex. 1002, ¶30; Ex. 1003, ¶26. It is common sense that removing what restricts the opening of a hole will allow air to pass between two areas. At the time of the initial ‘331 patent filing in May 2012, general motorcycle users and certainly persons of ordinary skill in the art (“POSITAs”)¹ were well-aware that holes or “air bleeds” like those long-

¹ SRAM submits that a POSITA at the time of the initial ‘331 patent filing in May 2012 would have a degree in Mechanical Engineering and at least three years’ experience in vehicle suspension technology, or a Master’s degree in Mechanical Engineering with a concentration in design of vehicle suspension technology and/or shock absorbers. Ex. 1002, ¶33; Ex. 1003, ¶29. SRAM applies this level of ordinary skill herein and submits two expert Declarations in support of this IPR, one from Dr. Eric Wang (a tenured associate professor at the University of Nevada at Reno who

established in the prior art would, when opened, allow air to pass between the inside and outside of the fork (thereby equalizing air pressure) and could also be used for purposes of adding fluid, for maintenance, or for improvements in operation. Ex. 1002, ¶¶31, 73; Ex. 1003, ¶¶27, 69.

One such clear example of an “air bleed assembly” with a “valve” in a vehicle suspension system is Japanese Patent No. JP2004345366A to Kojima (“*Kojima*”) (Ex. 1005), not considered during prosecution of the ‘331 patent and filed years before the ‘331 patent filing. As *Kojima* clearly discloses, the manually operable “valve” of its “air bleed assembly” is located above the resting internal oil bath, as anyone would locate such an opening so that the oil will not leak out when the “valve” is opened:

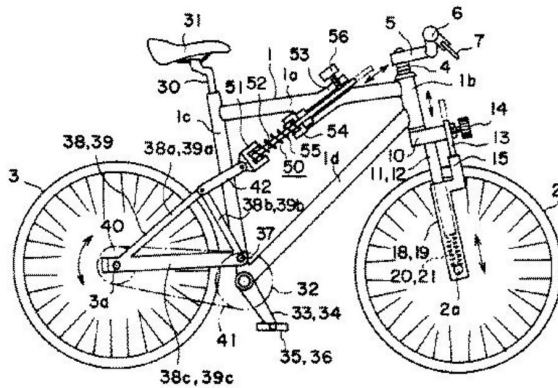
has written over 20 publications on the science of cycling and/or shock absorbers) and the other from Kevin Wesling (Global Director of Advanced Development with a Master’s in mechanical engineering and decades of experience in bicycle component design). Ex. 1002, ¶¶2-7, 33; Ex. 1003, ¶¶3-5, 29.



Ex. 1005, FIG. 9; Ex. 1002, ¶¶31, 57, 73; Ex. 1003, ¶¶27, 53, 69. As shown in Figures 1 and 2 below, *Kojima* disclosed such an air bleed assembly as part of a mountain bike suspension fork:

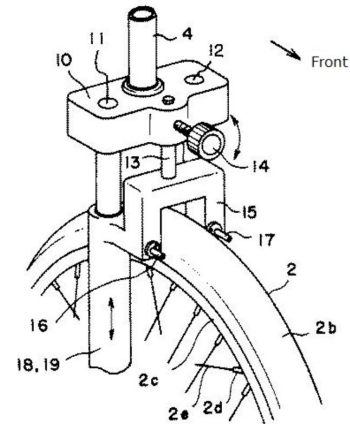
[Fig. 1]

1: Main frame
50: Suspension



The Mountain Bike in the First Embodiment of the Present Invention

[Fig. 2]



The Front Suspension in Fig. 1

The *Kojima* example is identical to the broad claim scope that Fox now asserts. *Id.*; Ex. 1014, at 7. In other words, Fox is asserting to have patented what already existed in prior art not previously considered by the Examiner.²

² To distinguish from the cited prior art after having been rejected six times for its claimed invention, applicant Fox represented to the Examiner that Fox's hole had to be located in a particular position, specifically between the fork's lower leg seal and the bushing that is attached thereto. After obtaining claims based on that specific disclaimer, Fox now asserts that the novelty of its device is more expansive: that its "air bleed" hole can be located anywhere between the lower leg seal and the resting level of an internal oil bath in the fork, just so that oil will not leak out when

The '331 patent claims at issue here broadly claim an apparatus that is simply long-known suspension technology and is not specific to a particular use (*e.g.*, maintenance or improved operation of a specific vehicle) sufficient to distinguish it from what came before. As shown above and further herein, this combination is anticipated by previously undisclosed individual prior art and would have been obvious to a POSITA long before 2012, when the provisional application leading to

the hole is opened. Ex. 1014, at 7. That is the equivalent to claiming that a new gas can's point of novelty was by placing its opening above the gasoline level so that gasoline does not leak out when opened. It is hard to imagine a more common sense, obvious design choice than where to put an opening in a container holding liquid that should not spill. As shown in the prior art cited herein, not considered during prosecution, the location of an "air bleed assembly" anywhere along the length of a vehicle fork above an internal oil level is an obvious, routine optimization that involves nothing more than common sense and mechanical skill and, although the applicant Fox tried to use a unique location to distinguish prosecution-cited prior art, this does not distinguish from the new prior art proffered here. Ex. 1002, ¶¶40, 44-53; Ex. 1003, ¶¶36, 40-49.

the patent was filed. As such, all challenged claims are unpatentable and the Board should institute IPR to cancel these unpatentable claims.

II. PROSECUTION HISTORY

The original '331 patent claims were directed to what was labeled as an “air bleed system” for a suspension fork or shock absorber that simply had a manually operable valve to allow fluid to flow between an interior and exterior of the suspension fork. Ex. 1004, 19. In simple words, the “air bleed” was a hole in the fork that could be opened and closed. The Examiner correctly rejected the claims under U.S. Patent Pub. No. 2012/0080279 to Galasso (“*Galasso*”) (Ex. 1011), which also discloses an air bleed system for a suspension fork or shock absorber. *See* Ex. 1004 at 40-44, 83-97, 125-136, 152-153, 176-191, 224-225. Indeed, the Examiner rejected applicant Fox’s claimed air bleed system, not once, but six separate times. *See id.* Time and time again, applicant Fox contested the Examiner’s reliance on *Galasso*, arguing, unsuccessfully, that its air bleed was different. *See id.* at 55-69, 105-116, 157-171.

Faced with these repeated rejections and even after adding a set of structural limitations to its air bleed, Fox finally made a clear and unmistakable disclaimer to distinguish *Galasso*, requiring that the air bleed assembly be located between the fork’s lower leg seal and upper bushing, at the far end of the fork away from the

internal oil bath. *Id.* at 214-215. However, placing the air bleed assembly in this position was simply an engineering (and not an inventive) choice, with a range of positions for air bleed assemblies known to POSITAs and described in multiple publicly available references long before 2012. Without the benefit of the prior art references described herein, claims 1-8 subsequently issued.

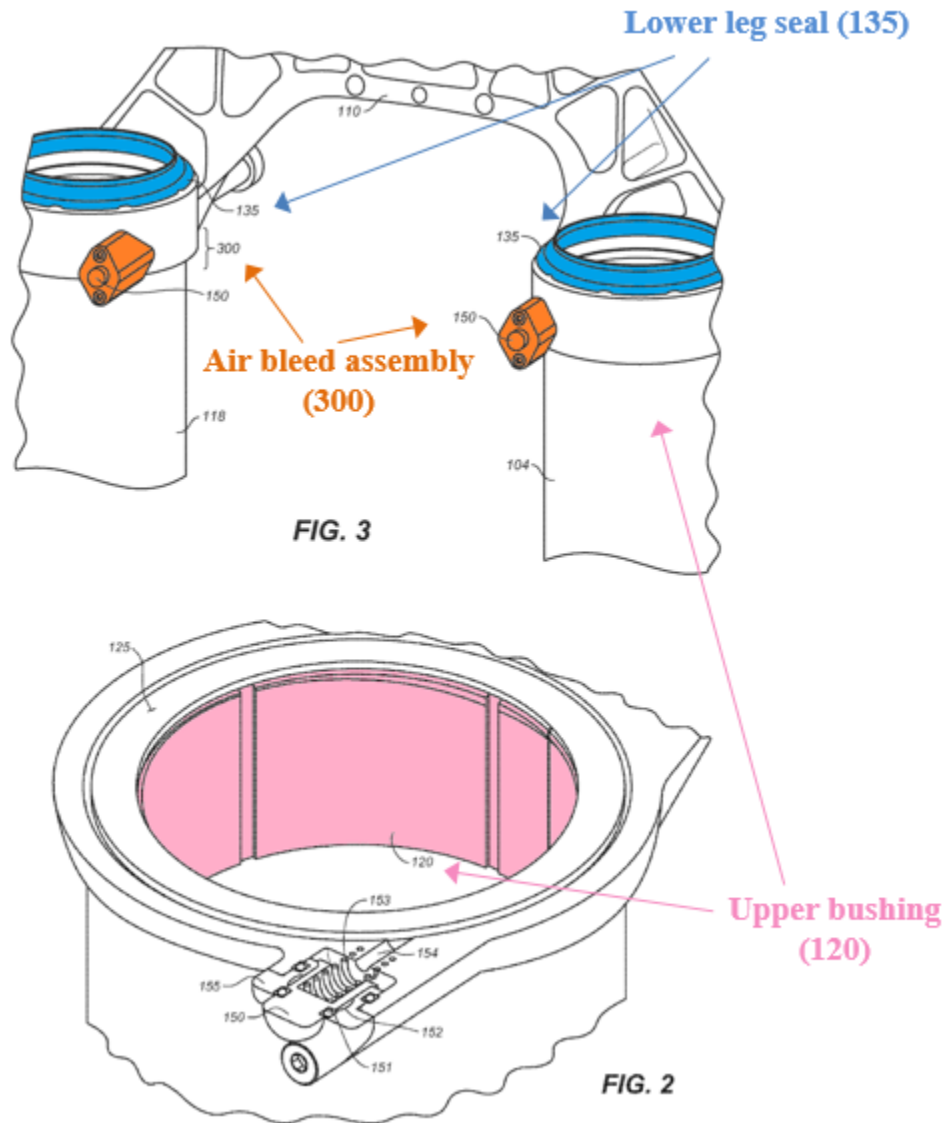
III. CLAIM CONSTRUCTION³

For purposes of this IPR, claim construction is not necessary because the claims of the '331 patent are invalid in view of the prior art regardless of whether Fox's prosecution history disclaimer on the position of the "air bleed assembly" is included in the claim construction.

To be sure, SRAM maintains that, properly construed, the term "air bleed assembly" includes the clear and unmistakable specific location disclaimer adopted by Fox to distinguish the *Galasso* prior art after six (6) rejections by the Examiner, wherein Fox required its location of the air bleed hole in a lower fork to be "located

³ Because the IPR procedure does not permit indefiniteness arguments, SRAM has not raised them here.

between the lower leg seal and the upper bushing,” as shown in the sole embodiment of the ‘331 patent:



Ex. 1002, ¶50; Ex. 1003, ¶46.

As background, the Examiner repeatedly rejected Fox’s claims for an air bleed system associated with a vehicle fork or suspension system, citing the *Galasso*

reference either alone or in combination with other prior art. *See* Ex. 1004, 40-44, 83-97, 125-136, 152-153, 176-191, 224-225. Fox argued over and over against the Examiner's six-fold reliance on *Galasso*, but could not convince the Examiner that Fox's structure was patentable. *See id.*, 55-69, 105-116, 157-171.

In response to the sixth rejection of its air bleed claims, Fox not only amended claim 1 to add further structure but specifically called out the difference between the prior art and the claimed invention: “In contrast to *Galasso*, Applicant's features, as recited in newly amended Claim 1, located its air bleed system in a lower fork, wherein the vent hole is **located between the lower leg seal and the bushing that is attached thereto.**” Ex. 1004, 214 (underlining in original, bold emphasis added).

Notably, Fox not only used this particular location of the air bleed assembly to distinguish the prior art but to tout the purported advantages of its design, stating that “**due to the positioning of Applicant's air bleed system being located directly below the lower leg seal**, ... Applicant's features enable[s] the release of excessive air pressure from the lower fork tube . . . while enabling the oil bath lubrication to remain fairly leveled at the bottom of the lower fork tube, without spraying/leaking out through the open vent hole.” Ex. 1004, 215. This is consistent with the only embodiment of the “air bleed assembly” shown in the ‘331 patent, as shown in figures 2-4, wherein the air bleed assembly 300 is located between the

lower leg seal 135 and the upper bushing 120. Ex. 1002, ¶¶50, *generally* 44-53; Ex. 1003, ¶¶46, *generally* 40-49.

In view of this prosecution history disclaimer, SRAM maintains that “air bleed assembly disposed” should be properly construed as “air bleed assembly located between the lower leg seal and the upper bushing”. Ex. 1014, at 7.

However, the Board does not need to reach such a construction here for purposes of this IPR because any location for the air bleed assembly does not distinguish the prior art cited here, as it is an obvious and common sense design choice to locate the air bleed hole in any range of locations above the oil level. *See* Ex. 1002, ¶¶40, 82-86; Ex. 1003, ¶¶36, 78-82. Moreover, because Fox asserts infringement of SRAM’s suspension forks with air bleed holes outside the location between the lower leg seal and upper bushing, the ‘331 patent claims are clearly anticipated and rendered obvious if the claims are broad enough to cover the SRAM products Fox accuses of infringement, as set forth in Exs. 1012 and 1013. In this respect, SRAM disagrees with Fox’s charting of its claims compared to SRAM’s products, but uses them for purposes of this Petition, irrespective of how “air bleed assembly” is ultimately construed.

As to any remaining claim terms, the Board should construe them in accordance with the ordinary and customary meaning of such claim terms as

understood by one of ordinary skill in the art.⁴ *See* 37 CFR § 42.100(b); *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

IV. THE APPROPRIATENESS OF *INTER PARTES* REVIEW

A. The Petitioner’s Reasonable Likelihood of Success

This petition easily meets the threshold that a petition for *inter partes* review must demonstrate “a reasonable likelihood that the Petitioner would prevail with

⁴ Fox has taken the position in the trial court that certain claim terms should be construed to correct alleged “errors” in the ‘331 patent. *E.g.*, Ex. 1014, at 10-11. SRAM disagrees with Fox that claim construction should be used as a vehicle to rewrite claims and maintains that the ordinary and customary meaning of claim terms should control. *Id.* at 9-11; *see also* Ex. 1002, ¶11 n.1 (noting that “valve activator” is not required to necessarily be separate from the “manually operable valve” in dependent claim 3); Ex. 1003, ¶9 n.1 (same). However, as with “air bleed assembly,” claim construction of these other terms is not strictly necessary here because, even assuming *arguendo* that Fox’s revisionist constructions were adopted for these other terms, its claims are still invalid in view of the new references discussed herein.

respect to at least one of the claims challenged in the petition.” 35 U.S.C. § 314(a). Here, all of the elements of Claims 1-8 are disclosed in the prior art as explained below, and, where necessary, reasons to combine the prior art teachings and/or disclosures are established for each proposed ground under pre-AIA 35 U.S.C. § 103, applicable here based on the filing date of the initial patent application giving rise to the ‘331 patent.

B. The *Fintiv* Factors Weigh in Favor of Institution

Here, the factors set forth in *Apple Inc. v. Fintiv Inc.*, No. IPR2020-00019, 2020 WL 2126495 (PTAB Mar. 20, 2020) (“*Fintiv*”) weigh in favor of the Board instituting review in accordance with 35 U.S.C. § 314(a). Here, there is a parallel District Court proceeding involving the ‘331 patent and the same parties. However, no trial date has been set in the underlying case. Moreover, the claim construction process has just begun, the District Court has not provided any analysis of prior art invalidity issues, and the parties are only in the preliminary stages of discovery (with Fox’s motion for preliminary injunction having already been denied by the District Court). Ex. 1015, ¶15.

The merits of the Grounds presented herein are compelling and clear evidence of the unpatentable nature of the ‘331 patent claims. Where the Board “determines that the information presented at the institution stage presents a compelling

unpatentability challenge, that determination alone demonstrates that the PTAB should not discretionarily deny institution under *Fintiv*.” USPTO Memorandum, Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (June 21, 2022). Because the factors clearly favor instituting review of the ‘331 patent, the Board should exercise its discretion to institute under 35 U.S.C. § 314(a).

C. Institution Is Warranted Because the Prior Art Relied Upon by Petitioner Was Neither Considered Nor Used During Prosecution of the ‘331 Patent.

The new prior art references relied upon by SRAM, alone or in combination, did not form the basis for any rejections of the ‘331 patent, favoring institution.

The Board has consistently “held that a reference that ‘was neither applied against the claims nor discussed by the Examiner’ does not weigh in favor of exercising [] discretion under §325(d).” *Fasteners for Retail, Inc. v. RTC Indus., Inc.*, IPR2019-00994, Paper 9 at 7-11 (PTAB Nov. 5, 2019). Here, the prior art references were not considered or used by the Examiner during prosecution, and the arguments presented herein are neither the same nor substantially the same as those considered during prosecution.

In *Becton Dickinson*, the Board instituted review and distinguished a situation where, like here, prior art was never considered during prosecution. *Becton*,

Dickinson & Co. v. B. Braun Melsungen AG, IPR2017-01586, Paper 8, at 17-18, 23 (PTAB Dec. 15, 2017). The Board weighed a non-exclusive list of six factors:

- (1) the similarities and material differences between the asserted art and the prior art involved during examination;
- (2) the cumulative nature of the asserted art and the prior art evaluated during examination;
- (3) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis of rejection;
- (4) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art;
- (5) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and
- (6) the extent to which additional evidence and facts presented in the Petition warranted reconsideration of the prior art or arguments.

Becton, Dickinson at 17-18, 23 (PTAB Dec. 15, 2017).

Regarding *Kojima, Becker, Bruckbauer, Huang, and Danter* (collectively the “IPR Prior Art”), factors 1 and 2 of *Becton Dickinson* clearly favor institution because the IPR Prior Art’s disclosures are unlike those considered during

prosecution. *Kojima* discloses a suspension system that has on-the-fly user-adjustable characteristics. Ex. 1005, ¶¶[0024]-[0025]. Similarly, *Bruckbauer* discloses an air bleed system that allows air to pass through the fork. Ex. 1009, Abstract. *Becker* discloses a suspension fork having a specialized damper valve. Ex. 1008, 1:7-10, 48-67. *Danter* discloses a suspension fork having integrated features for accommodating brake actuating systems, wherein the fork may be cast of metal materials. Ex. 1010, 4:18-20; Abstract. *Huang* discloses an improved air “inflation valve that automatically releases surplus high-pressure air when an object is excessively inflated via the inflation valve.” Ex. 1007, 1:6-8. None of the specific issues or technologies disclosed in the IPR Prior Art were addressed during prosecution, and, therefore, factors 1 and 2 of *Becton Dickinson* favor institution.

Factors 3 and 4 also favor institution. Because the IPR Prior Art was not cited at all during prosecution, the Examiner did not consider any of the references, nor did Fox distinguish over any. Factors 5 and 6 simply do not apply because the Examiner did not previously consider any of the IPR Prior Art.

All six *Becton Dickinson* factors weigh in favor of institution, in accordance with 35 U.S.C. § 325(d).

V. CLAIMS 1-8 OF THE '331 PATENT ARE UNPATENTABLE

A. Ground I: Claims 1 Through 3 and 5 Are Anticipated by *Kojima*

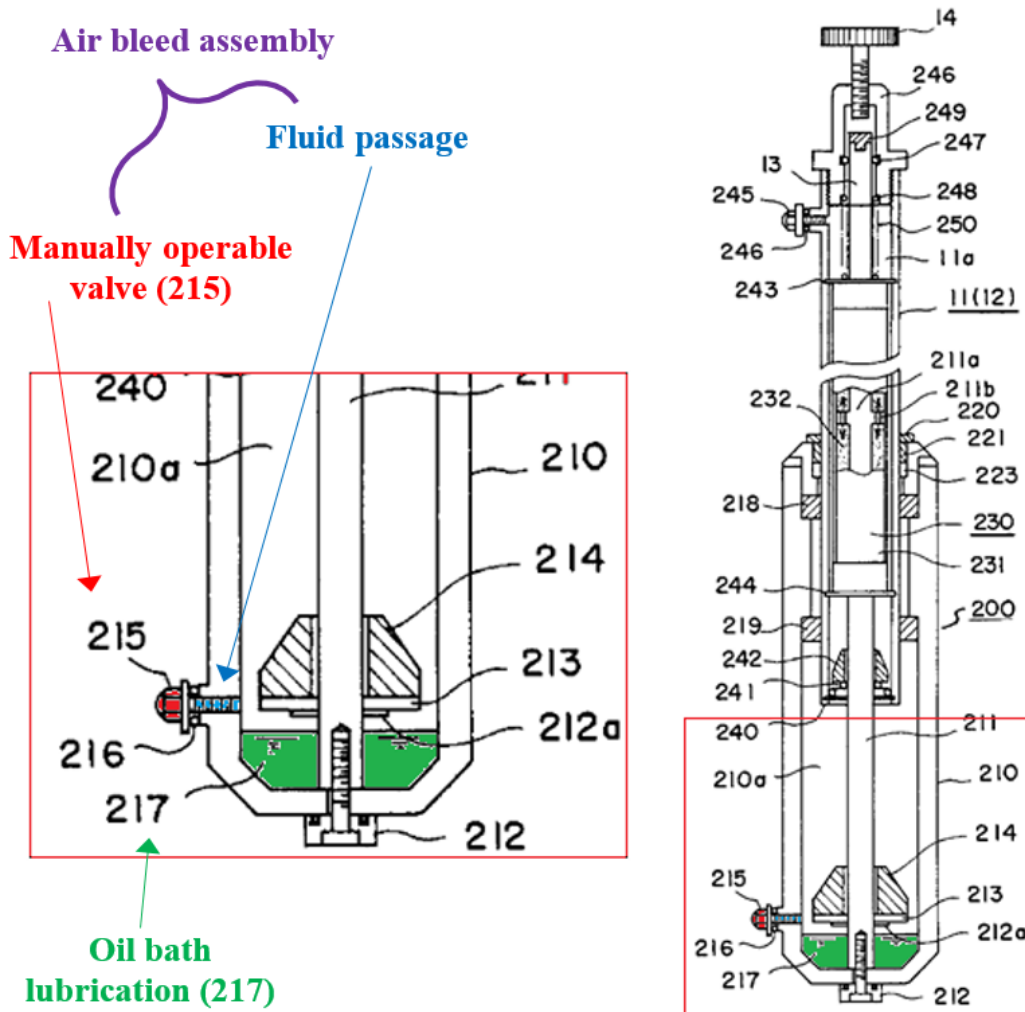
1. *Kojima* discloses an air bleed assembly on a vehicle suspension fork located above an internal oil bath.

The provisional patent application for what became the '331 patent was filed on May 9, 2012. Japanese Patent App Pub. No. JP2004345366A to Kojima ("*Kojima*") is prior art under pre-AIA 35 U.S.C. § 102(b), having been filed on May 19, 2003, and published on December 9, 2004. Ex. 1005.

Kojima discloses an adjustable suspension system including a front vehicle suspension fork **200** having "an air spring-plus-oil damper structure ... mounted on both sides of the front axle **2a**" around the "lower part of [the] bottom case **210**[" Ex. 1005 at Abstract, ¶¶ [0075]-[0076]. *Kojima* explains:

An air valve **215** is screwed into the lower side wall of the bottom case **210** via an o-ring **216** serving as an air seal. The bottom portion inside the bottom case **210** forms an oil bath, and lubricating oil **217** is enclosed in this portion (at, for example, enclosure viscosity of **10** wt to **15** wt) to reduce the sliding resistance and smooth operations between the inner shaft **11** and the slide bushes **218**, **219** and the various seals **220**, **221**, **223**, and to improve the airtightness of the air chamber **210a**.

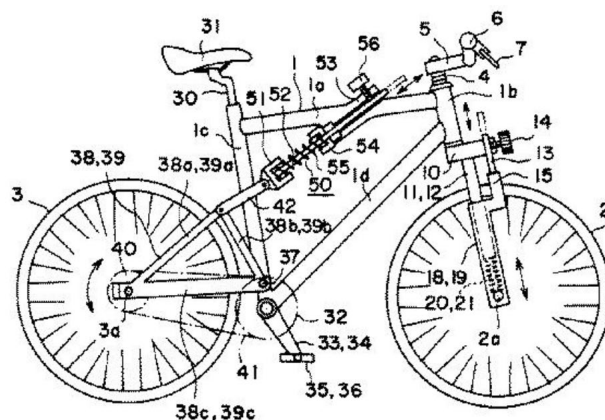
Ex. 1005, ¶[0077]. *Kojima's* Figure 9 shows that top-most portion of the lubricating oil bath 217 is below air valve 215. This arrangement allows for air within *Kojima's* bottom case 210 to pass through air valve 215 without materially disturbing the lubricating oil bath 217.



Ex. 1005, FIGS. 1, 2, 9; Ex. 1002, ¶¶55-57; Ex. 1003, ¶¶51-53. *Kojima's* Figures 1 and 2 show this air bleed assembly on a suspension fork placed on a mountain bike:

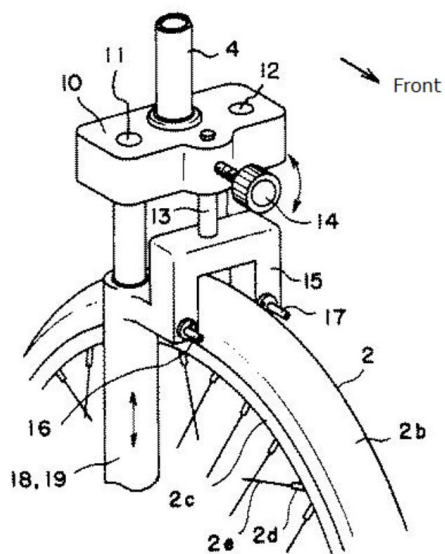
[Fig. 1]

1: Main frame
50: Suspension



The Mountain Bike in the First Embodiment of the Present Invention

[Fig. 2]

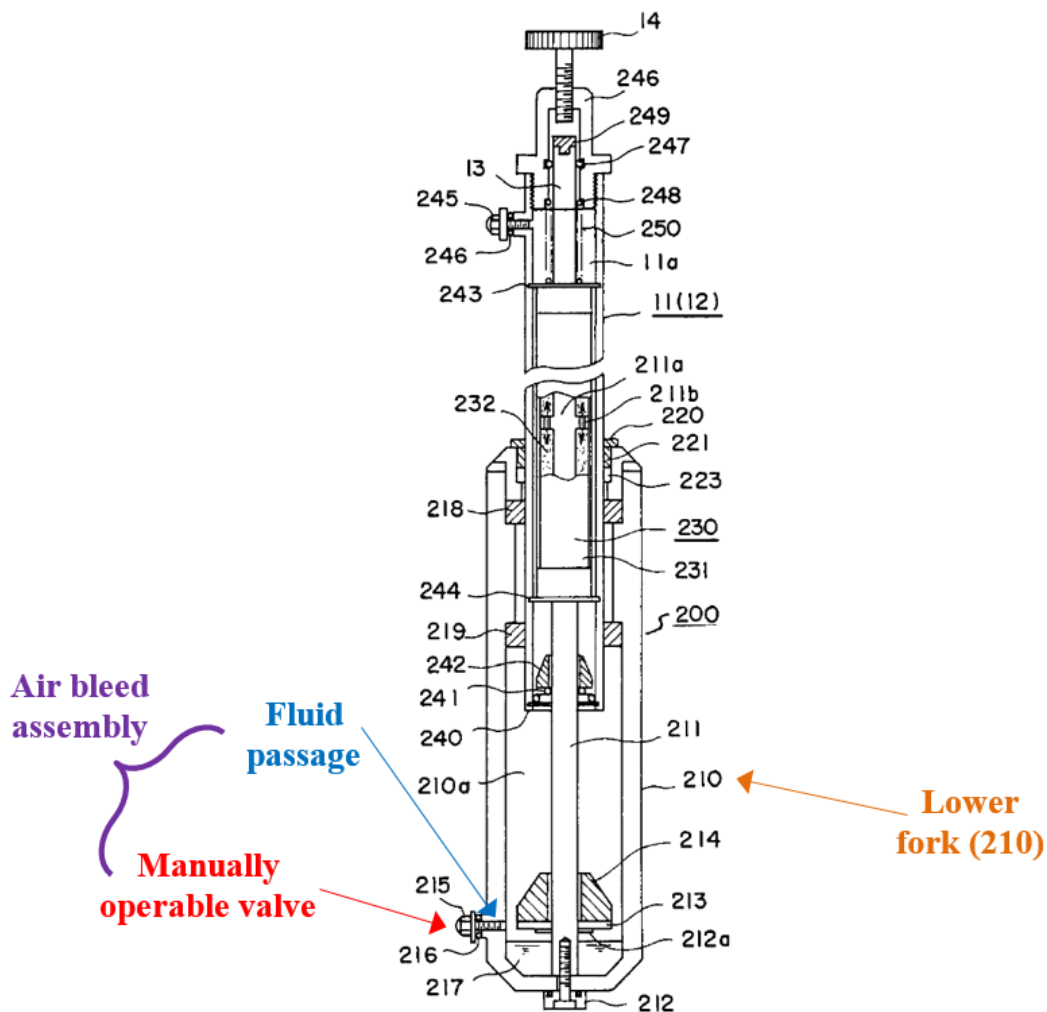


The Front Suspension in Fig. 1

2. Independent Claim 1

(a) Claim 1[pre]

Kojima discloses all elements of this preamble. *Kojima* includes a lower fork **210** (orange arrow) including an air bleed assembly **215, 216** (purple). *Kojima's* Figure 1 shows a “mountain bike” that includes a “front suspension” having a “bottom case **210**” and an “air valve **215**” with “an O-ring **216**” serving as a seal. Ex. 1002, ¶¶92; Ex. 1003, ¶¶88; Ex. 1005, ¶¶[0004], [0077], FIGS. 1, 2, 9.

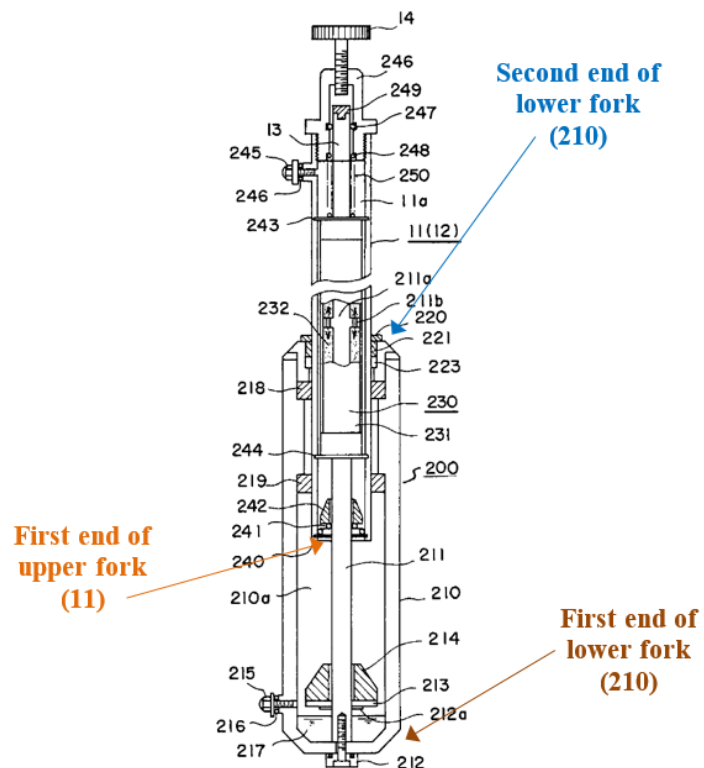


(b) Claim 1[a]

Kojima discloses all elements of this limitation. *Kojima* includes a lower fork **210** configured to have a first end (brown arrow) coupled to a vehicle wheel, and a second end (blue arrow) configured to be telescopically engaged with a first end (orange arrow) of an upper fork **11**. *Kojima* shows a mountain bike having a bottom case (identified as being **18, 19** in Figure 1 and **210** in Figure 9), a front wheel **2**, and inner shafts **11, 12**. “[t]he lower portion of each bottom case **18, 19** is attached to the front axle **2a** at the central portion of the front wheel **2**. The lower ends of the inner shafts **11** and **12** are

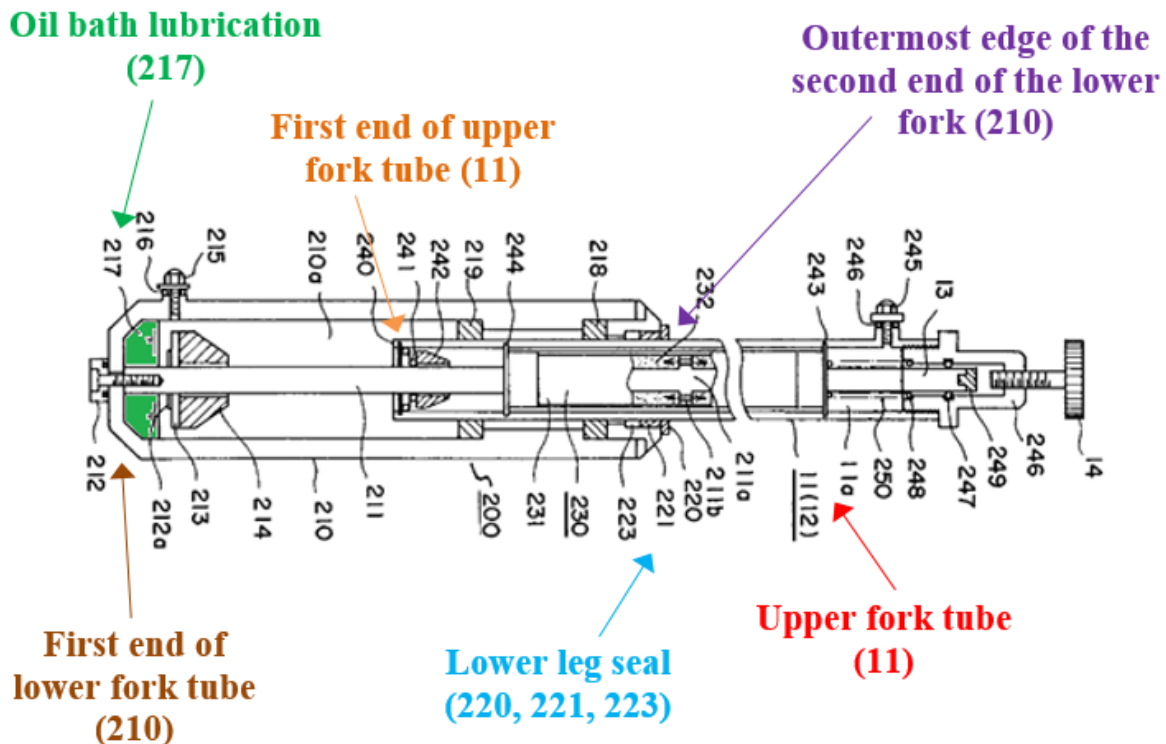
slidably inserted into bottom
cases **18, 19[.]”** Ex. 1005,
¶¶[0023]-[0024], FIGS. 1, 2, 9.

Accordingly, *Kojima's* bottom case (18, 19, 210) may be the recited lower fork and *Kojima's* inner shafts 11, 12 may be the recited upper fork. Ex. 1002, ¶93; Ex. 1003, ¶89.



(c) Claim 1[b]

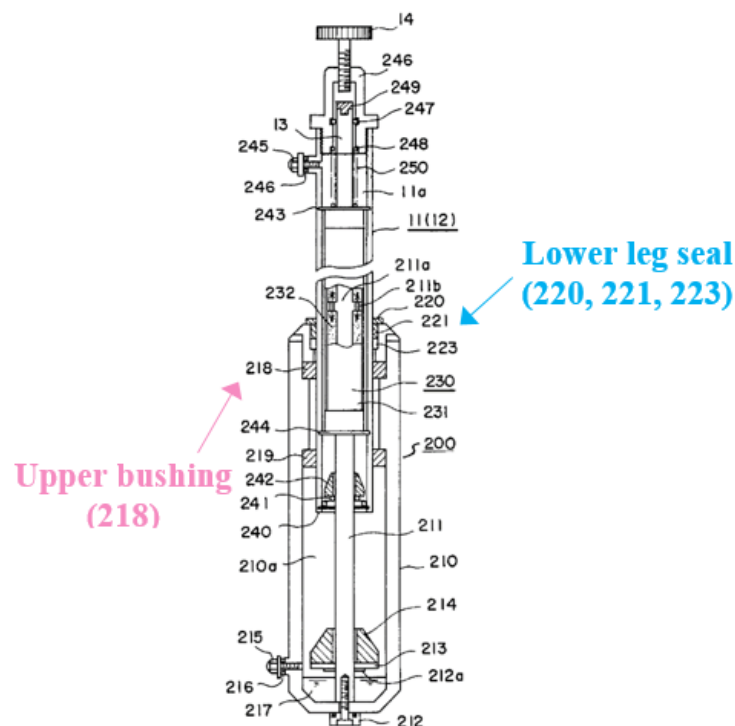
Kojima discloses all elements of this limitation. *Kojima* includes three upper seals **220**, **221**, **223** that comprise a lower leg seal (light blue arrow) located at an outermost edge of the second end (purple arrow) of the lower fork tube **210**, the lower leg seal **220**, **221**, **223** configured for sealing closed a gap disposed between the upper fork tube **11** (red arrow) and the lower fork tube **210** when the lower fork **210** is telescopically engaged with the first end (orange arrow) of the upper fork **11**, thereby preventing an oil bath lubrication **217** (green arrow) occupying an area **210a** within the lower fork tube **210** at a first end (brown arrow) of the lower fork tube **210** from leaking from the lower fork **210**. Ex. 1002, ¶94; Ex. 1003, ¶90.



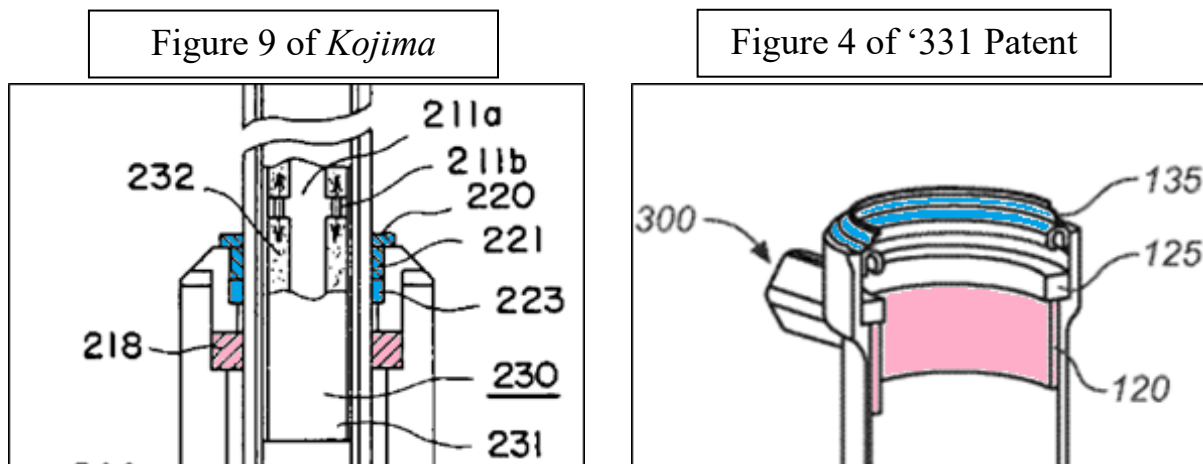
Kojima shows dust seal **220**, air seal **221**, and oil seal **223** all being located at the upper end opening of the bottom case **210** to prevent lubricating oil **217** within the bottom case **210** from leaking. Ex. 1002, ¶95; Ex. 1003, ¶91; Ex. 1005, ¶[0077], FIG. 9.

(d) Claim 1[c]

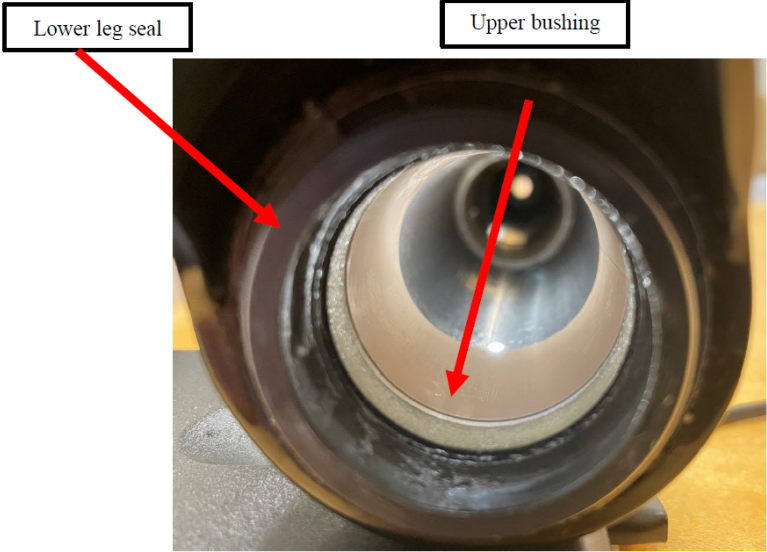
Kojima discloses all elements of this limitation. *Kojima* includes an upper bushing **218** (pink arrow) attached to and positioned adjacent to the lower leg seal **220, 221, 223** (light blue arrow). *Kojima* discloses a slide bush **218** attached to and positioned adjacent to the dust **220**, air **221**, and oil **223** seals. Ex. 1002, ¶96; Ex. 1003, ¶92; Ex. 1005, FIG. 9.



Kojima's configuration of the seals (blue) and bushing (pink) is the same as the only configuration disclosed in the '331 patent, as can be seen in a comparison between Figure 9 of *Kojima* (on the left, below) and Figure 4 of the '331 patent (on the right, below). Ex. 1002, ¶¶97; Ex. 1003, ¶¶93; Ex. 1005, FIG. 9; Ex. 1001, FIG. 4.



Fox has already conceded that *Kojima's* configuration of the various seals **220, 221, 223** and slide bush **218** meets this limitation because Fox accused a lower leg seal similarly arranged with the upper bushing as meeting this limitation in its infringement contentions against SRAM in the District Court:

Claim	U.S. Patent No. 9,739,331	Rockshox Lyrik Ultimate
1[c]	an upper bushing attached to and positioned adjacent to said lower leg seal; and	The Rockshox Lyrik Ultimate has an upper bushing attached to and positioned adjacent to said lower leg seal. 

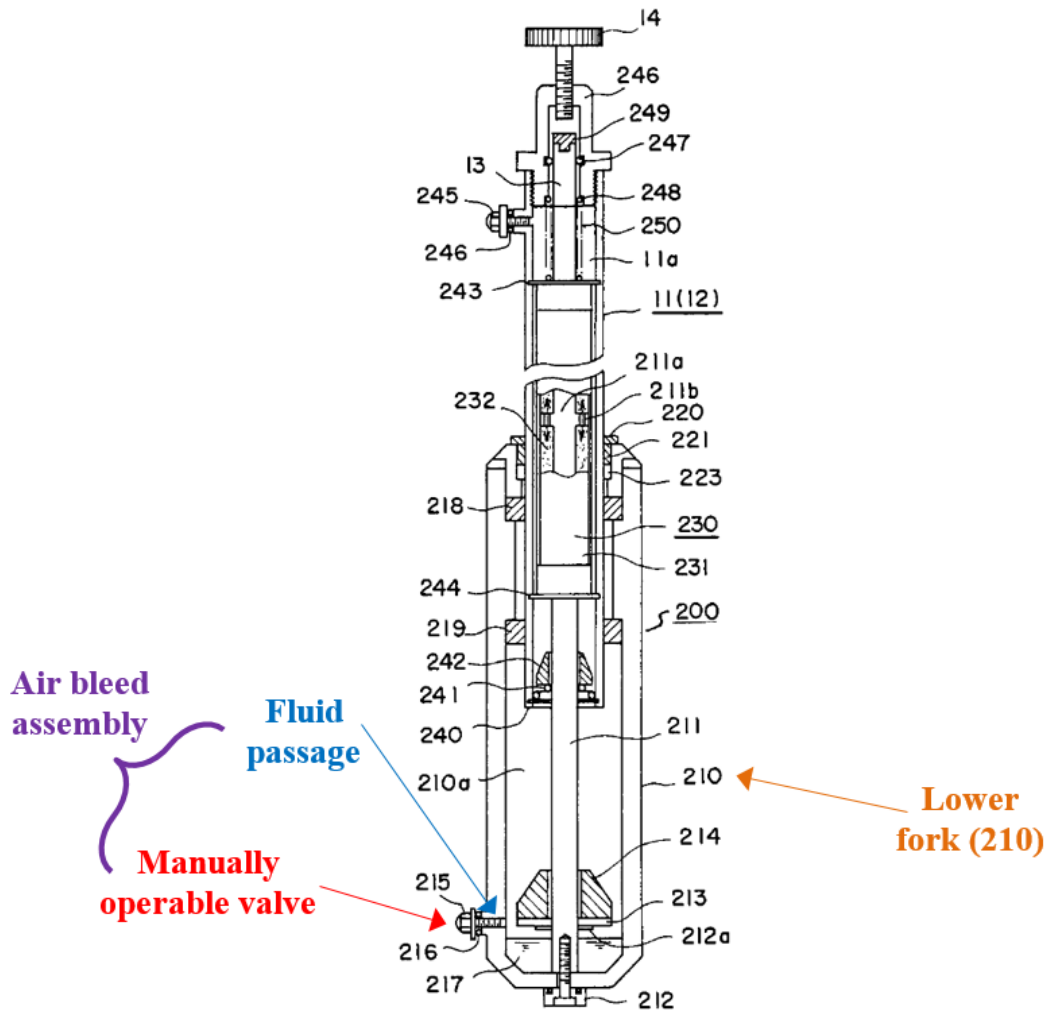
Ex. 1012, 19; Ex. 1013, 21; Ex. 1002, ¶98; Ex. 1003, ¶94.⁵ Adopting Fox’s own mapping of its claim, *Kojima* clearly discloses this claim limitation.

⁵ Fox has contended below that the “attached to” limitation means “in contact with” and appears to contend that this would include contact through other members. Ex. 1014, at 7. Although SRAM disagrees with this construction as contrary to the term’s plain meaning, Fox’s construction renders the claim invalid.

(e) **Claim 1[d]**

Kojima discloses all elements of this limitation as interpreted by Fox. *Kojima* includes an air bleed assembly **215, 216** (purple) (in addition to *Kojima*'s related fluid passage) disposed on the lower fork tube **210** that is configured for equalizing internal pressure within the lower fork **210** with ambient pressure. When *Kojima*'s air valve **215** is open, the air pressure within the fork equalizes with the ambient air pressure. *Kojima* discloses “[a]n air valve **215** [] screwed into the lower side wall of the bottom case **210** [with] an O-ring **216** serving as an air seal.” Ex. 1005, ¶[0077]; *see also* Ex. 1002, ¶99; Ex. 1003, ¶95.⁶

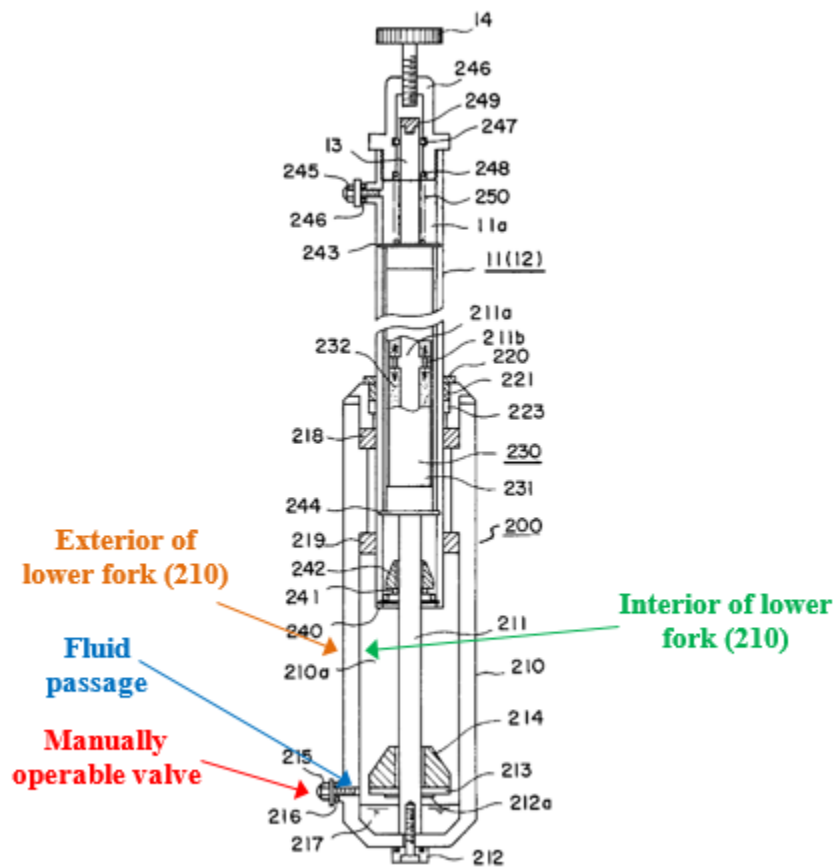
⁶ Fox limited the position of the “air bleed assembly” to a location between the fork’s lower leg seal and upper bushing. However, in the District Court, Fox contends that no such disclaimer took place. Ex. 1014, at 7. If Fox’s position were adopted, *Kojima* anticipates. Alternatively, if the Board recognizes this disclaimer, *Kojima* still renders this limitation obvious, wherein locating the air bleed assembly anywhere along the length of the fork tube is simply a matter of engineering choice and mechanical skill, such that it would have been obvious to a POSITA to modify *Kojima* in this regard. Ex. 1002, ¶40; Ex. 1003, ¶36.



(f) Claim 1[e]

Kojima discloses all elements of this limitation. *Kojima* includes a fluid passage (blue arrow) disposed between an interior (green arrow) of the lower fork **210** and an exterior (orange arrow) of the lower fork **210**. *Kojima*'s fluid passage is the passage for accommodating the illustrated manually operable valve **215** (red arrow). *Kojima* discloses an air valve **215** screwed into the lower side wall of the bottom case **210** with an o-ring **216** serving as an air seal. *Kojima*'s o-ring **216**

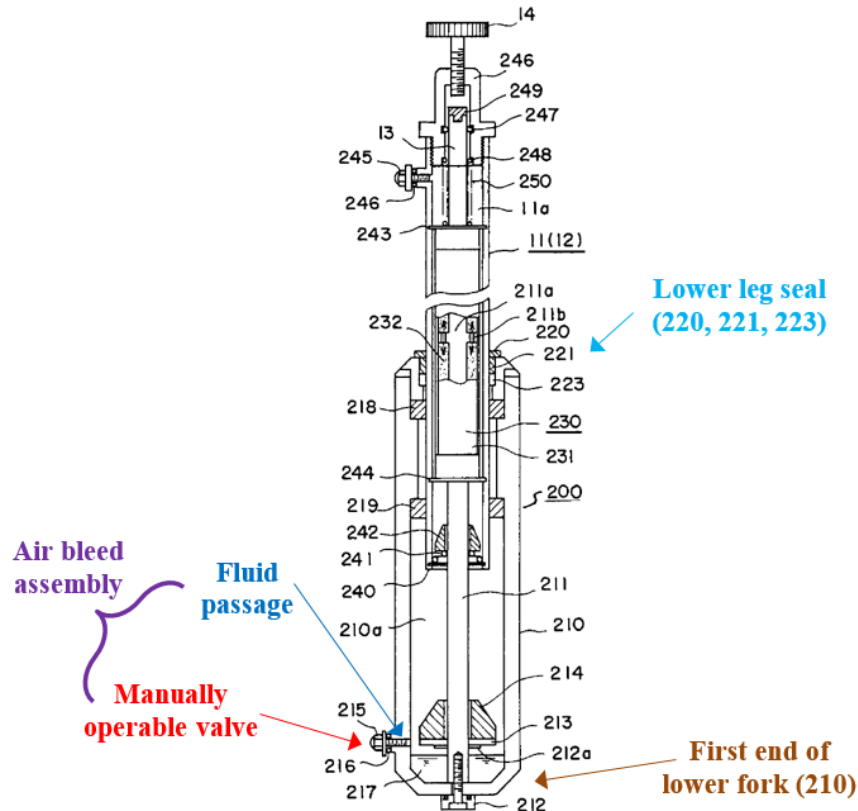
includes a fluid passage disposed between the interior and exterior of the bottom case **210**. *Kojima*'s fluid passage is the passage for accommodating the illustrated air valve **215**. Ex. 1002, ¶100; Ex. 1003, ¶96; Ex. 1005, FIG. 9.



(g) Claim 1[f]

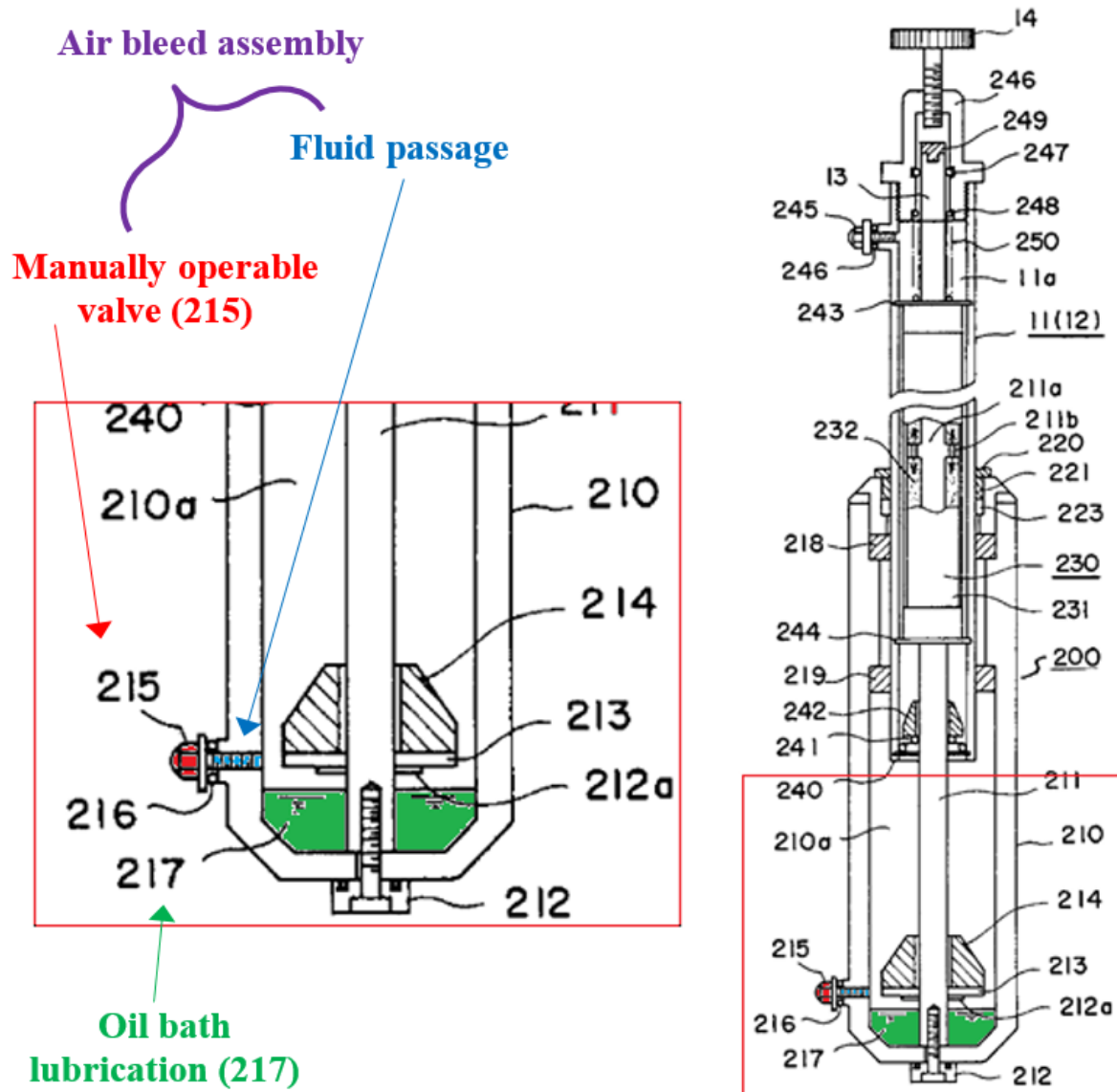
Kojima discloses all elements of this limitation. *Kojima* includes a manually operable valve (red arrow) located in the lower fork **210** and coupled to the fluid passage (blue arrow). The manually operable valve is the portion of *Kojima*'s air valve **215** that engages with the threads in *Kojima*'s bottom case **210** and *Kojima*'s

o-ring **216** that engages with the bottom case **210**. *Kojima's* manually operable valve (defined above) has a first position substantially closing the fluid passage (when the screw threads for the air valve **215** are sufficiently engaged or the o-ring **216** is sufficiently seated) and a second position allowing the fluid to flow between the interior and the exterior of the lower fork **210** (when the air valve **215** is removed or sufficiently loosened, or the o-ring **216** is unseated). *Kojima's* manually operable valve (defined above) is disposed within a passage (blue arrow) between the lower leg seal **220, 221, 223** (light blue arrow) and the first end (brown arrow) of the lower fork **210**. Ex. 1002, ¶101; Ex. 1003, ¶97; Ex. 1005, ¶[0024]; FIG. 9.



(h) Claim 1[g]

Kojima includes all elements of this limitation. *Kojima*'s fluid passage (blue arrow) and manually operable valve (red arrow, defined in Claim element 1[f]) are located at a distance from an oil bath lubrication **217** (green arrow) within the lower fork **210**. This positioning of *Kojima*'s valve **215** results in a configuration wherein when the manually operable valve (defined in Claim element 1[f]) is in the second position (open position), most if not all of the oil bath lubrication **217** remains within the lower fork **210** because the air valve **215** is above the top of the illustrated oil bath **217**. The air valve **215** can be closed were oil to begin leaking. Any air within lower fork **210** will be equalized with ambient pressure when air valve **215** is opened for a sufficient duration, while the oil **217** will remain in the oil bath lubrication space **210a** within the lower fork **210**. *Kojima*'s Figure 9 clearly illustrates that the top surface of the oil bath **217** is well below the fluid passage of the air valve **215** screw within the bottom case **210**. When air valve **215** screw is removed, little oil **217** would be vented. When air valve **215** screw is opened, the pressure of the gas within the bottom case **210** will be equalized with the exterior air pressure, while the lubricating oil **217** will remain in the bottom case **210**. Ex. 1002, ¶102; Ex. 1003, ¶98; Ex. 1005, ¶[0077]; FIG. 9.



3. Dependent Claim 2

Kojima includes all elements of this claim. In addition to disclosing all limitations of claim 1, *Kojima* includes air flowing through the fluid passage, at least when air is allowed to bypass *Kojima's* air valve **215**. *Kojima* discloses that the

screw is an air valve **215** and that the o-ring **216** serves as an air seal. *Kojima* explains that the interior of the bottom case **210** is filled with air. Ex. 1002, ¶103; Ex. 1003, ¶99; Ex. 1005, ¶[0078].

4. Dependent Claim 3

(a) Claim 3[pre]

See claim element 1[pre] above.

(b) Claim 3[a]

Kojima includes all elements of this limitation. *Kojima* includes a valve activator coupled with the manually operable valve (defined in claim element 1[f]). The valve activator is the portions of air valve **215** that may be used for communicating force from a manual input to the threads of the air valve **215**. *Kojima* includes facets on portions of the air valve **215** screw, which facets may be used for communicating force from a manual input to the threaded portions of the air valve **215** screw and thereby causing the seat portion of the air valve screw **215** to press into the o-ring **216**. Ex. 1002, ¶105; Ex. 1003, ¶101; Ex. 1005, FIG. 9. Alternatively, the threads of the air valve 215 can be considered the valve activator, as identified by the Examiner during the prosecution of the '331 patent. Ex. 1004, at 88 (identifying *Galasso*'s threads of 214, 314, 414, or pin of Schrader-type 470 as the valve activator); Ex. 1002, ¶105; Ex. 1003, ¶101.

(c) **Claim 3[b]**

Kojima includes all elements of this limitation. *Kojima*'s valve activator (defined in claim element 3[a]) includes an activation position where the manually operable valve (defined in claim element 1[f]) is in an open position.⁷ *Kojima*'s air valve **215** includes an activation position that is in an open position when the air valve **215** is removed or sufficiently loosened, or the o-ring **216** is unseated. Fluid may pass the air valve **215** when in the open position. Ex. 1002, ¶106; Ex. 1003, ¶102; Ex. 1005, ¶[0077]; FIG. 9.

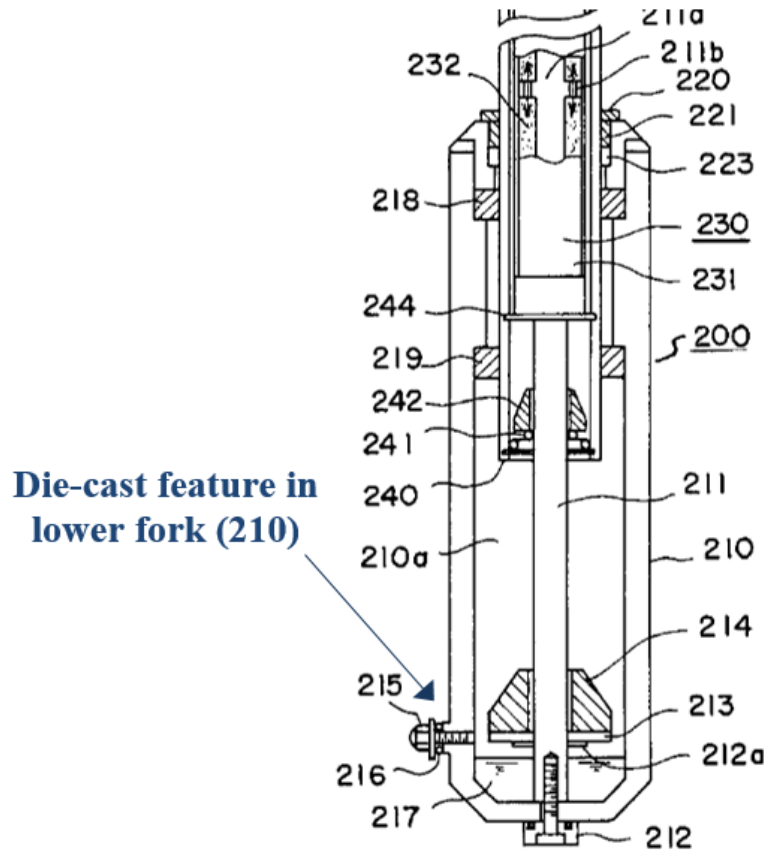
⁷ SRAM notes that the term “activation position” conflates the first and second positions between claims 1 and 3 of the ‘331 patent, in that claim 1 requires the first position to be the closed position, whereas claim 3 requires that the activation position be both the first (closed) position and an open position where fluid may flow around the valve. As a result, claim 3 is irreconcilably indefinite. Because this indefiniteness issue cannot be addressed in this IPR as noted above, SRAM has adopted Fox’s mapping and proposed rewriting of the claims. Ex. 1012, at 35-37; Ex. 1013, at 37-39; Ex. 1014, at 10-12; Ex. 1002, ¶106 n.2; Ex. 1003, ¶102 n.2.

(d) Claim 3[c]

Kojima includes all elements of this limitation. *Kojima*'s valve activator (defined in claim element 3[a]) includes a deactivation position where the manually operable valve (defined in claim element 1[f]) is in a closed position, as seen in *Kojima*'s Figure 9. When *Kojima*'s air valve **215** is opened, trapped air pressure in the lower fork **210** is equalized with the local ambient air pressure if open for a sufficient duration. When *Kojima*'s air valve **215** is opened, trapped air pressure in the bottom case **210** may be equalized with the exterior air pressure. Ex. 1002, ¶107; Ex. 1003, ¶103; Ex. 1005, ¶[0077], FIG. 9.

5. Dependent Claim 5

Kojima includes all elements of this claim. In addition to meeting all of the limitations of claim 3, *Kojima* includes a manually operable valve (defined in claim element 1[f]) fixed into a passage through the body of the lower fork **210**, and *Kojima* discloses that the valve activator (defined in claim element 3[a]) is located on a die-cast feature (blue arrow) of the lower fork **210**. The die-cast feature is a portion of the bottom case **210** that protrudes slightly from the overall cylinder shape of the bottom case **210**, which portion further includes threads. *Kojima* explains that the bottom case **210** and its feature may be cast aluminum or magnesium. Ex. 1002, ¶108; Ex. 1003, ¶104; Ex. 1005, ¶[0076], FIG. 9.



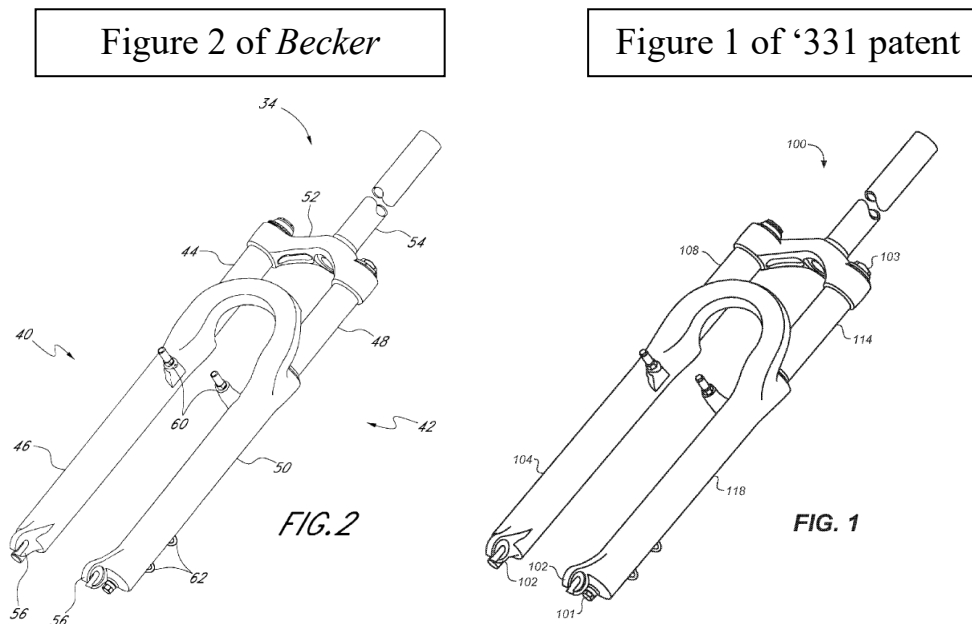
B. Ground II: Claims 1 Through 8 Are Rendered Obvious Under 35 U.S.C. § 103 by *Becker* in View of *Bruckbauer*

- 1. *Becker* discloses a conventional suspension fork with an internal oil bath and air chamber.**

U.S. Patent No. 6,592,136 to Becker ("*Becker*") is prior art under pre-AIA 35 U.S.C. § 102(b), having been filed on July 2, 2001, and issued on July 15, 2003. Ex. 1008.

Becker discloses the fork recited in the claims of the '331 patent. *Becker* relates to "[a]n off-road bicycle suspension fork includ[ing] a pair of fork leg

assemblies, each of the leg assemblies having an upper [inner] leg telescopically engaged with a lower [outer] leg.” Ex. 1008, Abstract. *Becker* shows a suspension fork **34** in use on a bicycle **20**, wherein the suspension fork **34** includes each and every limitation of claim 1 of the ‘331 patent but for the air bleed assembly. *See, e.g.*, Ex. 1002, ¶62; Ex. 1003, ¶58; Ex. 1008, FIG. 1. In fact, *Becker* includes nearly the same figure of a fork as is used in the ‘331 patent:



Compare Ex. 1008, FIG. 2, with Ex. 1001, FIG. 1.

Becker's Figure 3, depicted below, provides details of the identical internal components of *Becker*'s suspension fork **34**, which include: a main seal **68**; an upper bushing **64**; an upper (inner) tube **44**; a lower (outer) tube **46**; and oil. Ex. 1002, ¶63; Ex. 1003, ¶59; Ex. 1001, 1:60–67. *Becker*'s damper assembly **76** is formed within the outer tube **46** of the leg on the left of Figure 3:

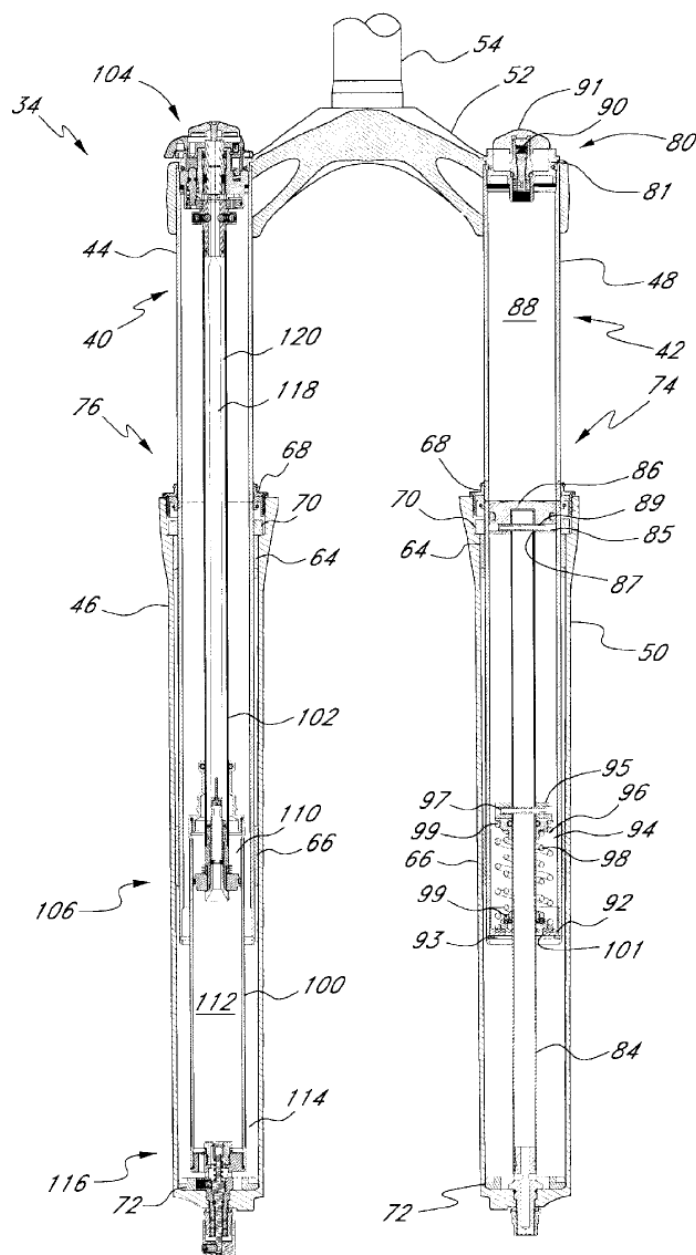
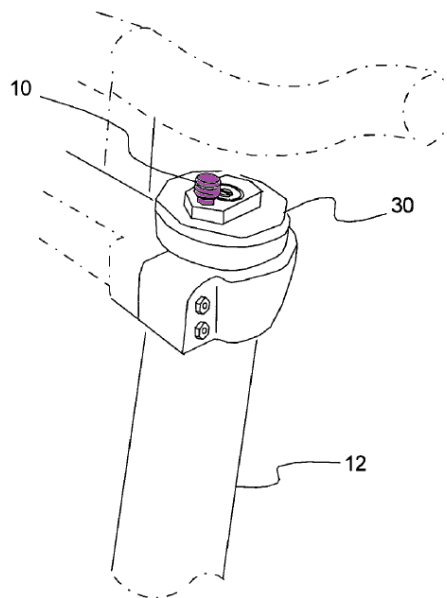


FIG. 3

2. *Bruckbauer* discloses an air bleed assembly.

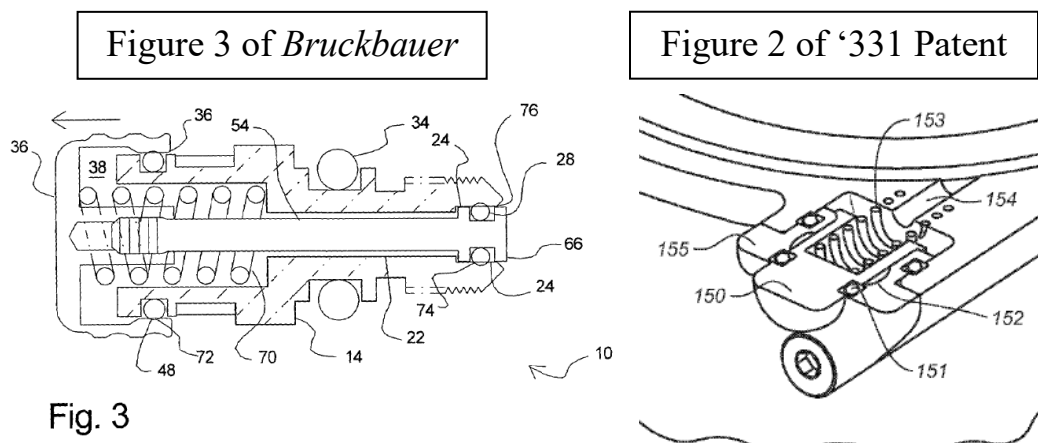
U.S. Patent No. 7,231,939 to Bruckbauer (“*Bruckbauer*”) is prior art under pre-AIA 35 U.S.C. § 102(b), having been filed on March 9, 2005 and issued on June 19, 2007. Ex. 1009.

Bruckbauer discloses an air bleed assembly as disclosed in the ‘331 patent. *Bruckbauer* “relates to a valve system for purging gases that become trapped within the fork tubes or suspension of a motorcycle’s fork.” Ex. 1009, 1:10–12. *Bruckbauer* discloses that “[e]xcessive trapped gas stiffens [a given fork] assembly.” Ex. 1009, 1:33; Ex. 1002, ¶59; Ex. 1003, ¶55. To alleviate this issue, *Bruckbauer* provides “a bleed button, or pressure relief valve” extending through the body of an outer fork leg, as shown below:



Ex. 1009, 2:24–34; FIG. 1.

The functions of the pressure relief valve **10** and associated button (*Bruckbauer's* valve cap **36**) (together shown in purple above) “include opening or closing access to an air escape passage through the air passage inside the valve body” using, in part, an o-ring **28** carried by a connecting shaft **54**. Ex. 1009, 2:38–40. This opening and closing may “allow[] any buildup of excess pressure to be relieved by the user ... in order to restore the dampener’s design characteristics.” Ex. 1009, 4:25–28. A spring **70** biases the pressure relief valve **10** toward the closed position. The overall structure of *Bruckbauer's* pressure relief valve **10** is the same as the '331 patent's air bleed assembly **300**:



Compare Ex. 1009, FIG. 3, with Ex. 1001, FIG. 2. See also Ex. 1002, ¶60; Ex. 1003, ¶56.

3. It would have been obvious to a POSITA to modify *Becker* with *Bruckbauer*, thereby yielding the subject matter of claims 1-8.

Combining *Becker* and *Bruckbauer* is straightforward: a POSITA would modify *Becker*'s typical suspension fork to incorporate *Bruckbauer*'s pressure relief system at a point along the length of the lower (outer) tube of *Becker*'s suspension fork. Ex. 1002, ¶77; Ex. 1003, ¶73.

Becker discloses a typical suspension fork embodiment shown in Figures 2 and 3, wherein the suspension fork 34 includes right and left lower tubes 46, 50 and right and left upper tubes 44, 48:

Figure 2 of *Becker*

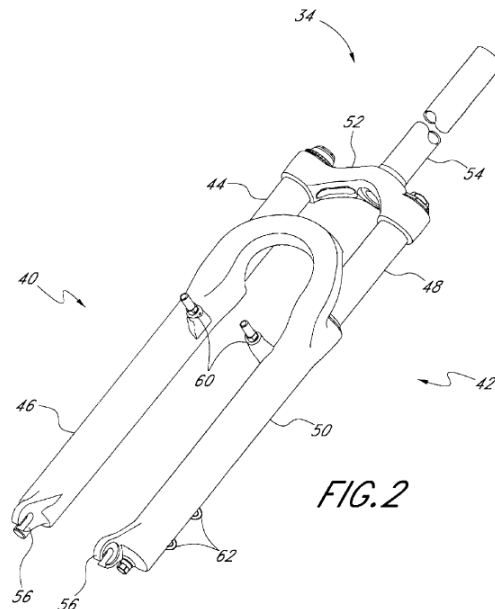
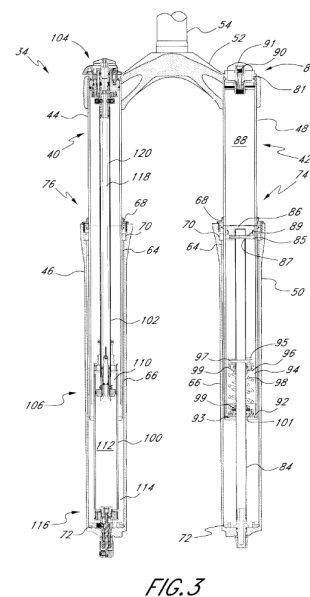


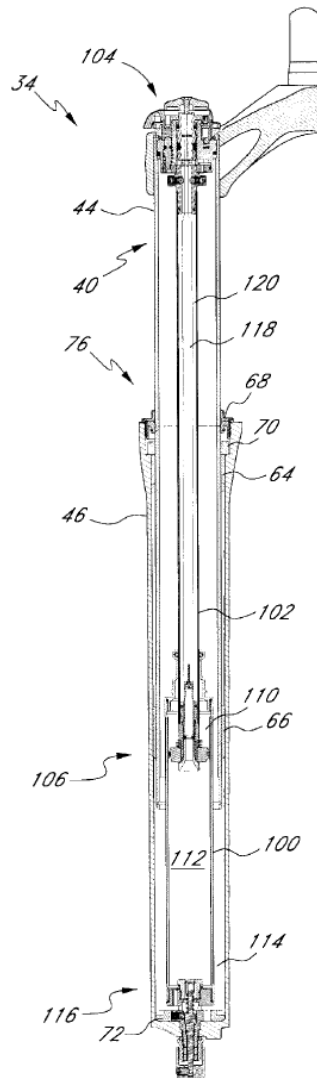
Figure 3 of *Becker*



Ex. 1008, FIGS. 2, 3; Ex. 1002, ¶78; Ex. 1003, ¶74.

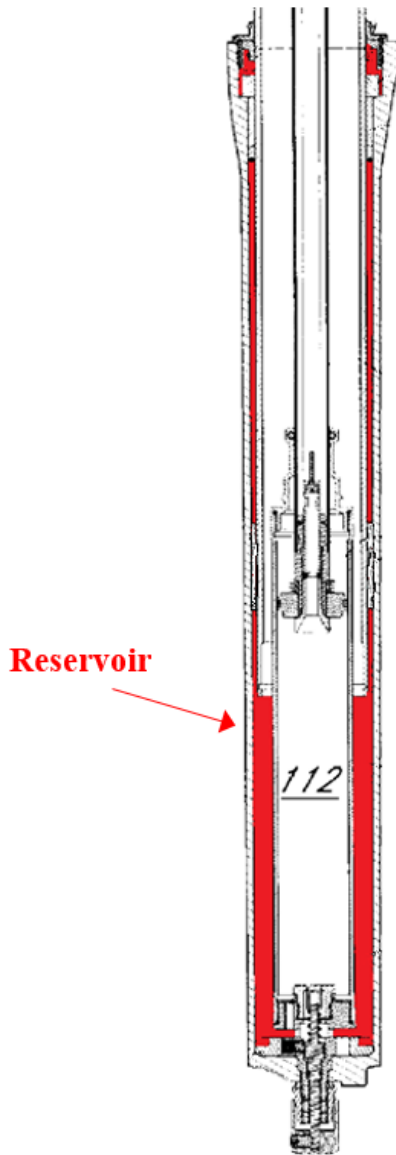
Becker's suspension fork construction arranges the lower tubes **46**, **50** as the outer tubes and the upper tubes **44**, **48** as the inner tubes of the telescoping suspension fork. *See, e.g.*, Ex. 1008, 5:42–55; 6:7–12; FIGS. 2, 3. Ex. 1002, ¶79; Ex. 1003, ¶75.

As shown in the truncated image of *Becker's* Figure 3, below, *Becker's* damper assembly **76** is formed in the right lower tube **46** of the suspension fork **34**, which tube is an outer tube. *See, e.g.*, Ex. 1008, 7:51–56. The damper assembly **76** includes a cartridge tube **100** that houses most of the damping components. Ex. 1008, 7:56–8:21; Ex. 1002, ¶80; Ex. 1003, ¶76.



Ex. 1008, FIG. 3.

Becker explains that there is a reservoir **114** formed around the cartridge tube **100** of the damper. Ex. 1008, 8:4–12. This reservoir **114** is highlighted in red in the truncated version of *Becker*'s Figure 3 shown below:



Ex. 1008, FIG. 3 (red coloring added). This reservoir **114** is continuous, as oil and gas are able to move past and around *Becker's* bushings **64**, **66**. Ex. 1002, ¶81; Ex. 1003, ¶77.

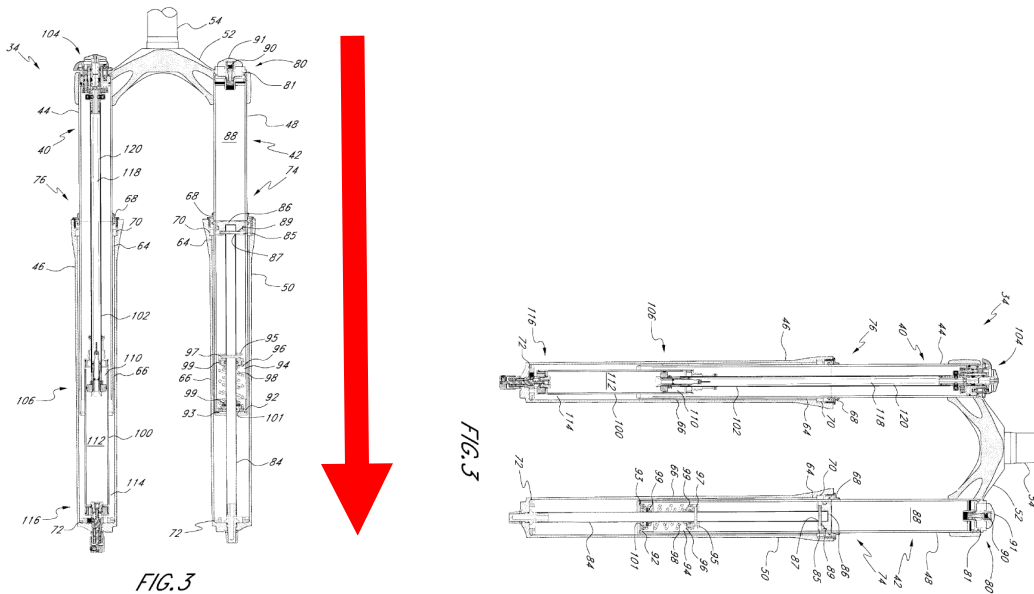
A POSITA would have been motivated to add *Bruckbauer's* pressure relief system to a portion of *Becker's* right outer tube **46** at a point in contact with *Becker's*

reservoir **114**, in order to allow the pressure of any gas trapped within the reservoir **114** to equalize with the pressure of ambient air around the suspension fork **34**. *See* Ex. 1009, 4:21–28. *Bruckbauer* explains that such equalization can “restore the [damper’s] design characteristics” and unstiffen the suspension fork **34**. Ex. 1009, 4:27–28; 1:33–37. These benefits would have motivated a POSITA to make the simple combination. Ex. 1002, ¶82; Ex. 1003, ¶78.

A POSITA would have been motivated to try different locations for placing *Bruckbauer*’s pressure relief valve **10** along the extent of *Becker*’s reservoir **114**. First, a POSITA would be motivated to improve *Becker* with *Bruckbauer*’s pressure relief valve **10**, as discussed above. Second, a POSITA would have been motivated to provide pressure relief to *Becker*’s damper assembly **76** and the area therearound, at least because *Bruckbauer* recognizes and provides a specific solution to issues with trapped air that may build up in this region of the suspension fork. *See* Ex. 1009, 1:7–12 (“a valve system for purging gases that become trapped within the fork tubes or suspension”); *id.*, 2:10–13 (“there remains a need for a simple device that can be used for rapid, reliable release of excess air or gas trapped in the dampeners or struts of the fork”). In *Becker*, the area around and in fluid communication with the damper is *Becker*’s reservoir **114**. Thus, a POSITA would have been motivated to place this reservoir **114** in fluid communication with

Bruckbauer's pressure relief valve **10**. Third, it would have been obvious to try different locations for placement of *Bruckbauer's* pressure relief valve **10** along the length of *Becker's* outer tube **46**, as there are only a finite number of positions along the length to try. Fourth, such a modification would have been predictable at least because the process of modifying *Becker* would have been simple to a POSITA, and the combined *Becker/Bruckbauer* device would be reasonably expected to function to fluidly connect the reservoir **114** with the ambient air, allowing gas to pass between the two regions and the pressures within the reservoir **114** and external to the suspension fork **34** to become equal. After all, *Bruckbauer* is intended to release air from the damper of a suspension fork, like that in *Becker*. Ex. 1002, ¶83; Ex. 1003, ¶79.

SRAM notes that the fork may be oriented such that any air within the reservoir **114** is easily vented from the pressure relief valve **10**. For example, the images below depict *Becker's* fork oriented in different positions relative to the direction of gravity (red arrow). Ex. 1002, ¶84; Ex. 1003, ¶80.



Ex. 1008, FIG. 3.

In the image on the left, the oil within *Becker's* damper and reservoir **114** would be expected to pool at the bottom of the outer tube **46**. On the other hand, in the image on the right, the oil within *Becker's* damper and reservoir **114** would be expected to pool along the length of the reservoir **114** on the side of the outer tube **46**. Ex. 1002, ¶85; Ex. 1003, ¶81.

Thus, for a pressure relief valve **10** (*Bruckbauer*) placed along the reservoir **114** (*Becker*), the suspension fork may need to be oriented so that gravity carries the oil away from the vent hole of the pressure relief valve **10**. This would have been clear to a person of ordinary skill in the art. Moreover, this placement is made even more predictable by the fact that *Bruckbauer* explains that the pressure relief valve **10** is placed onto the cap portion for the sake of convenience, and not for a specific

need. *See, generally*, Ex. 1009. A POSITA would have known that *Bruckbauer's* pressure relief valve **10** works by creating a fluid passage between the damper and the external air, and that this may work regardless of which portion of the damper is proximate to the pressure relief valve **10**. Ex. 1002, ¶86; Ex. 1003, ¶82.

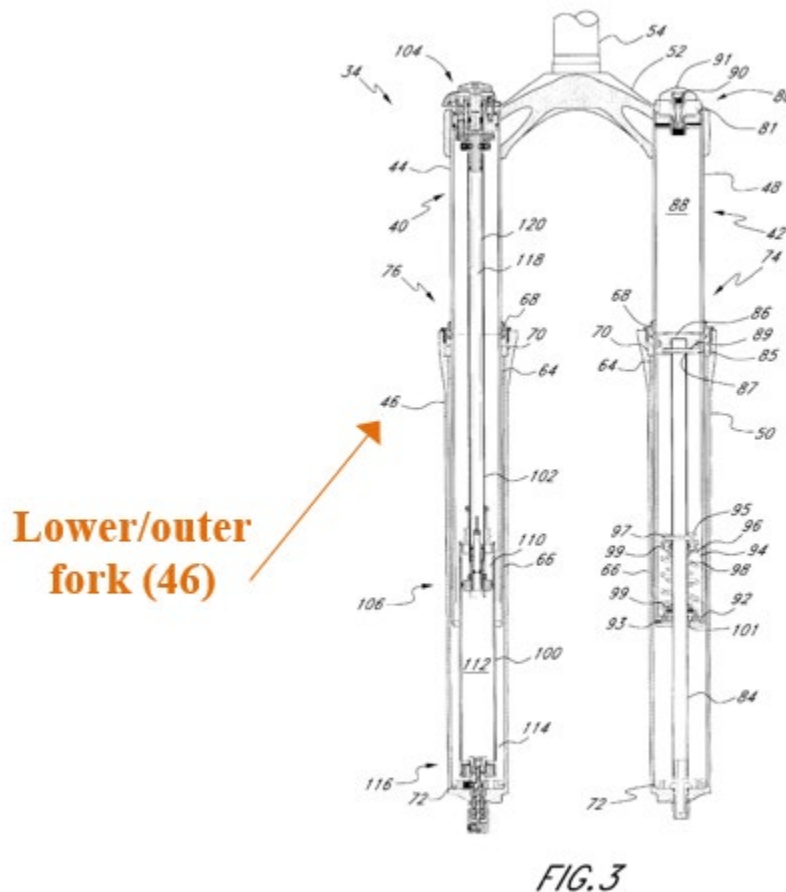
The addition of *Bruckbauer's* pressure relief valve **10**, which itself is already designed as a suspension fork improvement to *Becker's* suspension fork **34**, would have merely been the application of a known technique to a known device that was ready for improvement, and the result would have been predictable, as discussed above. *Bruckbauer* is being used in the same way in the combination of *Becker/Bruckbauer* as it is used in *Bruckbauer*, and a POSITA would expect success from adding *Bruckbauer's* pressure relief valve **10** at any point along the length of *Becker's* reservoir **114**. Ex. 1002, ¶87; Ex. 1003, ¶83.

4. Independent Claim 1

(a) Claim 1[pre]

Becker in view of *Bruckbauer* discloses all elements of the preamble. *Becker* includes a lower fork **46, 50** (orange arrow), and *Bruckbauer* includes an air bleed assembly **10** (in addition to *Becker/Bruckbauer's* related fluid passage). Specifically, *Becker* discloses a suspension fork **34** as discussed above. The suspension fork **34** includes a lower (outer) tube **46** with a lower end (proximate to

the bottom-out bumper 72) and an upper end (proximate to the main seal 68), the lower tube 46 being an outer tube. Ex. 1008, 6:22–23, FIG. 3. *Bruckbauer* discloses a pressure relief valve 10. Ex. 1009, 4:8–12, FIGS. 1, 2. It would have been obvious to combine *Bruckbauer*'s pressure relief valve 10 with *Becker*'s lower (outer) tube 46 in order to benefit from the ability to “relieve the pressure from excess air or gas buildup” around the damper within the outer tube, as discussed in detail immediately above. Ex. 1002, ¶109; Ex. 1003, ¶105; Ex. 1008, FIG. 3; Ex. 1009, FIGS. 1, 2.



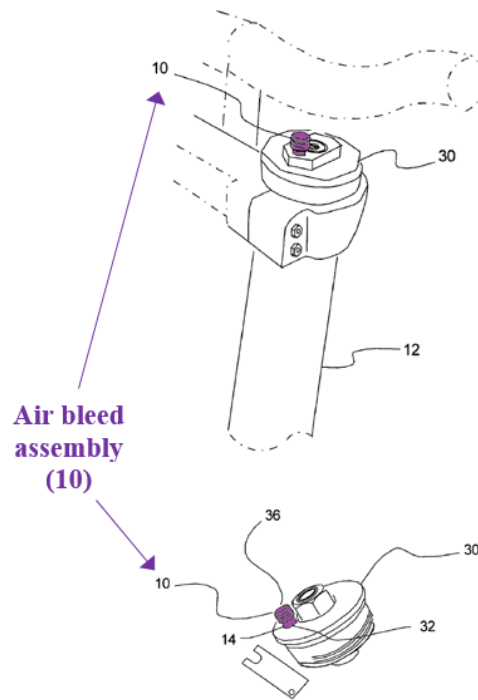
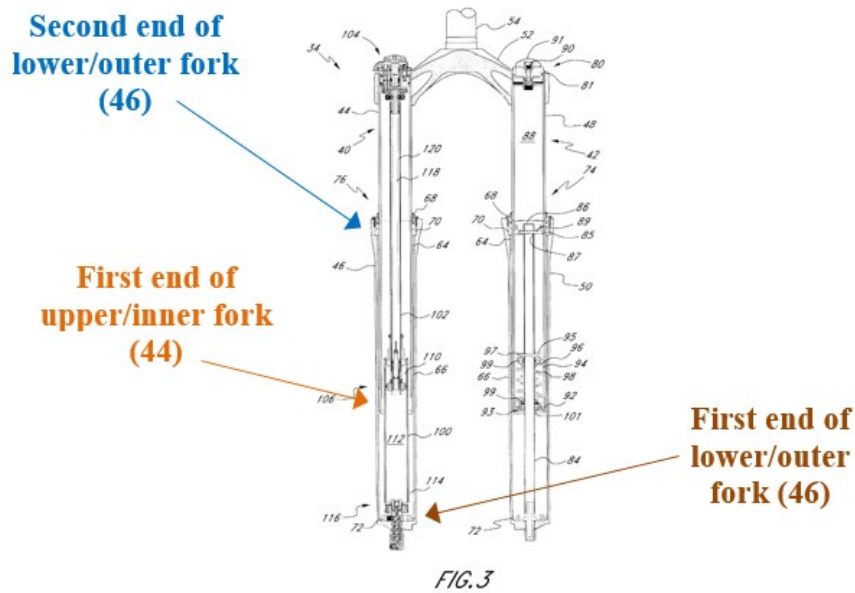


Fig. 2

(b) Claim 1[a]

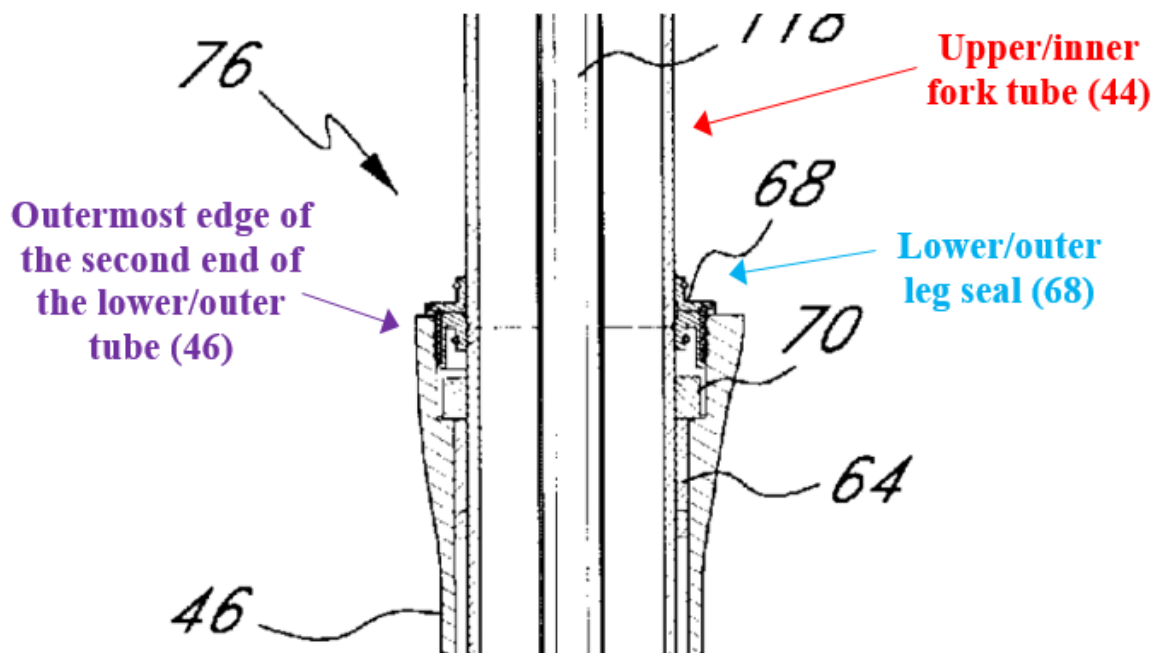
Becker discloses all elements of this limitation. *Becker* includes a lower fork **46, 50** configured to have a first end (brown arrow) coupled to a vehicle wheel, and a second end (blue arrow) configured to be telescopically engaged with a first end (orange arrow) of an upper (inner) fork **44, 48**. *Becker's* Figures 1 and 2 show a lower (outer) tube **46** of the suspension fork **34** configured to have a lower end of the lower (outer) tube **46** coupled to a vehicle wheel **28**, and an upper end thereof configured to be telescopically engaged with a lower end of an upper (inner) tube **44**. Ex. 1002, ¶110; Ex. 1003, ¶106; Ex. 1008, 5:48–49; FIGS. 1–3.



(c) Claim 1[b]

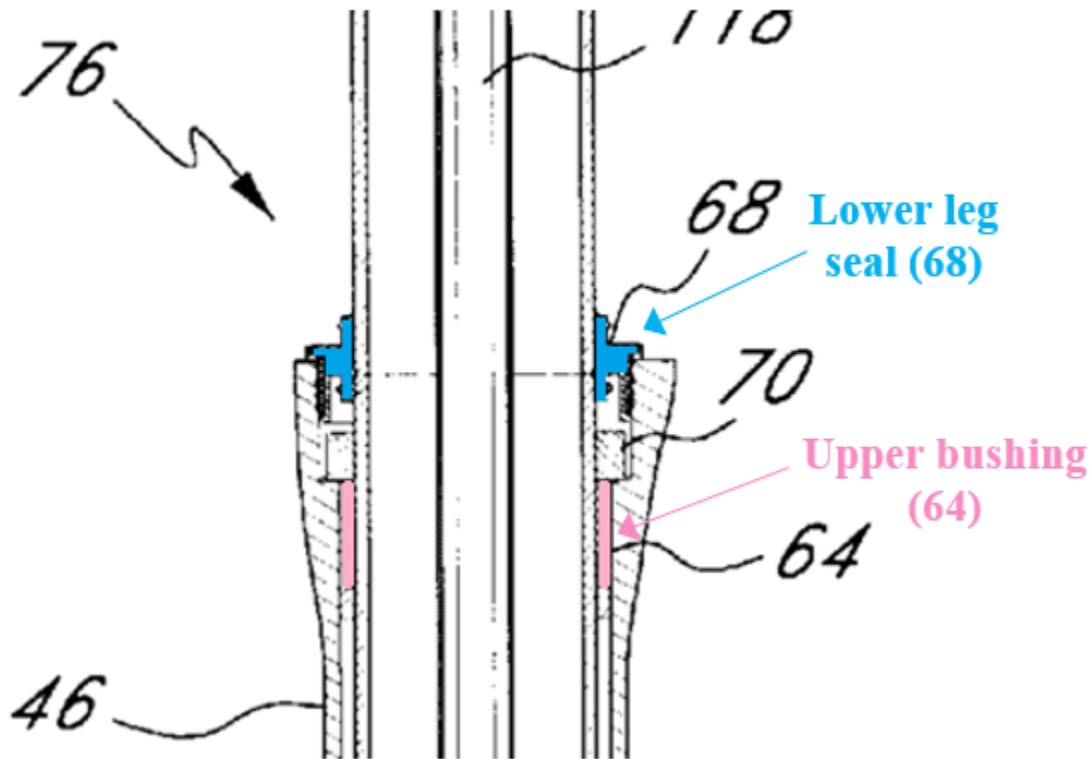
Becker discloses all elements of this limitation. *Becker* includes a lower leg seal **68** (light blue arrow) located at an outermost edge of the second end (purple arrow) of the lower fork tube **46**, the lower leg seal **68** configured for sealing closed a gap disposed between the upper fork tube **44** (red arrow) and the lower fork tube **46** when the lower fork **46** is telescopically engaged with the first end (orange arrow) of the upper fork **44**, thereby preventing an oil bath lubrication occupying an area **114** within the lower fork tube **46** at a first end (brown arrow above) of the lower fork tube **46** from leaking from the lower fork **46**. *Becker* includes a main seal **68** supported by the lower (outer) tube **46** in a sealing engagement with the upper (inner) tube **44** to substantially prevent oil from exiting, or foreign material from entering,

the fork tubes. Ex. 1002, ¶111; Ex. 1003, ¶107; Ex. 1008, 6:25-39; FIG. 3. *Becker's* damper design is “preferably an open-bath, cartridge-type damper having a cartridge tube **100** fixed to the closed lower end of the right lower (outer) tube **46** and extending vertically upward.” Ex. 1008, 7:53-56. This oil bath within the damper is also “able to move throughout the reservoir **114** and, advantageously, provides lubrication for the bushings **64**, **66** and various seals within the damper assembly **76**.” Ex. 1008, 14:2-6. This oil bath is positioned at all times within the lower (outer) tube **46**. Ex. 1002, ¶111; Ex. 1003, ¶107; Ex. 1008, 7:51-56; 13:66-14:6; FIG. 3.



(d) Claim 1[c]

Becker includes all elements of this limitation. *Becker* includes an upper bushing **64** (pink arrow) attached to and positioned adjacent to the lower leg seal **68** (light blue arrow). In fact, the upper bushing **64** is in contact with the foam ring **70**. Ex. 1002, ¶112; Ex. 1003, ¶108; Ex. 1008, 6:10-39; FIG. 3.



Although *Becker*'s foam ring **70** is interposed between the main seal **68** and the bushing **64**, the same configuration is the only configuration disclosed in the '331 patent, as can be seen in a comparison between Figure 2 of *Becker* (on left) and Figure 4 of the '331 patent (on right).

Figure 2 of *Becker*

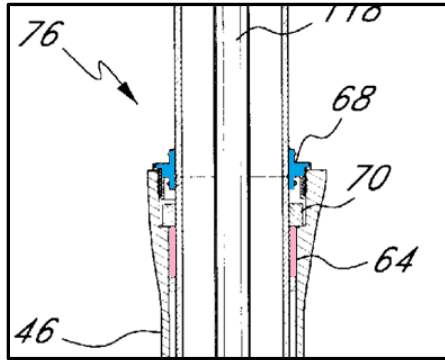
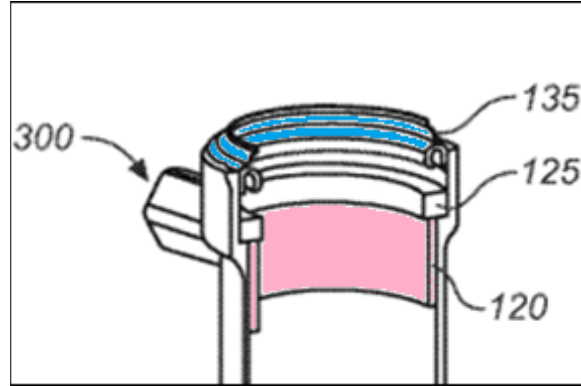


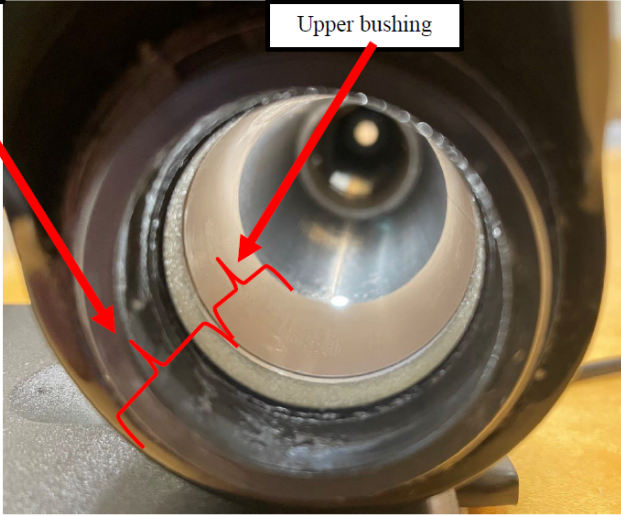
Figure 4 of '331 patent



Ex. 1008, FIG. 2; Ex. 1001, FIG. 4; Ex. 1002, ¶113; Ex. 1003, ¶109.

Furthermore, Fox already admitted that this specific configuration of the seal, foam ring, and bushing in *Becker* meets this limitation because Fox has accused the following structure of meeting this limitation in its Amended Infringement Contentions against Petitioner in District Court, as shown below:

Claim	U.S. Patent No. 9,739,331	Rockshox Lyrik Ultimate
1[c]	an upper bushing attached to and positioned adjacent to said lower leg seal; and	The Rockshox Lyrik Ultimate has an upper bushing affixed to the lower fork tube. The upper bushing is further engaged with the foam ring (of the seal), and thus the upper bushing is positioned adjacent to and is attached to said lower leg seal. Specifically, the upper bushing and the foam ring are fitted into the lower fork tube as shown below, and thus the seal (including the foam ring) is adjacent to and indirectly attached to the upper bushing via the lower fork tube. Moreover, the foam ring is held in place by the upper bushing and prevented from slipping into the tube during operation, and thereby the upper bushing maintains the

Claim	U.S. Patent No. 9,739,331	Rockshox Lyrik Ultimate
		coaxial alignment and symmetry of the foam ring during operation. Therefore, the seal (including the foam ring) is also directly attached to the upper bushing. Lower Leg Seal  Upper bushing

Ex. 1013, 7, 8. As can be seen, the same seal/foam ring/bushing configuration from *Becker* is found in SRAM's products that Fox has accused of infringing the '331 patent claims. Although not dispositive, Fox's infringement contentions are an admission that this prior art configuration also meets this limitation. Ex. 1002, ¶114; Ex. 1003, ¶110.

(e) **Claim 1[d]**

Becker in view of *Bruckbauer* discloses all elements of this limitation. *Bruckbauer* includes an air bleed assembly **10** (purple arrows) (in addition to *Becker/Bruckbauer's* related fluid passage), which in the combination of *Becker* and *Bruckbauer* is disposed on *Becker's* lower fork tube **46**. *Bruckbauer's* pressure

relief valve **10** is configured for equalizing ambient pressure and the gas pressure within the lower (outer) fork **46**. When *Bruckbauer's* pressure relief valve **10** is open, the air pressure with the suspension fork **34** may equalize with the ambient air pressure. Ex. 1002, ¶115; Ex. 1003, ¶111; Ex. 1008, 6:22-23; Ex. 1009, 5:6-9; FIGS. 1, 2.

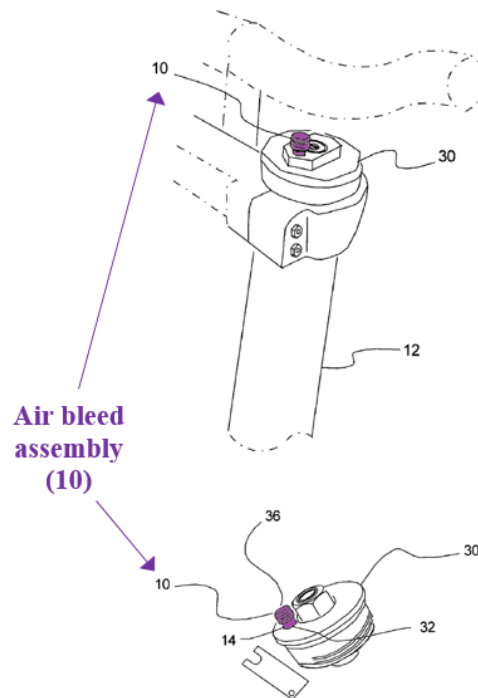


Fig. 2

(f) Claim 1[e]

Becker in view of *Bruckbauer* discloses all elements of this limitation. The combination of *Becker* and *Bruckbauer* includes a fluid passage disposed between an interior (green arrow) and an exterior (orange arrow) of the lower fork **46**. *Becker/Bruckbauer's* fluid passage is the passage for accommodating portions of

Bruckbauer's pressure relief valve **10**, and it is formed towards the upper end of *Becker's* lower (outer) fork **46**. *Becker* in view of *Bruckbauer* includes a passage that allows a flow of air or gases into or out of a lower (outer) tube **46**. Ex. 1002, ¶116; Ex. 1003, ¶112; Ex. 1008, 6:19-21; FIG. 3; Ex. 1009, 5:6-9; FIGS. 1, 2.

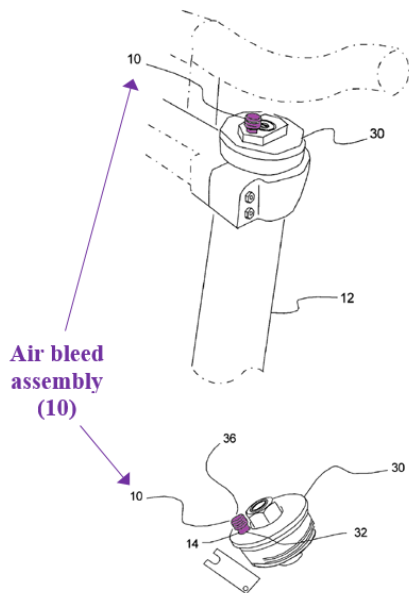
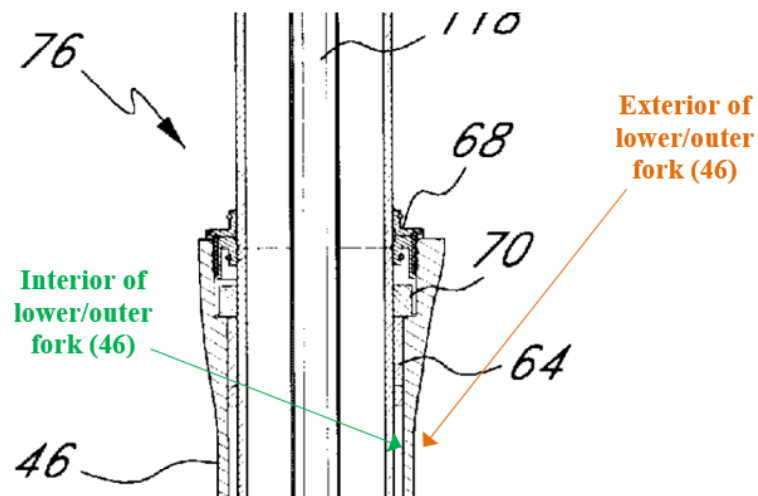


Fig. 2

(g) Claim 1[f]

Becker in combination with *Bruckbauer* discloses all elements of this limitation. *Bruckbauer* includes a manually operable valve **54, 36, 14, 70** (red arrows) located in *Becker*'s lower (outer) fork **46** and coupled to a fluid passage that extends through *Becker*'s lower (outer) fork **46**. *Bruckbauer*'s manually operable valve **54, 36, 14, 70** has a first position substantially closing the fluid passage and a second position allowing a fluid to flow between the interior and the exterior. At least portions of *Bruckbauer*'s manually operable valve **54, 36, 14, 70**, in the combination of *Becker* in view of *Bruckbauer*, is disposed within a passage between the lower leg seal **68** (light blue arrow) and the first end (brown arrow) of *Becker*'s lower (outer) fork **46**. *Bruckbauer*'s pressure relief valve **10** would be formed in *Becker*'s lower (outer) tube **46**, as discussed above in the context of a motivation to combine *Becker* and *Bruckbauer*. Ex. 1002, ¶117; Ex. 1003, ¶113; Ex. 1008, 6:22-39; FIG. 3; Ex. 1009, 4:36-5:28, FIGS. 3, 4.

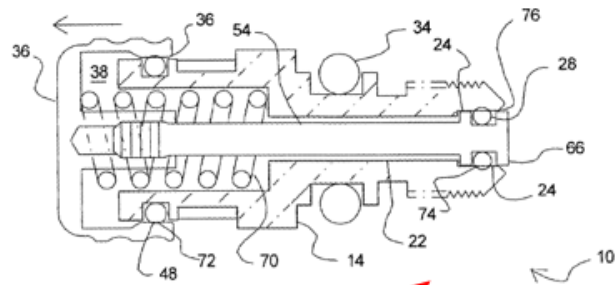


Fig. 3

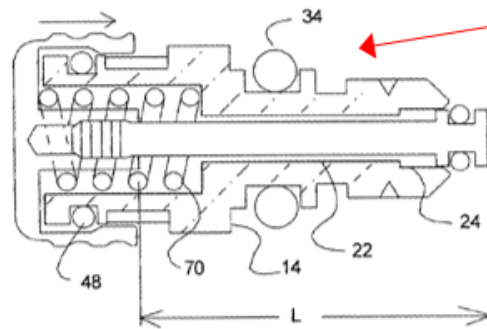


Fig. 4

**Manually
operable valve
(54, 36, 14, 70)**

**Lower/outer leg
seal (68)**

**First end of
lower/outer
fork (46)**

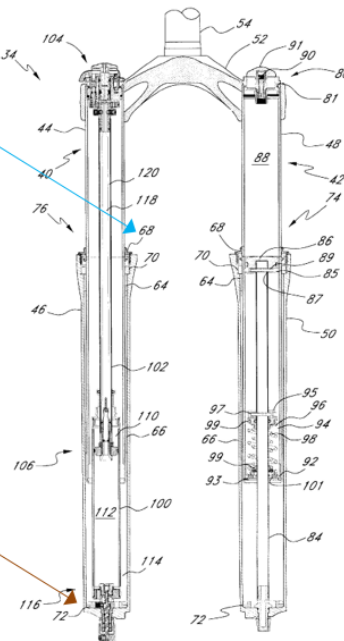


FIG. 3

(h) Claim 1[g]

Becker in view of *Bruckbauer* discloses all elements of this limitation. *Bruckbauer's* manually operable valve **54, 36, 14, 70** and related fluid passage are located at a distance from an oil bath lubrication (see claim element 1[b] in this Section, above) within *Becker's* lower (outer) fork **46**. This positioning of *Bruckbauer's* pressure relief valve **10** results in a configuration wherein when the manually operable valve **54, 36, 14, 70** is in the second (open) position, most, if not all of the oil bath lubrication remains within *Becker's* lower (outer) fork **46** because *Bruckbauer's* valve **54, 36, 14, 70** and related passage are located sufficiently high on *Becker's* lower fork **46** and can be closed were oil to begin leaking. Any air within *Becker's* lower fork **46** will be equalized with ambient pressure when *Bruckbauer's* pressure relief valve **10** is opened, while the oil will remain in *Becker's* oil bath lubrication space **114** within the lower fork **46**. Moreover, a POSITA would design the combination of *Becker* in view of *Bruckbauer* so that a majority of the oil within the lower tube remains therein at least because the venting of oil needed to lubricate the lower (outer) fork **46** would be unwanted. It would have been obvious to a POSITA to try to fit *Bruckbauer's* pressure relief valve **10** at a position sufficiently high on *Becker's* lower (outer) tube **46, 50**, such that this limitation would be met. It would have been obvious to modify *Becker* in this known way to

achieve the predictable and expected results of an effective pressure relief system for *Becker's* lower (outer) tube **46, 50**. Ex. 1002, ¶118; Ex. 1003, ¶114; Ex. 1008, 6:22-39; Ex. 1009, 4:36-5:28; FIG. 4.

5. Dependent Claim 2

Becker in view of *Bruckbauer* discloses all elements of this claim. *Becker* includes a lower (outer) fork **46**, and *Bruckbauer* includes an air bleed assembly **10**. *Bruckbauer* includes a gas flowing through the fluid passage, at least when gas is allowed to flow through *Bruckbauer's* pressure relief valve **10**. Ex. 1002, ¶119; Ex. 1003, ¶115; Ex. 1008, 6:5-39; Ex. 1009, 5:3-9.

6. Dependent Claim 3

(a) Claim 3[pre]

See claim element 1[pre], above.

(b) Claim 3[a]

Becker in view of *Bruckbauer* discloses all elements of this limitation. *Bruckbauer* includes a valve activator **54, 36** (pink arrow) coupled with *Bruckbauer's* manually operable valve **54, 36, 14, 70**. For example, *Becker* in view of *Bruckbauer* includes a valve cap **36** and connecting shaft **54** coupled with *Bruckbauer's* manually operable valve **54, 36, 14, 70**. Ex. 1002, ¶121; Ex. 1003, ¶117; Ex. 1009, 5:3-15; FIG. 3.

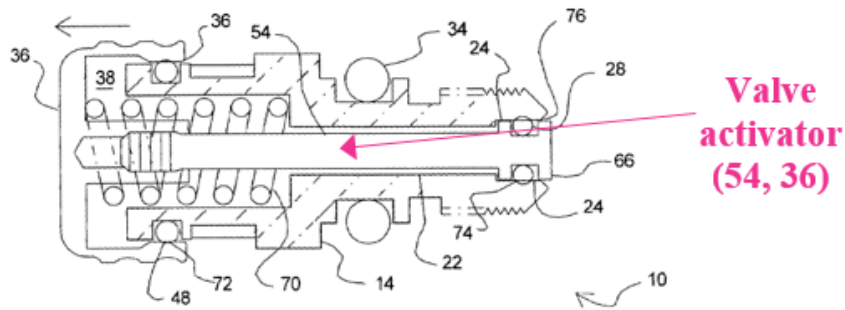


Fig. 3

(c) Claim 3[b]

Becker in view of *Bruckbauer* discloses all elements of this limitation. *Bruckbauer*'s valve activator 54, 36 includes an activation position where the manually operable valve 54, 36, 14, 70 is in an open position (green arrow). For example, *Becker* in view of *Bruckbauer*'s valve cap 36, connecting shaft 56, and hollow body 14 include a spaced-apart relationship where a gas may travel through the air bleed assembly 10. Ex. 1002, ¶122; Ex. 1003, ¶118; Ex. 1009, 5:3-9; FIG. 4.

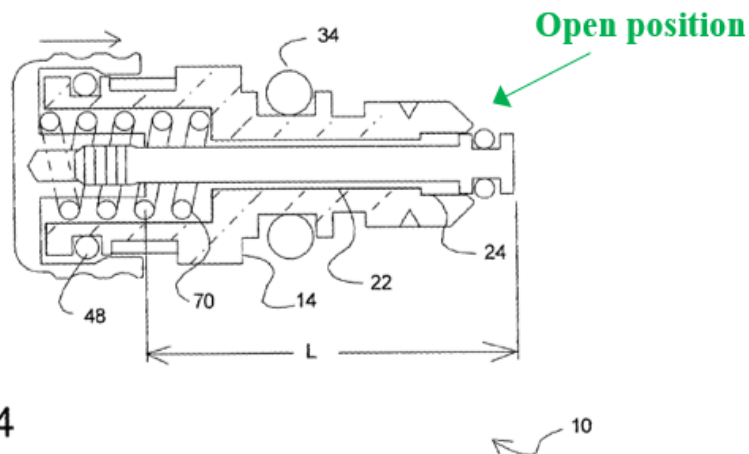


Fig. 4

(d) Claim 3[c]

Becker in view of *Bruckbauer* discloses all elements of this limitation. *Bruckbauer's* valve activator **54, 36** includes a deactivation position where the manually operable valve **54, 36, 14, 70** is in a closed position (red arrow). For example, *Becker* in view of *Bruckbauer's* valve cap **36**, connecting shaft **56**, and hollow body **14** include a biased position where a gas may not travel through the air bleed assembly **10**. Ex. 1002, ¶123; Ex. 1003, ¶119; Ex. 1009, 5:23-28; FIG. 3.

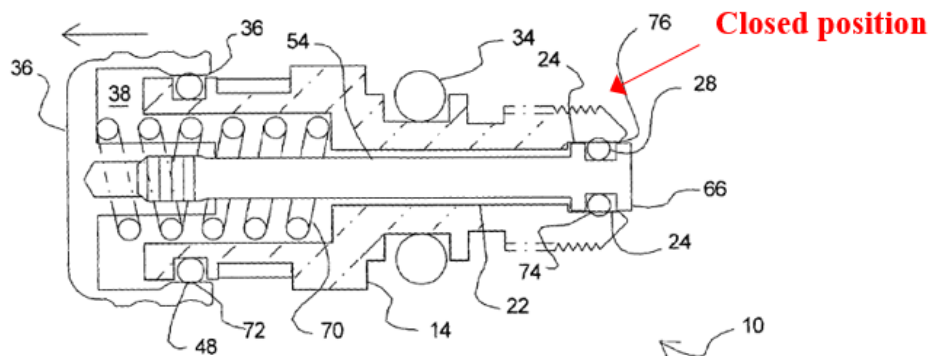


Fig. 3

7. Dependent Claim 4

Becker in view of *Bruckbauer* discloses all elements of this claim. *Bruckbauer's* valve activator **54, 36** includes a button **36** (blue arrow) to select the activation position and the deactivation position. Ex. 1002, ¶124; Ex. 1003, ¶120; Ex. 1009, 5:3-28; FIG. 3.

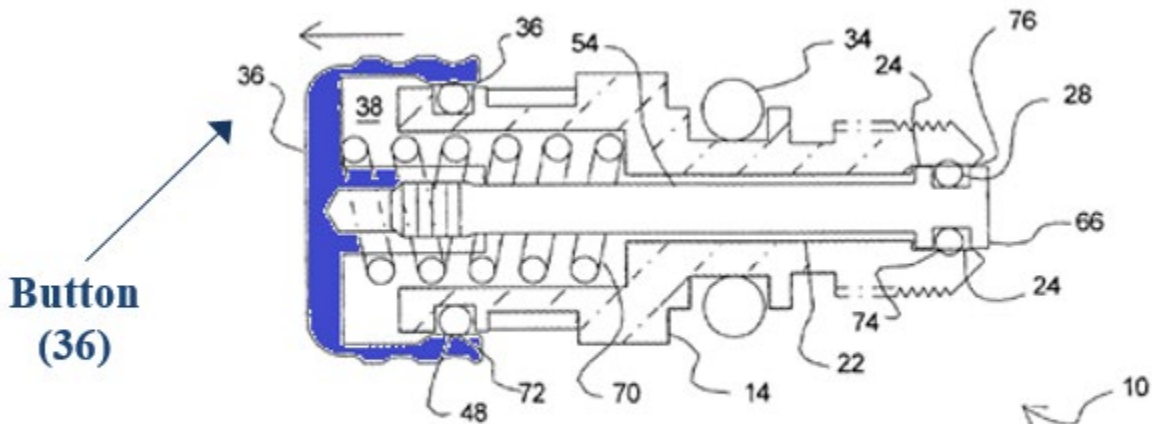


Fig. 3

8. Dependent Claim 5

Becker in view of *Bruckbauer* discloses all elements of this claim. *Bruckbauer* includes a manually operable valve **54, 36, 14, 70** fixed into a passage through the body of *Becker*'s lower (outer) fork **46**, which passage would be formed on a die-cast feature of *Becker*'s lower (outer) fork **46**. Ex. 1009, 5:3-28; Ex. 1008, 6:22-39; FIG. 3. In any case, the structures of *Becker*'s lower (outer) tube **46** do not differ from those made by die-casting, and because this is a product-by-process limitation that does not distinguish itself from the structure imparted by other prior art manufacturing techniques (and, therefore, should be given no patentable weight), this limitation regarding die-casting cannot distinguish Claim 5 from *Becker* in view of *Bruckbauer*. *Kamstrup A/S v. Axioma Metering UAB*, 43 F.4th 1374, 1382–83 (Fed. Cir. 2022) (claim element reciting “cast in one piece” was a product-by-

process claim element and given no patentable weight at least because patent owner failed to show that the limitation imparted any structural or functional differences). Ex. 1002, ¶125; Ex. 1003, ¶121.

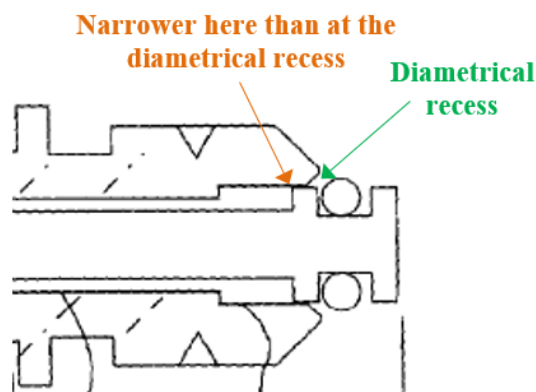
9. Dependent Claim 6

(a) Claim 6[pre]

Becker in view of *Bruckbauer* discloses all elements of this preamble. *Becker* includes a lower (outer) fork **46** and *Bruckbauer* includes an air bleed assembly **10** (in addition to *Becker/Bruckbauer's* related fluid passage). Ex. 1002, ¶126; Ex. 1003, ¶122.

(b) Claim 6[a]

Becker in view of *Bruckbauer* discloses all elements of this limitation. *Bruckbauer* includes a diametrical recess (green arrow), in that the inner bore diameter is larger at the green arrow than at the orange arrow. Ex. 1002, ¶127; Ex. 1003, ¶123; Ex. 1009, FIG. 4.



(c) Claim 6[b]

Becker in view of *Bruckbauer* discloses all elements of this limitation. *Bruckbauer* includes a sealing o-ring **28** (red arrow). Ex. 1002, ¶128; Ex. 1003, ¶124; Ex. 1009, FIG. 3.

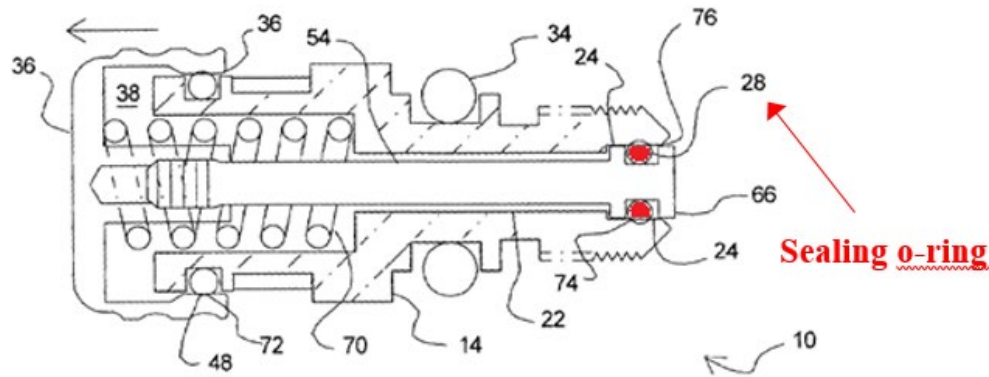


Fig. 3

(d) Claim 6[c]

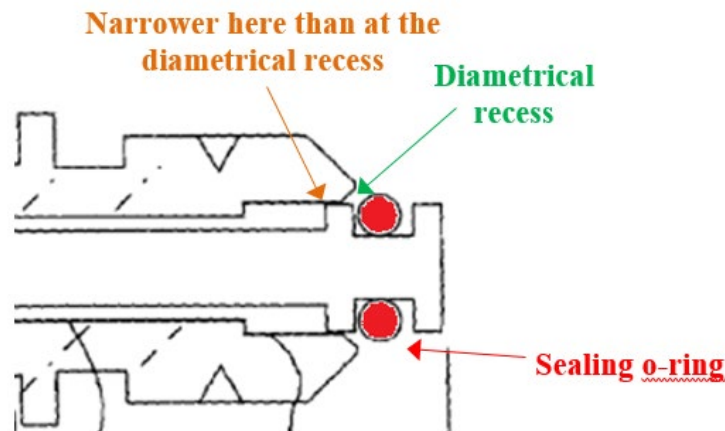
Becker in view of *Bruckbauer* discloses all elements of this limitation. *Bruckbauer* includes a sealing o-ring **28** (red arrow) also having a sealed position. Ex. 1002, ¶129; Ex. 1003, ¶125; Ex. 1009, FIG. 3.

(e) Claim 6[d]

Becker in view of *Bruckbauer* discloses all elements of this limitation. *Bruckbauer* includes a sealing o-ring **28** (red arrow, above), having an unsealed position. Ex. 1002, ¶130; Ex. 1003, ¶126; Ex. 1009, FIG. 4.

(f) Claim 6[e]

Becker in view of *Bruckbauer* discloses all elements of this limitation. *Bruckbauer* includes a sealing o-ring **28** (red arrow) having a sealed position and an unsealed position wherein the sealed position seals against air leaks from *Becker's* lower (outer) fork **46** through the die-cast feature, whereupon when *Bruckbauer's* valve activator **54, 36** is moved from the activation position to the deactivation position, the sealing o-ring **28** moves further into the diametrical recess (green arrow), thereby attaining the unsealed position and letting air pressure by-pass into or out of *Becker's* lower (outer) fork **46** via a vent hole. Ex. 1002, ¶131; Ex. 1003, ¶127; Ex. 1009, FIGS. 3, 4.



10. Dependent Claim 7

Becker in view of *Bruckbauer* discloses all elements of this claim. *Bruckbauer's* manually operable valve **54, 36, 14, 70** includes a spring **70** (orange

arrow) coupled to the valve activator **54, 36** (pink arrow), which spring **70** biases the valve activator **54, 36** toward the first (closed) position. Ex. 1002, ¶132; Ex. 1003, ¶128; Ex. 1009, 5:23–46; FIG. 4.

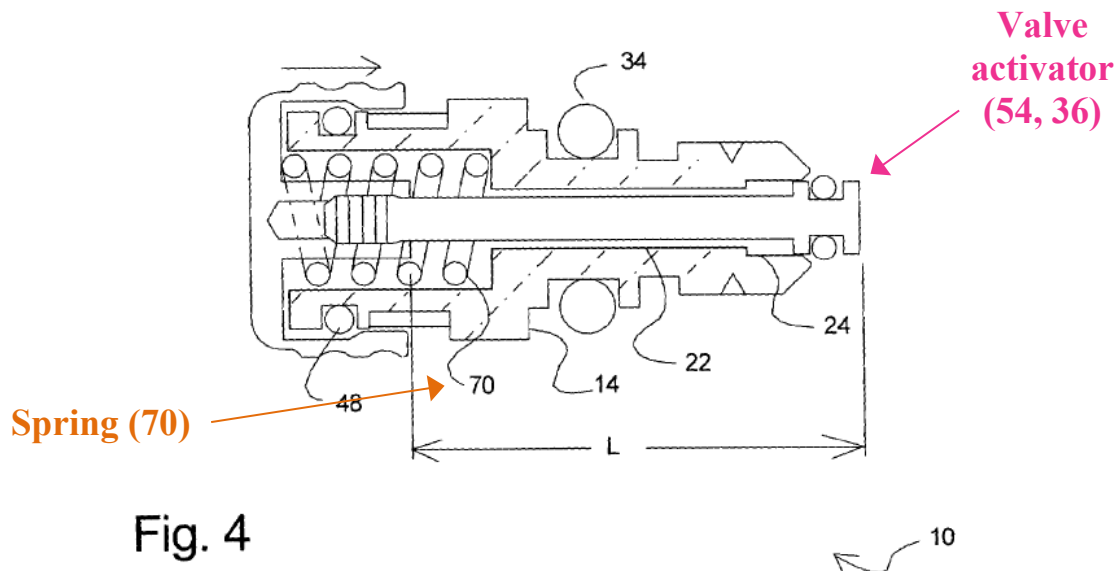
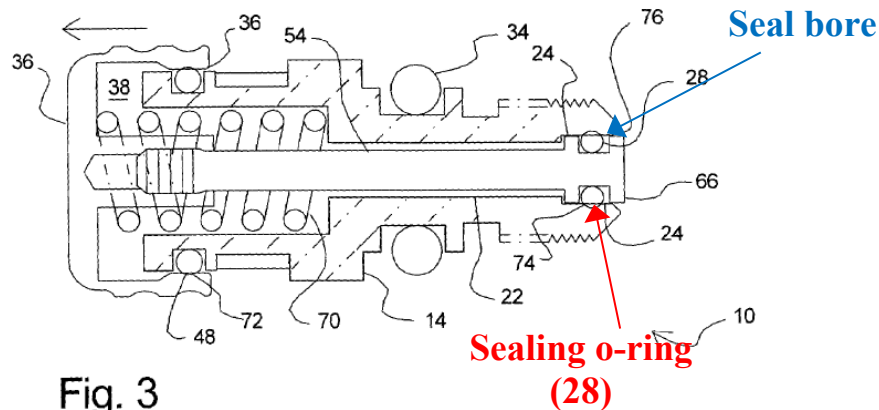


Fig. 4

11. Dependent Claim 8

Becker in view of *Bruckbauer* discloses all elements of this claim. *Bruckbauer*'s manually operable valve **54, 36, 14, 70** has a second position having a sealing engagement between the sealing o-ring **28** (red arrow) and a seal bore (blue arrow), wherein when in the sealing engagement, trapped air pressure does not bypass into or out of *Becker*'s lower (outer) fork **46**. Air flow through the manually operable valve **54, 36, 14, 70** may be sealed by squeezing the internal o-ring **28** into the entrance of the aperture at the end of the hollow body **14** when the valve cap is moved into the closed position, thereby preventing entry of dirt, water, or other

foreign substances from entering the lower tube. Ex. 1002, ¶133; Ex. 1003, ¶129; Ex. 1009, 5:23–46; FIG. 3; Ex. 1008, 6:22–39.



C. Ground III: Claims 5 and 6 Are Rendered Obvious Under 35 U.S.C. § 103 by *Becker* in View of *Bruckbauer*, and Further in View of *Danter*

1. *Danter* discloses a die-cast procedure.

European Patent App. Pub. No. EP0979772A2 to *Danter* (“*Danter*”) is prior art under pre-AIA 35 U.S.C. § 102(b), having been filed on February 8, 1999, and published on February 16, 2000. Ex. 1010.

Danter discloses the use of an aluminum casting process for making portions of a fork tube. *See, e.g.*, Ex. 1010, [0011], [0018]. *Danter* states that POSITAs preferred such a casting process. Ex. 1010, [0011], [0018]. *Danter* discloses that the casting process may include the formation of features formed on and attached to the cast fork tubes. *See, e.g.*, Ex. 1010, FIGS. 8–14; [0013], [0015], [0017]. Casting

using a die is very well-known and widely utilized in manufacturing bicycle and motorcycle forks, including suspension forks. Ex. 1002, ¶65; Ex. 1003, ¶61.

2. It would have been obvious to a POSITA to modify *Becker* and *Bruckbauer* with *Danter*'s die-cast procedure, thereby yielding the subject matter of claims 5-6.

The combination relied upon in this Petition—*Becker*, *Bruckbauer*, and *Danter*—is straightforward: a POSITA would modify *Becker*'s typical lower (outer) tubes **46, 50** to incorporate *Danter*'s method of forming “leg portions of the front suspension fork member” using a “cast[ing process] from a suitable metal such as steel or aluminum alloy[.]” Ex. 1010, 4:18–20. A POSITA would have been motivated to improve *Becker* by using *Danter*'s casting process at least because casting was a common and known technique; forks were known devices; and it was predictable that fork legs could be made via casting. It would have been obvious to try casting *Becker*'s lower (outer) fork **46, 50**. A POSITA would have been motivated to use die-casting to benefit from the reliability and low-costs associated with such methods. Ex. 1002, ¶88; Ex. 1003, ¶84.

3. Dependent Claim 5

Becker in view of *Bruckbauer* discloses all elements of claim 3, from which this claim depends, as discussed above. It would have been obvious to a POSITA to modify *Becker* in view of *Bruckbauer* to form *Becker*'s lower (outer) tubes **46, 50**

using a die-cast procedure disclosed in *Danter*, as discussed immediately above.

Ex. 1002, ¶¶88, 134; Ex. 1003, ¶¶84, 130.

4. Dependent Claim 6

As discussed above, *Becker* in view of *Bruckbauer* discloses all elements of claim 6.

D. Ground IV: Claims 1 Through 8 Are Rendered Obvious Under 35 U.S.C. § 103 by *Kojima* in View of *Bruckbauer*, and Further in View of *Danter*

1. *Kojima* discloses a conventional suspension fork with an internal oil bath that includes a gas.

As discussed above, *Kojima* discloses a conventional suspension fork. An oil bath **217** is formed within the lower fork **210** when *Kojima*'s suspension fork is fully assembled. Ex. 1005, ¶[0077], FIG. 9. *Kojima*'s Figure 9 shows the top-most portion of the lubricating oil bath **217** is below the air valve **215**. This arrangement allows for the air within *Kojima*'s bottom case **210** to pass through the air valve **215** without materially disturbing the lubricating oil bath **217**. Ex. 1002, ¶57; Ex. 1003, ¶53.

2. *Bruckbauer* discloses an air bleed assembly.

As discussed above, *Bruckbauer* discloses an air bleed assembly as disclosed in the '331 patent.

3. It would have been obvious to a POSITA to modify *Kojima* with *Bruckbauer*, thereby yielding the subject matter of Claims 1-8.

Combining *Kojima* and *Bruckbauer* is straightforward: a POSITA would modify *Kojima*'s typical suspension fork to substitute *Bruckbauer*'s pressure relief system for *Kojima*'s air valve **215** and o-ring **216**. Ex. 1002, ¶70; Ex. 1003, ¶66.

As discussed above, *Kojima* discloses a typical suspension fork embodiment shown in Figure 9, wherein *Kojima*'s suspension fork includes lower tubes **210** and upper tubes **11**. Ex. 1005, FIG. 9; Ex. 1002, ¶71; Ex. 1003, ¶67.

Kojima's bottom case **210** may be filled with a pressurized gas to form an air spring **210a**. Ex. 1005, ¶¶[0077]-[0078]. As a result, a user may have need of tuning, and eventually will need to release, the air pressure built up in *Kojima*'s air spring **210a**. A POSITA would know that a user may overinflate the air spring **210a** during setup, or the air pressure may increase as a result of an altitude change or temperature increase and as a result, have a need for venting some of the air pressure within the air spring **210a**. Such altitude changes and temperature increases (especially those due to heating during heavy use) are common when riding over mountainous terrain. A user will eventually need to equalize the pressure within the air spring **210a** with that of ambient air in order to safely disassemble the suspension fork for maintenance. Disassembling a suspension fork with an air spring without

first equalizing the pressure of the gas within the air spring may cause portions of the air spring to eject at high speeds, potentially causing serious injuries to anyone in the proximity of the suspension fork. Accordingly, a POSITA would have been motivated to improve *Kojima* and its air spring **210a** by providing a means for equalizing the gas pressures therein with the ambient air pressure. Ex. 1002, ¶72; Ex. 1003, ¶68.

A POSITA would also understand that this functionality may be provided by *Bruckbauer's* pressure relief valve **10**. In fact, *Bruckbauer's* pressure relief valve **10** may be directly screwed into *Kojima's* threaded hole that accommodates the air valve **215**, as *Bruckbauer* is intended to replace prior art screws that were previously used for purging fluids through holes in suspension forks. Ex. 1009, 1:38-47, 2:14-20. *Bruckbauer* is a device for safely equalizing pressure. Ex. 1002, ¶73; Ex. 1003, ¶69.

The advantages of such an improvement extend beyond providing safe equalization of pressures. *Bruckbauer's* solution additionally provides the convenience of a push-button device that requires no tools, as well as an ability to remain free of contamination during use. Ex. 1002, ¶74; Ex. 1003, ¶70; Ex. 1009, 1:38-47, 2:14-20.

When substituted into *Kojima's* threaded hole, *Bruckbauer's* pressure relief valve **10** allows the user to equalize any pressure built up between the lower fork **210** and the upper fork **11** during assembly or maintenance by merely pressing *Bruckbauer's* cap **36**. Ex. 1002, ¶75; Ex. 1003, ¶71.

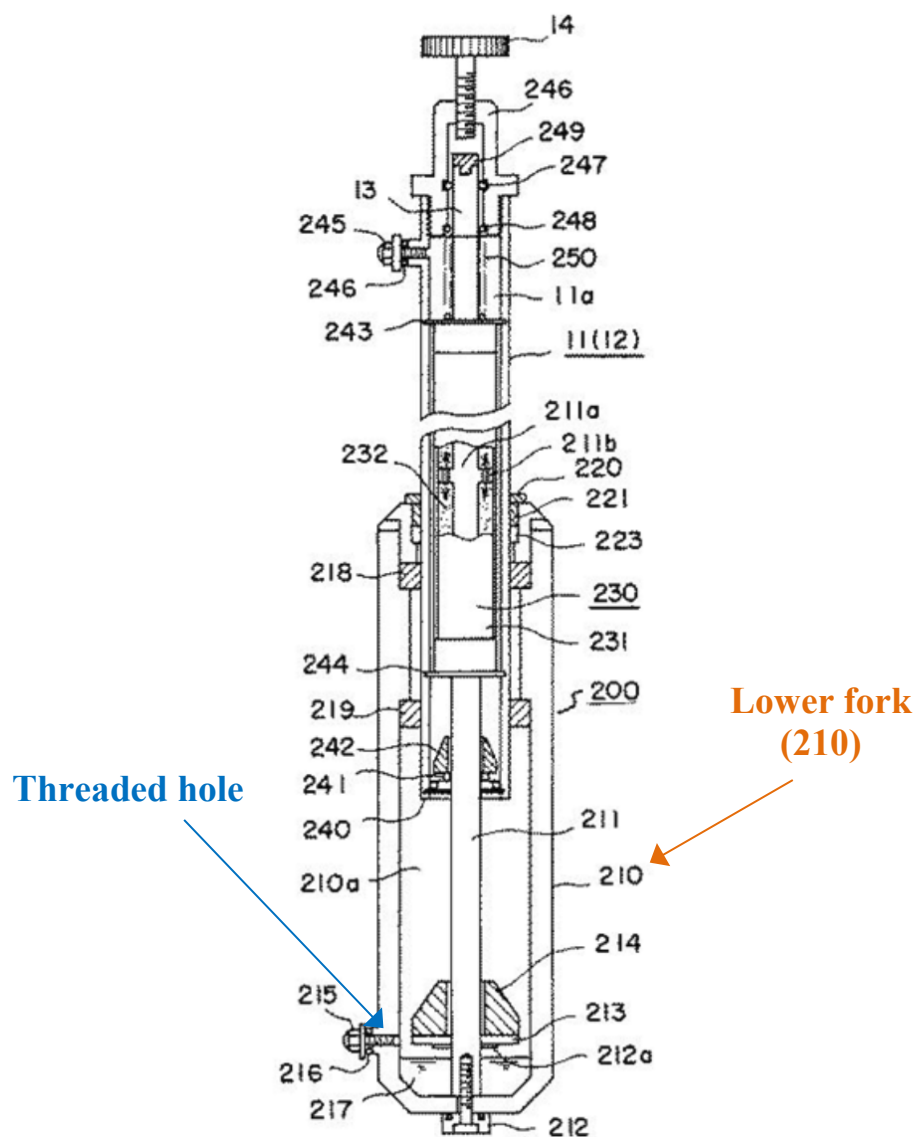
Accordingly, the combination of *Kojima* and *Bruckbauer* would merely be the combination of known prior art elements (*Kojima's* typical vehicle suspension fork and *Bruckbauer's* known pressure relief valve) according to known methods (*Bruckbauer's* known pressure relief valve **10** may directly screw into *Kojima's* threaded hole). The combination of *Kojima* and *Bruckbauer* would merely be a simple substitution of one known element (*Bruckbauer's* known pressure relief valve **10**) for another (*Kojima's* air valve **215** and o-ring **216**). In each of these two cases, a POSITA would expect the combination to yield and obtain easily predictable results (that *Bruckbauer's* pressure relief valve **10** would allow for push-button opening and closing of *Kojima's* threaded hole), at least because each element in the combination is being incorporated and used as intended. Ex. 1002, ¶76; Ex. 1003, ¶72; Ex. 1005, FIG. 9; Ex. 1009, FIGS. 1-4. In addition, mechanical arts like those discussed in *Kojima* and *Bruckbauer* have previously been found to be predictable. See, e.g., *Cedarapids, Inc. v. Nordberg, Inc.*, 121 F.3d 727 (Fed. Cir. 1997).

4. Independent Claim 1

Kojima discloses all of the elements of Claim 1 in the combination of *Kojima* and *Bruckbauer*, except that *Kojima*'s air valve **215** and o-ring **216** are substituted with *Bruckbauer*'s pressure relief valve **10**. Ex. 1002, ¶70; Ex. 1003, ¶66; Ex. 1005, FIG. 9; Ex. 1009, FIGS. 1-4.

(a) Claim 1[pre]

Kojima in view of *Bruckbauer* discloses all elements of this preamble. *Kojima* discloses a lower fork **210**, and *Bruckbauer* discloses an air bleed assembly **10** (with *Kojima*'s threaded hole). Ex. 1002, ¶136; Ex. 1003, ¶132; Ex. 1005, FIG. 9; Ex. 1009, FIGS. 1-4.



Ex. 1005, FIG. 9.

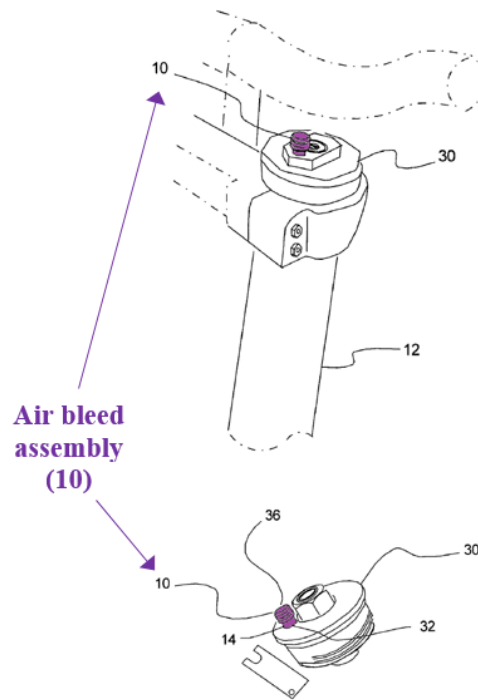


Fig. 2

Ex. 1009, FIGS. 1, 2.

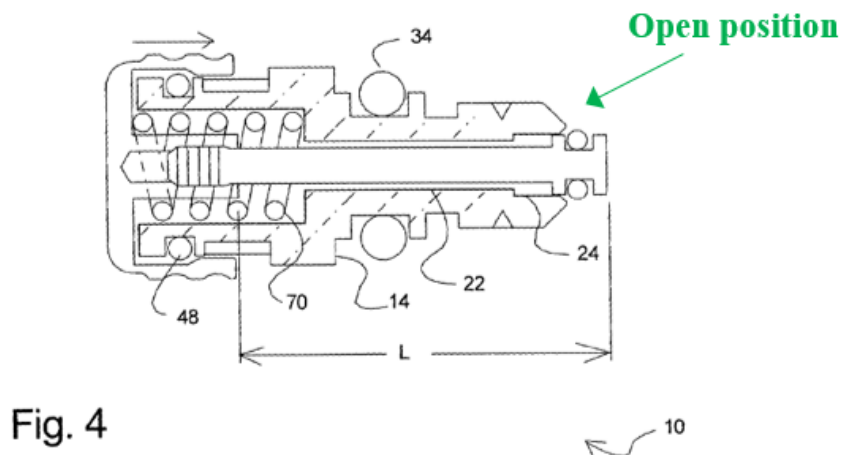
(b) Claim 1[a] through Claim 1[c]

Kojima discloses all elements of these limitations as discussed previously.

(c) Claim 1[d]

Kojima in view of *Bruckbauer* discloses all elements of this limitation. *Kojima* in view of *Bruckbauer* includes *Bruckbauer*'s pressure relief valve **10** and *Kojima*'s threaded hole as an air bleed assembly (blue and purple arrows, above) disposed on *Kojima*'s lower fork tube **210** (orange arrow, above) at *Kojima*'s threaded hole. This air bleed assembly is configured for equalizing ambient pressure within *Kojima*'s lower fork **210**. When *Bruckbauer*'s valve cap **36** is depressed, gas

may travel through *Bruckbauer's* pressure relief valve **10** while it is in an open position (green arrow, below), as illustrated in Figure 4, and the air pressure within *Kojima's* lower fork **210** will equalize with the ambient air pressure. Ex. 1002, ¶140; Ex. 1003, ¶136; Ex. 1005, FIG. 9; Ex. 1009, FIGS. 1-4.



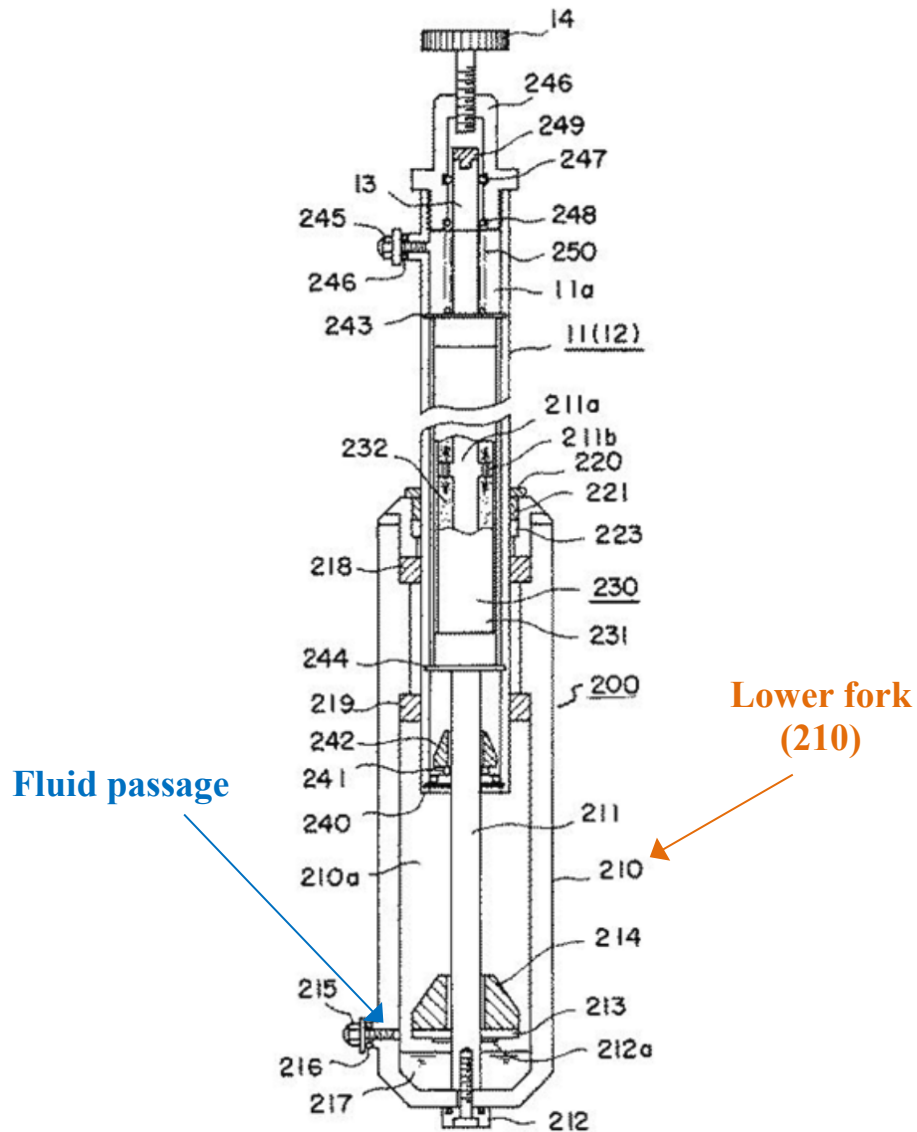
(d) Claim 1[e]

Kojima in view of *Bruckbauer* discloses all elements of this limitation, as set forth above.

(e) Claim 1[f]

Kojima in view of *Bruckbauer* discloses all elements of this limitation. *Bruckbauer's* manually operable valve **54, 36, 14, 70** (red arrow) located in *Kojima's* lower fork **210** is coupled to *Kojima's* fluid passage (blue arrow). *Bruckbauer's* manually operable valve **54, 36, 14, 70** has a first position substantially closing the fluid passage (*Bruckbauer's* Figure 3) and a second position (*Bruckbauer's*

Figure 4) allowing a fluid to flow between the interior and the exterior of *Kojima's* lower fork **210**. Ex. 1002, ¶142; Ex. 1003, ¶138; Ex. 1005, FIG. 9; Ex. 1009, FIGS. 1-4.



Ex. 1005, FIG. 9.

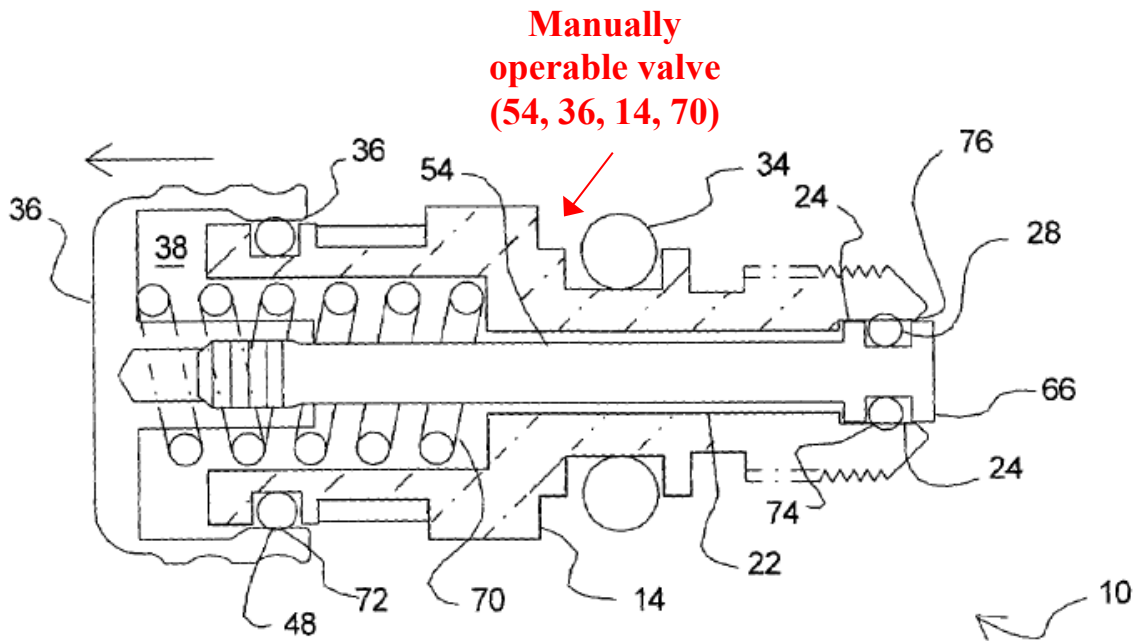


Fig. 3

Ex. 1009, FIG. 3.

(f) Claim 1[g]

Kojima in view of *Bruckbauer* discloses all elements of this limitation. *Kojima*'s fluid passage and *Bruckbauer*'s manually operable valve **54, 36, 14, 70** are located at a distance from an oil bath lubrication **217** within the lower fork **210**. This positioning of *Kojima*'s valve **215** results in a configuration wherein when *Bruckbauer*'s manually operable valve **54, 36, 14, 70** is in the second position (open position), most, if not all of the oil bath lubrication **217** remains within the lower fork **210** because the air valve **215** is above the top of the illustrated oil bath **217**. The air valve **215** can be closed were oil to begin leaking. Any air within the lower

fork **210** will be equalized with ambient pressure when the air valve **215** is opened for a sufficient duration, while the oil **217** will remain in the oil bath lubrication space **210a** within the lower fork **210**. *Kojima*'s Figure 9 clearly illustrates that the top surface of the oil bath **217** is well below the fluid passage of the air valve **215** screw within the bottom case **210**. Thus, when the air valve **215** screw is removed, little oil **217** would be vented. In addition, when the air valve **215** screw is opened, the pressure of the gas within the bottom case **210** will be equalized with the exterior air pressure, while the lubricating oil **217** will remain in the bottom case **210**. Ex. 1002, ¶143; Ex. 1003, ¶139; Ex. 1005, ¶[0077], FIG. 9; Ex. 1009, FIGS. 3, 4.

5. Dependent Claim 2

Kojima discloses all elements of this claim, as set forth above.

6. Dependent Claim 3

(a) Claim 3[pre]

Kojima discloses all elements of this preamble, as set forth above.

(b) Claim 3[a]

Kojima in view of *Bruckbauer* discloses all elements of this limitation. *Kojima* in view of *Bruckbauer* includes *Bruckbauer*'s valve activator **54, 36** (pink arrow) coupled with *Bruckbauer*'s manually operable valve **54, 36, 14, 70**. *Bruckbauer* at FIG. 3. Ex. 1002, ¶146; Ex. 1003, ¶142; Ex. 1009, FIG. 3.

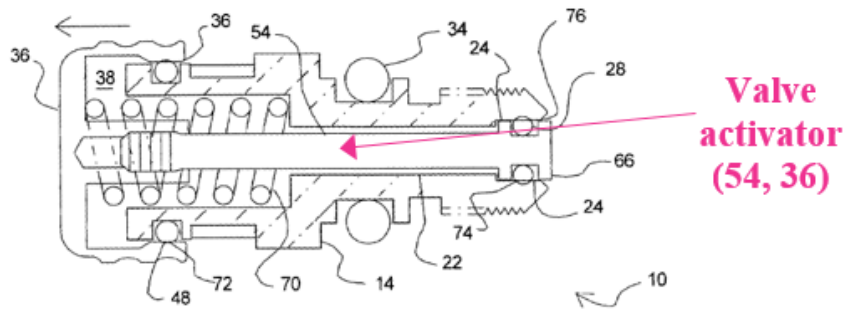
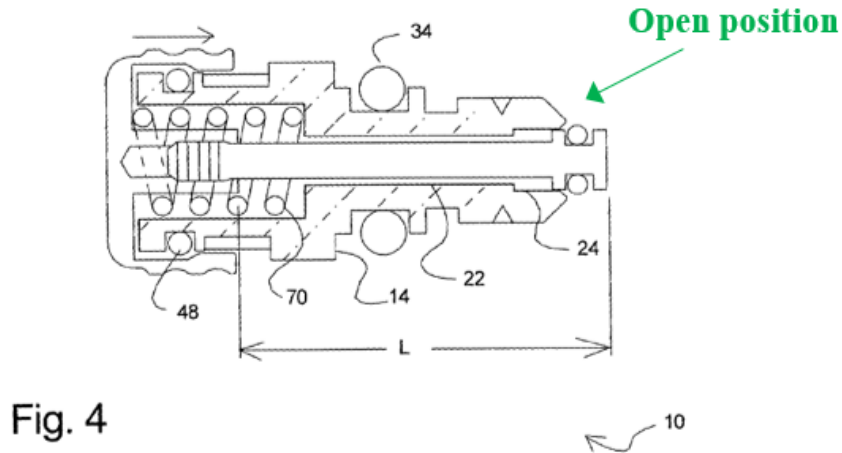


Fig. 3

(c) Claim 3[b]

Kojima in view of *Bruckbauer* discloses all elements of this limitation. *Bruckbauer*'s valve activator 54, 36 includes an activation position where the manually operable valve 54, 36, 14, 70 is in an open position (green arrow). For example, *Kojima* in view of *Bruckbauer*'s valve cap 36, connecting shaft 56, and hollow body 14 include a spaced-apart relationship where a gas may travel through the manually operable valve. Ex. 1002, ¶147; Ex. 1003, ¶143; Ex. 1009, 5:3-9, FIG. 4.



(d) Claim 3[c]

Kojima in view of *Bruckbauer* discloses all elements of this limitation. *Bruckbauer's* valve activator 54, 36 includes a deactivation position where the manually operable valve 54, 36, 14, 70 is in a closed position (red arrow). For example, *Kojima* in view of *Bruckbauer's* valve cap 36, connecting shaft 56, and hollow body 14 include a biased position where a gas may not travel through the manually operable valve. Ex. 1002, ¶148; Ex. 1003, ¶144; Ex. 1009, 5:23-28, FIG. 3.

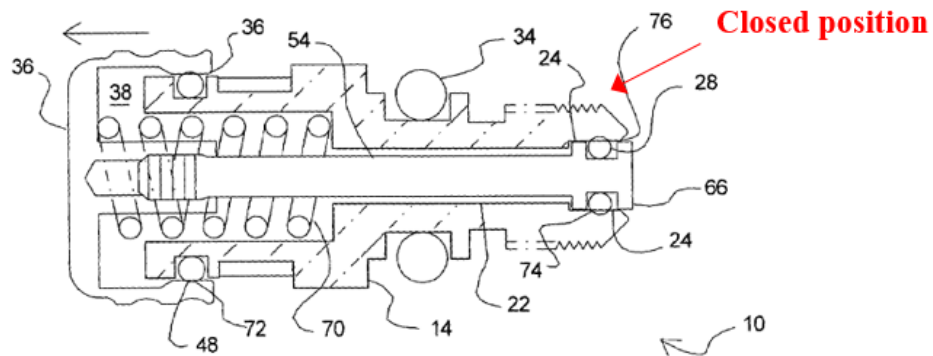


Fig. 3

7. Dependent Claim 4

Kojima in view of *Bruckbauer* discloses all elements of this claim. *Bruckbauer's* valve activator 54, 36 includes a button 36 (blue arrow) to select the activation position and the deactivation position. Ex. 1002, ¶149; Ex. 1003, ¶145; Ex. 1009, 5:3-28, FIG. 3.

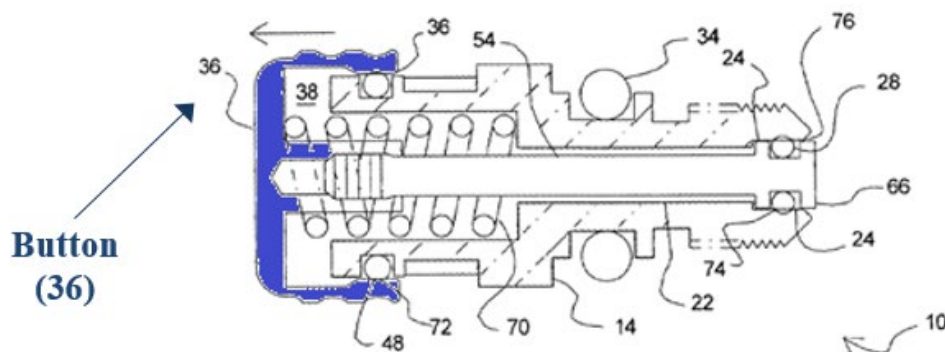


Fig. 3

8. Dependent Claim 5

Kojima in view of *Bruckbauer* discloses all elements of this claim. *Bruckbauer* includes a manually operable valve **54, 36, 14, 70** fixed into *Kojima*'s threaded hole through the body of *Kojima*'s lower fork **210**, which threaded hole would be formed on a die-cast feature of *Kojima*'s lower fork **210**. *Kojima* explains that the bottom case **210** and its feature may be cast aluminum or magnesium. Ex. 1002, ¶¶108, 150; Ex. 1003, ¶¶104, 146; Ex. 1005, ¶[0076], FIG. 9; Ex. 1009, 5:3-28.

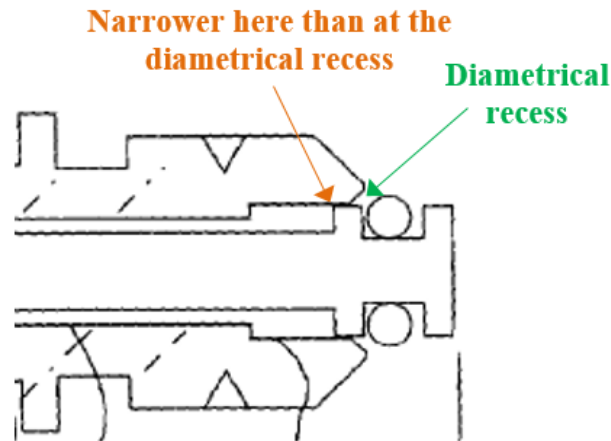
9. Dependent Claim 6

(a) Claim 6[pre]

Kojima in view of *Bruckbauer* discloses all elements of this preamble. *Kojima* includes a lower fork **210** and *Bruckbauer* includes an air bleed assembly **10** (in addition to *Kojima*'s related threaded hole). Ex. 1002, ¶152; Ex. 1003, ¶148; Ex. 1005, FIG. 9; Ex. 1009, FIGS. 3, 4.

(b) Claim 6[a]

Kojima in view of *Bruckbauer* discloses all elements of this limitation. *Bruckbauer* includes a diametrical recess (green arrow), in that the inner bore diameter is larger at the green arrow than at the orange arrow. Ex. 1002, ¶154; Ex. 1003, ¶150; Ex. 1009, FIG. 4.



(c) Claim 6[b]

Kojima in view of *Bruckbauer* discloses all elements of this limitation. *Bruckbauer* includes a sealing o-ring **28** (red arrow). Ex. 1002, ¶155; Ex. 1003, ¶151; Ex. 1009, FIG. 3.

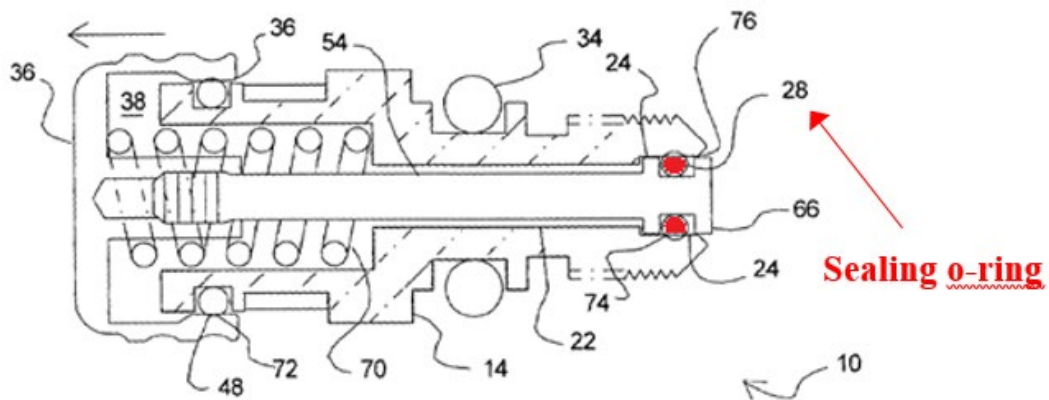


Fig. 3

(d) Claim 6[c]

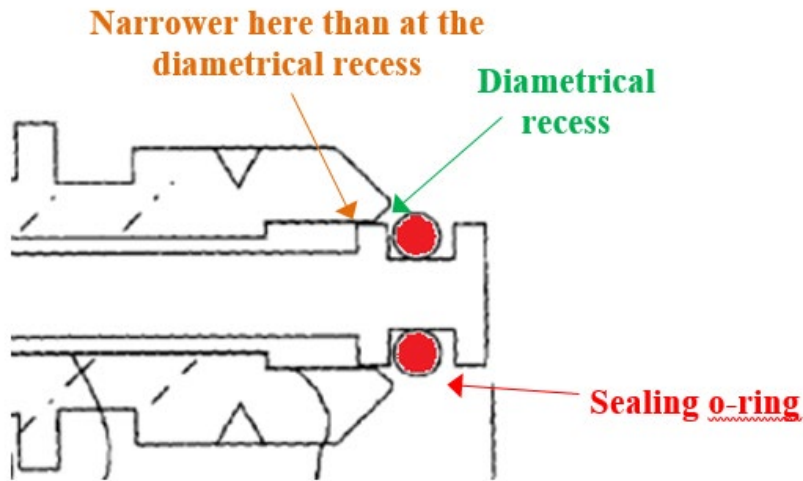
Kojima in view of *Bruckbauer* discloses all elements of this limitation. *Bruckbauer* includes a sealing o-ring **28** (red arrow) having a sealed position. Ex. 1002, ¶156; Ex. 1003, ¶152; Ex. 1009, FIG. 3.

(e) Claim 6[d]

Kojima in view of *Bruckbauer* discloses all elements of this limitation. *Bruckbauer* includes a sealing o-ring **28** (red arrow, above) having an unsealed position. Ex. 1002, ¶157; Ex. 1003, ¶153; Ex. 1009, FIG. 4.

(f) Claim 6[e]

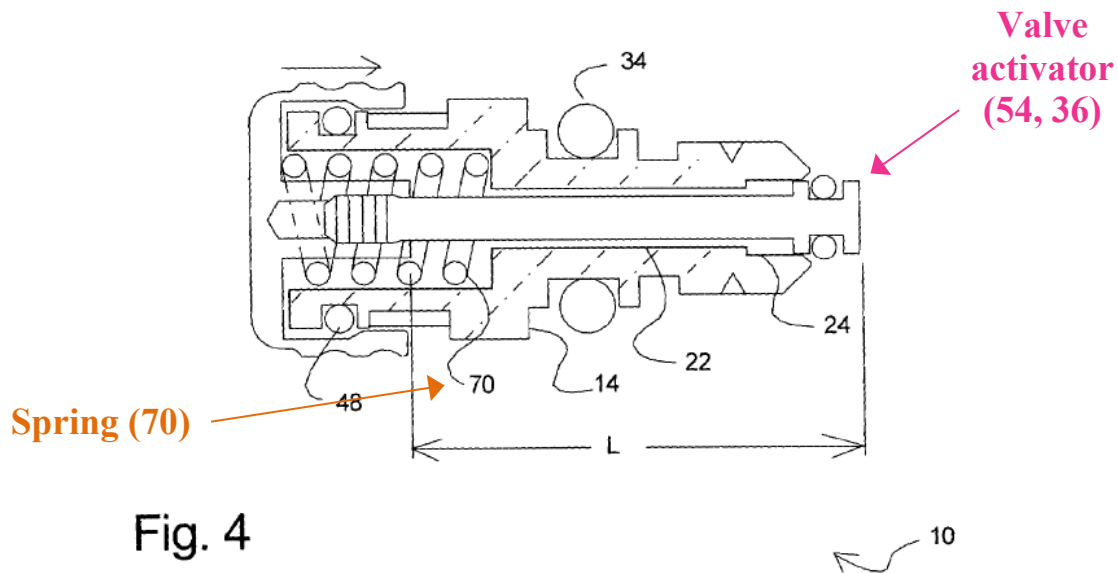
Kojima in view of *Bruckbauer* discloses all elements of this limitation. *Bruckbauer* includes a sealing o-ring **28** (red arrow) having a sealed position and an unsealed position wherein the sealed position seals against air leaks from *Kojima*'s lower fork **210** through the die-cast feature, whereupon when *Bruckbauer*'s valve activator **54, 36** is moved from the activation position to the deactivation position, the sealing o-ring **28** moves further into the diametrical recess (green arrow), thereby attaining the unsealed position and letting air pressure by-pass into or out of *Kojima*'s lower fork **1** via the vent hole **5**. Ex. 1002, ¶158; Ex. 1003, ¶154; Ex. 1005, FIG. 9; Ex. 1009, FIGS. 3, 4.



Ex. 1009, FIG. 4.

10. Dependent Claim 7

Kojima in view of *Bruckbauer* discloses all elements of this claim. *Bruckbauer*'s manually operable valve **54, 36, 14, 70** includes a spring **70** (orange arrow) coupled to the valve activator **54, 36** (pink arrow), which spring **70** biases the valve activator **54, 36** toward the first (closed) position. Ex. 1002, ¶159; Ex. 1003, ¶155; Ex. 1009, 5:23-46, FIG. 4.



11. Dependent Claim 8

Kojima in view of *Bruckbauer* discloses all elements of this claim. *Bruckbauer's* manually operable valve **54, 36, 14, 70** has a second position having a sealing engagement between the sealing o-ring **28** (red arrow) and a seal bore (blue arrow), wherein when in the sealing engagement, trapped air pressure does not bypass into or out of *Kojima's* lower fork **210**. Air flow through the manually operable valve **54, 36, 14, 70** may be sealed by squeezing the internal o-ring **28** into the entrance of the aperture at the end of the hollow body **14** when the valve cap **36** is moved into the closed position, thereby preventing entry of dirt, water, or other foreign substances from entering *Kojima's* lower fork **210**. Ex. 1002, ¶160; Ex. 1003, ¶156; Ex. 1009, 5:23-46, FIG. 3.

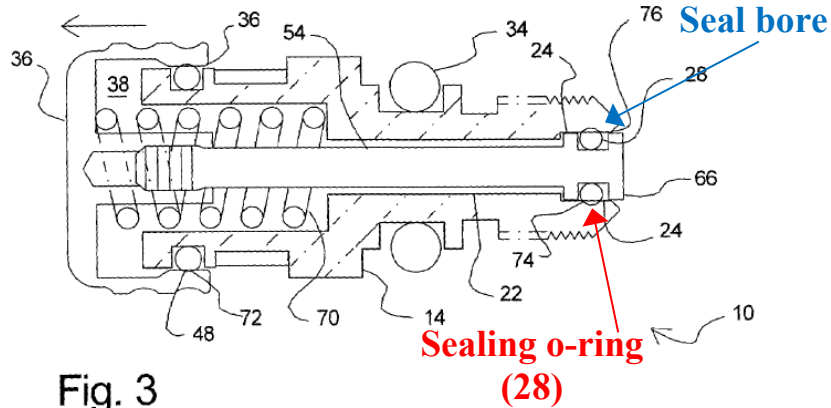


Fig. 3

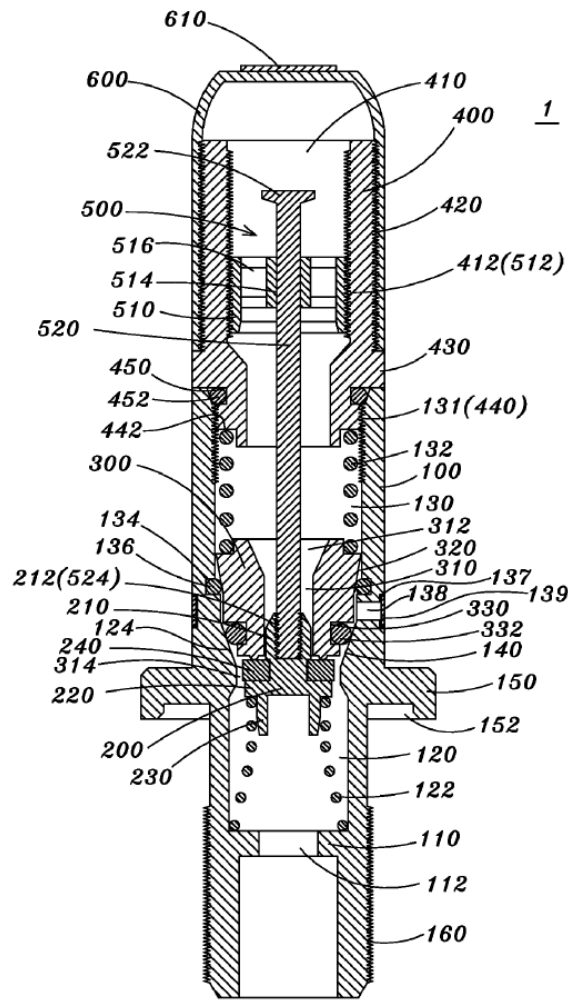
E. Ground V: Claims 3 Through 8 Are Rendered Obvious Under 35 U.S.C. § 103 by *Kojima* in View of *Huang*

1. *Huang* discloses an air bleed assembly.

U.S. Patent No. 7,624,752 to Huang (“*Huang*”) is prior art under pre-AIA 35 U.S.C. § 102(b), having been filed on November 22, 2006, and issued on December 1, 2009. Ex. 1007.

Huang discloses an air valve **1** that “automatically releases surplus high-pressure air when an object is excessively inflated via the inflation valve.” Ex. 1007, 1:6-8. The valve **1** includes a first valve body **200** holding an airtight washer **240** that seals against a seat of a second valve body **300**. Ex. 1007, 4:38-53; FIGS. 2, 3a. A central pin **520** is connected at one end to the second valve body **300** and at the other end to a diametrically expanded head portion **522**, which portion is a button

that may actuate the valve **1**. Ex. 1007, 6:10–17; FIGS. 2, 3A; Ex. 1002, ¶69; Ex. 1003, ¶65.



- 2. It would have been obvious to a POSITA to modify *Kojima's* air valve with *Huang's* air valve, thereby yielding the subject matter of claims 3-8.**

The combination of *Kojima* and *Huang* is straightforward: a POSITA would modify *Kojima* to substitute and improve *Kojima's* air valve **215** with *Huang's* air valve **1**. Ex. 1007, FIGS. 2, 3A.

A POSITA would have been motivated to make this simple substitution at least because *Huang*'s valve is well-known, relatively inexpensive, and easily operated with manual inputs. Ex. 1005; Ex. 1007; Ex. 1002, ¶90; Ex. 1003, ¶86. This simple substitution of known elements would have been predictable, as it would have only required screwing in the body of *Huang*'s valve into the die-cast feature of *Kojima*. Ex. 1002, ¶90; Ex. 1003, ¶86. A POSITA would have been motivated to improve *Kojima* by using *Huang*'s valve at least because *Huang* discloses an air valve that would allow for more convenient air insertion into *Kojima*, when needed. Ex. 1002, ¶91; Ex. 1003, ¶87.

3. Dependent Claim 3

(a) Claim 3[pre]

Kojima discloses each and every limitation of the preamble. A POSITA would have been motivated to modify and substitute *Kojima*'s air valve **215** with *Huang*'s air valve **1** at least for the reasons discussed above. Ex. 1002, ¶161; Ex. 1003, ¶157.

(b) Claim 3[a]

Kojima in view of *Huang* discloses all elements of this limitation. *Kojima* in view of *Huang* includes a valve activator **520, 522** (pink arrows) coupled with the manually operable valve **1** (and the related fluid passage). Ex. 1007, FIGS. 2, 3A;

Ex. 1002, ¶162; Ex. 1003, ¶158.

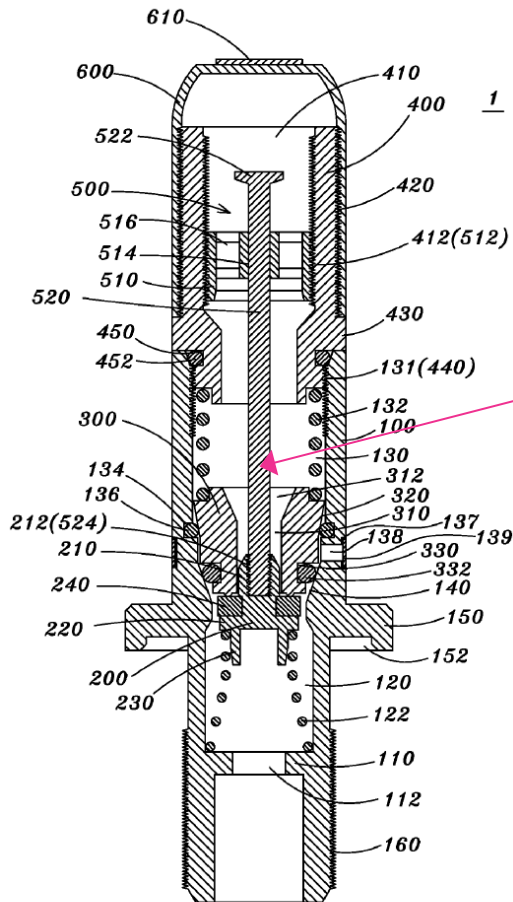


Fig. 2

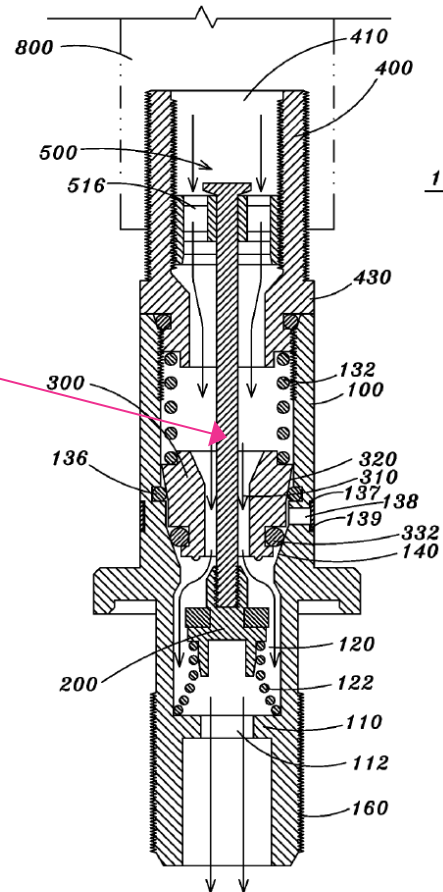


Fig. 3A

(c) Claim 3[b]

Kojima and *Huang* disclose all elements of this limitation. *Kojima* in view of *Huang* includes all elements of this limitation. *Kojima* in view of *Huang*'s valve activator **520**, **522** includes an activation position where the manually operable valve **1** is in an open position. The central pin **520** may be pushed downward (as

shown by the yellow arrows), thereby allowing a gas to pass through the valve 1.

Ex. 1002, ¶163; Ex. 1003, ¶159; Ex. 1007, 6:37-47; FIG. 3A.

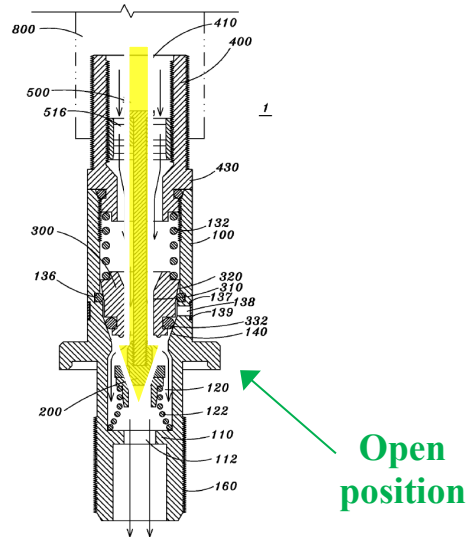


Fig. 3A

(d) Claim 3[c]

Kojima and *Huang* disclose all elements of this limitation. *Kojima* in view of *Huang*'s valve activator 520, 522 also includes a deactivation position where the manually operable valve 1 is in a closed position, as shown in Figure 2, below.

Ex. 1002, ¶164; Ex. 1003, ¶160; Ex. 1007, FIG. 2.

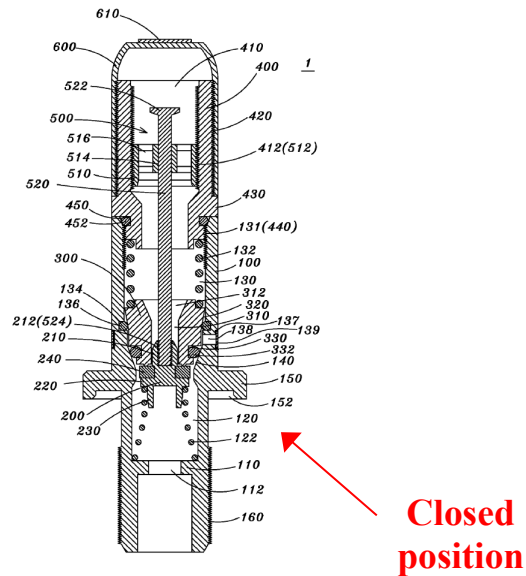


Fig. 2

4. Dependent Claim 4

Kojima in view of *Huang* discloses all elements of this claim. *Huang* includes a button **522** (blue arrows) to select the activation position and the deactivation position. Ex. 1002, ¶165; Ex. 1003, ¶161; Ex. 1007, FIGS. 2, 3A.

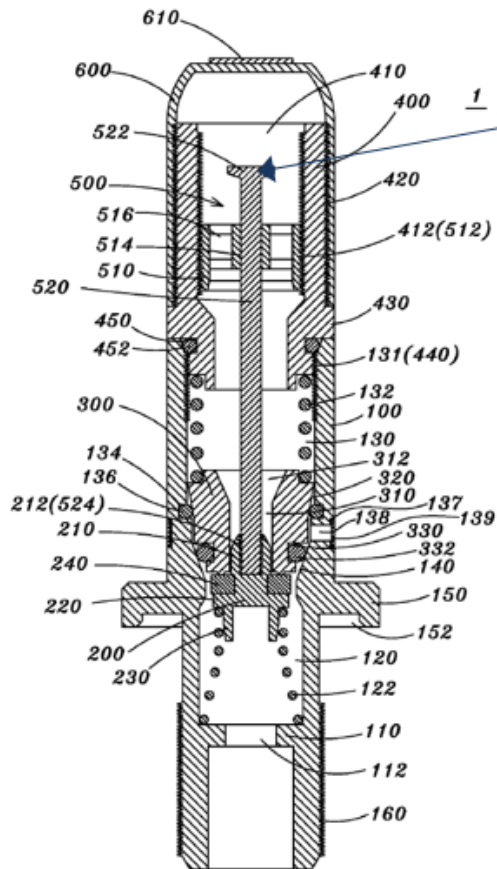


Fig. 2

Button
(522)

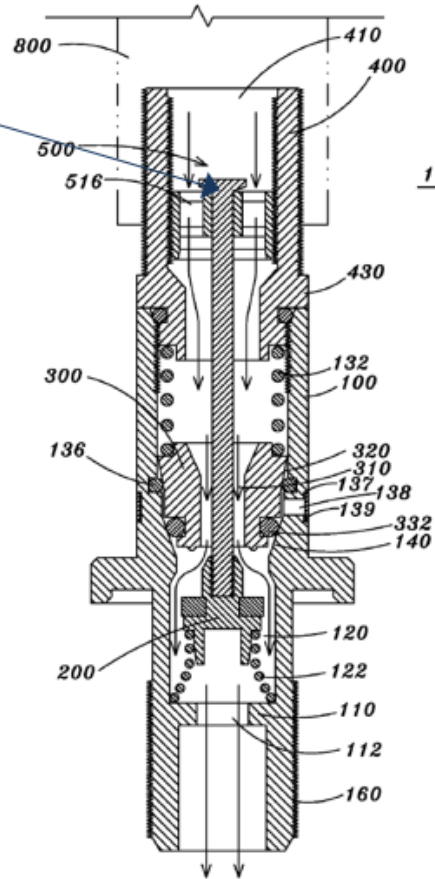


Fig. 3A

5. Dependent Claim 5

Kojima in view of *Huang* discloses all elements of this claim, as discussed above.

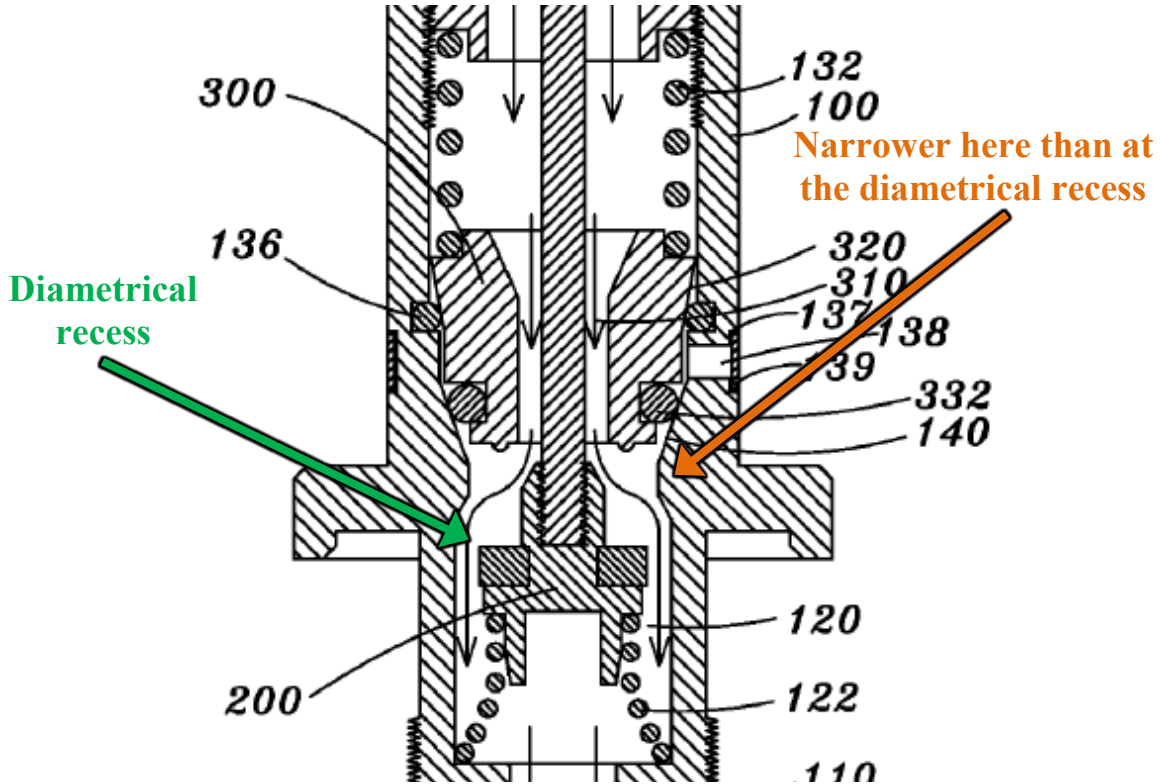
6. Dependent Claim 6

(a) Claim 6[pre]

Kojima in view of *Huang* discloses all elements of this preamble. *Kojima* in view of *Huang* includes *Kojima's* lower fork **210** and an air bleed assembly (*Huang's* valve **1** with the fluid passage) combination of claim 5. Ex. 1002, ¶167; Ex. 1003, ¶163; Ex. 1005, FIG. 9; Ex. 1007, FIGS. 2, 3A.

(b) Claim 6[a]

Kojima in view of *Huang* discloses all elements of this limitation. *Kojima* in view of *Huang* includes a diametrical recess (green arrow). *Huang* shows that the inner bore diameter is larger at the green arrow than at the orange arrow. Ex. 1007, FIG. 3A; Ex. 1002, ¶168; Ex. 1003, ¶164.



(c) Claim 6[b]

Kojima in view of *Huang* discloses all elements of this limitation. *Kojima* in view of *Huang* includes a sealing o-ring **240** (red arrow). *Huang* includes an airtight washer **240** that is positioned around the first valve body **200** in the first chamber **120**. Ex. 1007, 4:38–48; FIG. 2; Ex. 1002, ¶169; Ex. 1003, ¶165.

To the extent that an airtight washer is not an o-ring, even though it is a circular sealing element, a POSITA would have been motivated to substitute a typical o-ring, such as *Bruckbauer's* o-ring **28**, for *Huang's* airtight washer **240** at least because o-rings and airtight washers are both circular sealing elements known to be substitutable for each other, each providing the same sealing function. A

POSITA would be familiar with a wide array of circular sealing elements because such seals are used throughout vehicle suspensions, which tend to be pressure vessels in need of considerable sealing from gas and debris ingress/egress. A POSITA would have been motivated to provide this substitution at least because the substitution would have been expected to yield predictable results. For at least these reasons, it would have been obvious to try this substitution. The resulting combination would be *Kojima's* lower fork **210** in combination with *Huang's* valve **1** having an o-ring replacing *Huang's* airtight washer **240**. Ex. 1002, ¶170; Ex. 1003, ¶166.

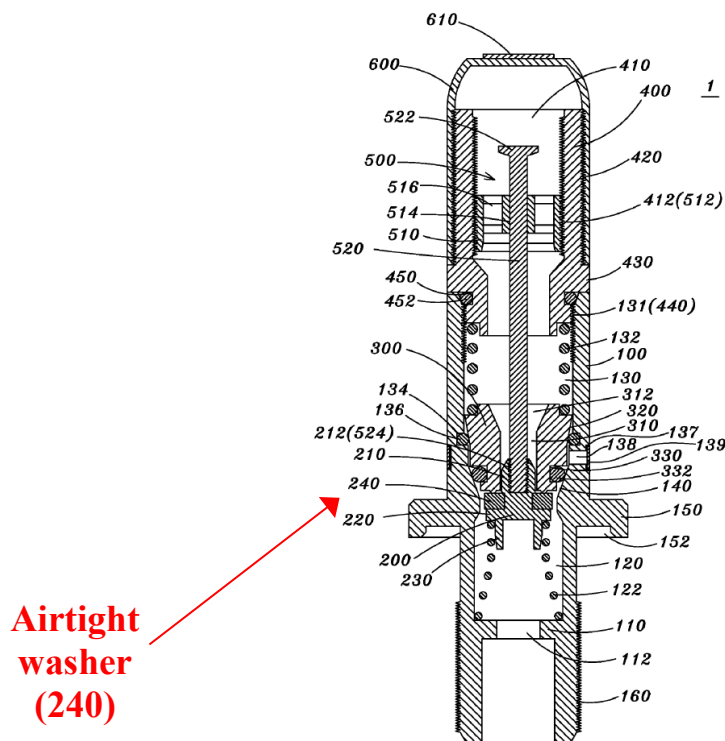


Fig. 2

(d) Claim 6[c]

Kojima in view of *Huang* discloses all elements of this limitation. *Kojima* in view of *Huang* includes an airtight washer **240** (red arrow) (or an o-ring, as discussed above) having a sealed position, as shown in *Huang*'s Figure 2. Ex. 1002, ¶171; Ex. 1003, ¶167; Ex. 1007, FIG. 2.

(e) Claim 6[d]

Kojima in view of *Huang* discloses all elements of this limitation. *Kojima* in view of *Huang* includes an airtight washer **240** (red arrow, above) having an unsealed position, as shown in *Huang*'s Figure 3A. Ex. 1002, ¶172; Ex. 1003, ¶168; Ex. 1007, FIG. 3A.

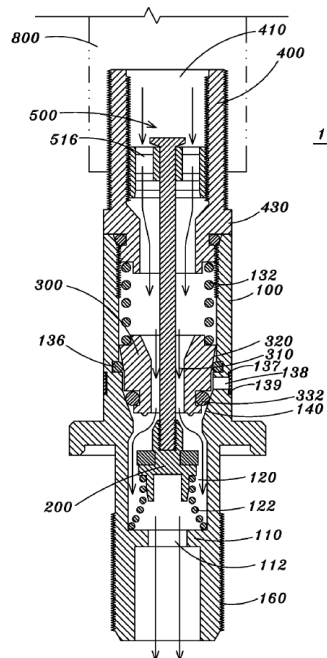


Fig. 3A

(f) Claim 6[e]

Kojima in view of *Huang* discloses all elements of this limitation. *Kojima* in view of *Huang* includes an airtight washer **240** having sealed and unsealed positions where the sealed position seals against air leaks from *Kojima*'s lower fork **210** through the die-cast feature. When *Huang*'s valve activator **520** is moved from the activation position to the deactivation position, the airtight washer **240** moves further into the diametrical recess (green arrows), thereby attaining the unsealed position and letting air pressure by-pass into or out of *Kojima*'s lower fork **210** via a vent hole. Ex. 1002, ¶173; Ex. 1003, ¶169; Ex. 1005, FIG. 9; Ex. 1007, FIGS. 2, 3A.

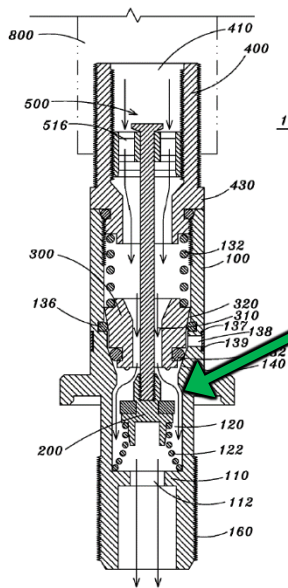


Fig. 3A

Diametrical
recess

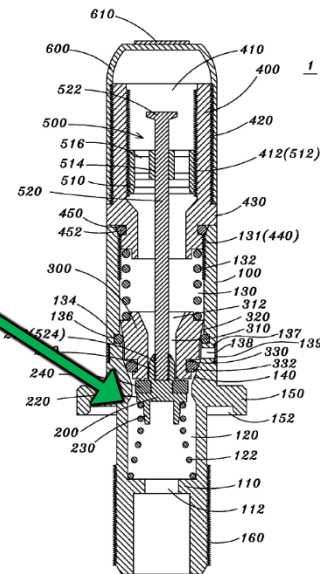


Fig. 2

7. Dependent Claim 7

Kojima in view of *Huang* discloses all elements of this claim. *Kojima* in view of *Huang*'s manually operable valve **1** (and the related fluid passage) includes a spring **122** (orange arrow) coupled to the valve activator **520, 522** (pink arrow), whereupon when the valve activator **520, 522** is moved into the deactivation position, discussed above, the spring **122** biases the valve activator **520, 522** toward the first (closed) position. Ex. 1002, ¶174; Ex. 1003, ¶170; Ex. 1007; FIG. 2.

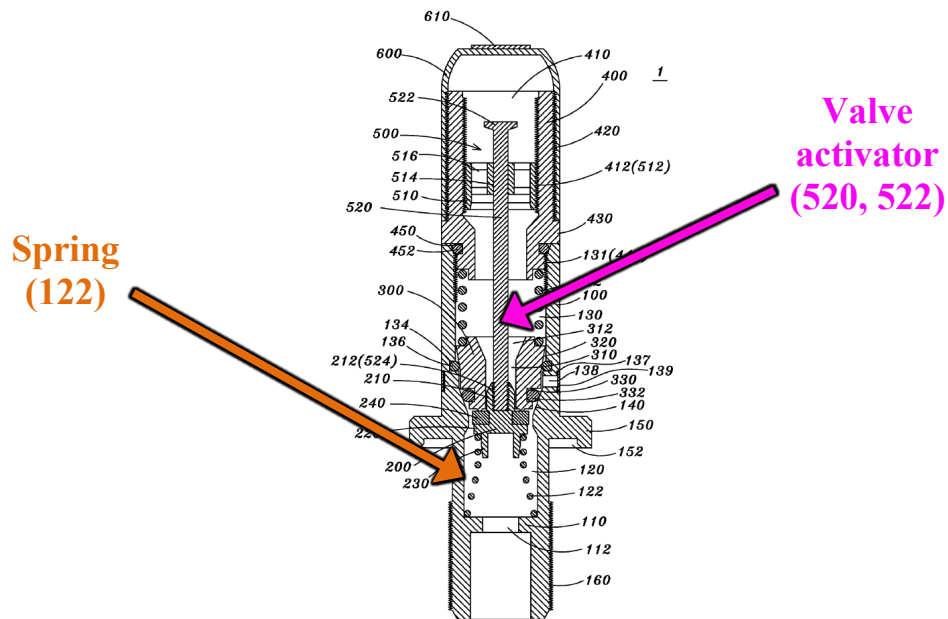
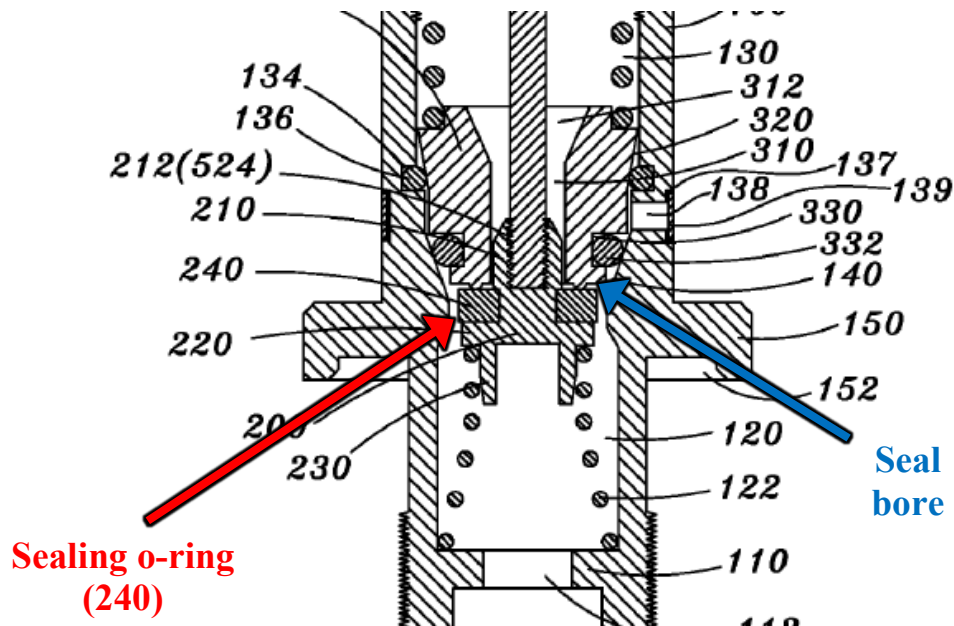


Fig. 2

8. Dependent Claim 8

Kojima in view of *Huang* discloses all elements of this claim. *Kojima* in view of *Huang*'s manually operable valve **1** has a second position, discussed above,

having a sealing engagement, as shown in Figure 2 below, wherein when in the sealing engagement, trapped air pressure does not bypass into or out of *Kojima's* lower fork **210**. Ex. 1002, ¶175; Ex. 1003, ¶171; Ex. 1005; Ex. 1007, FIG. 2.



VI. STATEMENT OF PRECISE RELIEF REQUESTED FOR EACH CLAIM CHALLENGED

Claims 1-8 are unpatentable under 35 U.S.C. §§ 102 and/or 103, so SRAM requests review and cancellation of these claims. Although SRAM does not believe that any of the grounds presented herein are redundant, SRAM requests that the grounds be instituted in the order in which they are presented if the Board declines to institute certain grounds on the basis of redundancy.

VII. MANDATORY NOTICES UNDER 37 C.F.R. § 42.8

A. Real Party-in-Interest

The real party-in-interest for this petition is Petitioner SRAM, LLC.

B. Related Matters

Patent Owner asserted the '331 patent against SRAM in a lawsuit captioned *Fox Factory, Inc. v. SRAM, LLC*, Case No. 1:23-cv-00313-RM-KLM (D. Colo.).

C. Lead and Backup Counsel and Service Information

Lead counsel and Backup counsel are identified in the following table:

LEAD COUNSEL	BACK-UP COUNSEL
Michael J. Hickey, Reg. No. 51,801 LEWIS RICE LLC 600 Washington Avenue Suite 2500 St. Louis, Missouri 63101 T: 314-444-7630 F: 314-612-7630 mhickey@lewisrice.com	Michael H. Durbin, Reg. No. 63,725 LEWIS RICE LLC 600 Washington Avenue Suite 2500 St. Louis, Missouri 63101 T: 314-444-7782 F: 314-612-7782 mdurbin@lewisrice.com Richard B. Walsh, Jr. (<i>pro hac vice</i> to be submitted) LEWIS RICE LLC 600 Washington Avenue Suite 2500 St. Louis, Missouri 63101 T: 314-444-7722 F: 314-612-7722 rwalsh@lewisrice.com

SRAM consents to e-mail service at these e-mail addresses.

VIII. GROUNDS FOR STANDING

Petitioner certifies that the ‘331 patent is available for IPR and that Petitioner is not barred or estopped from requesting IPR of the ‘331 patent challenging the patent claims on the grounds identified in this Petition, wherein, *inter alia*, Petitioner waived service of the complaint and summons in the underlying lawsuit regarding the ‘331 patent on August 11, 2022, less than a year before the filing of this Petition.

IX. CERTIFICATION UNDER 37 C.F.R. § 42.24(d)

Petitioner certifies that this Petition complies with 37 C.F.R. § 42.24(d). As calculated by the “Word Count” feature of Microsoft Word 2016, the Petition contains 13,859 words, excluding the words contained in the following: Table of Contents, Table of Authorities, Mandatory Notices, Certificate of Service, Certificate Under 37 C.F.R. § 42.24(d), Appendix of Exhibits, and Claim Listing.

X. CONCLUSION

Claims 1-8 are unpatentable, so the Board should institute IPR and cancel these claims. Please charge any required fees to Deposit Account No. 50-0975.

Dated: August 10, 2023

Respectfully submitted,

By: /s/ Michael J. Hickey

Michael J. Hickey, Reg. No. 51,801

CERTIFICATE OF SERVICE

The undersigned certifies that a copy of the foregoing Petition for *Inter Partes* Review, the associated Power of Attorney, Petitioner's Explanation of Two Petitions Challenging U.S. Patent No. 9,739,331, and Exhibits 1001-1015 were served by United States Postal Service Priority Mail Express on August 10, 2023, at the following address of record for the subject patent:

FOX C/O WAGNER BLECHER LLP
P.O. Box 1749
Aptos, CA 95001

With a courtesy copies of the same served by United States Postal Service Priority Mail Express on August 10, 2023, at the following address for Patent Owner Fox Factory, Inc.'s litigation counsel in the parallel district court proceeding relating to the subject patent:

Robert F. McCauley
Arpita Bhattacharyya
FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, LLP
3300 Hillview Avenue
Palo Alto, California 94304

/s/ Michael J. Hickey
Michael J. Hickey (Reg. No. 51,801)