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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte FUMINORI OHTA and KOJI MASAKI¹

Appeal 2014-005277
Application 12/529,979
Technology Center 1700

Before CHUNG K. PAK, BEVERLY A. FRANKLIN, and CHRISTOPHER L. OGDEN, *Administrative Patent Judges*.

PAK, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134(a) from the Examiner's decision² finally rejecting claims 1 and 3–11, which are all of the claims pending in the above-identified application. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ The real party in interest is said to be Bridgestone Corporation. Appeal Brief filed October 9, 2013 (“App. Br.”) at 2.

² Non-Final Action entered June 23, 2011 (“First Non-Final Act.”) at 4–11; First Final Action entered March 13, 2012 (“First Final Act.”) at 1–3; Second Non-Final Action entered October 1, 2012 (“Second Non-Final Act.”) at 2–11; Second Final Action entered May 10, 2013 (“Second Final Act.”) at 1–7, and the Examiner's Answer entered January 31, 2014 (“Ans.”) at 2–9.

STATEMENT OF THE CASE

The subject matter on appeal is directed to “a rubber composition and a tire using the rubber composition[.]” Spec. 1, ¶ 1. The rubber composition, according to paragraph 9 of the Specification,

is characterized by compounding 1-60 parts by mass of a low-molecular weight conjugated diene-based polymer (B) having a weight average molecular weight as measured through a gel permeation chromatography molecular weight as measured through a gel permeation chromatography and converted to polystyrene of 10,000-200,000 and vinyl bond content in a conjugated diene compound portion of not less than 40% based on 100 parts by mass of a rubber component (A) comprised of at least one selected from the group consisting of natural rubber, polyisoprene rubber, and styrene-butadiene copolymer rubber, polybutadiene rubber and isobutylene isoprene rubber, wherein the rubber component (A) comprises natural rubber and/or polyisoprene rubber, and a proportion of styrene units in total of the low-molecular weight conjugated diene-based polymer (B) is less than 5% by mass.

This rubber composition is said to be “excellent in the workability during production and the heat resistance, high in the storage elastic modulus (G') and small in the loss of tangent ($\tan \delta$) [reflective of reduced rolling resistance].” Spec. ¶¶ 1, 3, and 7.

Details of the appealed subject matter are recited in illustrative claim 1, which is reproduced below from the Claims Appendix of the Appeal Brief (with disputed limitations in italicized form):

1. A rubber composition characterized by compounding *1-60 parts by mass of a low-molecular weight conjugated diene-based polymer (B)* synthesized through an anionic polymerization and having a weight average molecular weight as measured through a gel permeation chromatography and converted to polystyrene of *40,000-200,000* and a vinyl bond content in a conjugated diene

compound portion of not less than 40% based on *100 parts by mass of a rubber component (A) having a weight average molecular weight as measured through a gel permeation chromatography and converted to polystyrene of more than 200,000,*

wherein the rubber component (A) comprises natural rubber and/or polyisoprene rubber, and

an amount of the aromatic vinyl compound bonded in the low-molecular weight conjugated diene-based polymer (B) is less than 5% by mass.

App. Br. 15, Claims Appendix.

The Examiner maintains, and Appellants seek review of, the following grounds of rejection:

1. Claims 1 and 3–11 under 35 U.S.C. §103(a) as unpatentable over Yokoyama (US 5,959,039 issued Sept. 28, 1999)
2. Claims 1, 3–5, 8, and 9 under 35 U.S.C. §103(a) as unpatentable over Miyoshi³ (WO 2006/098103 A1 published Sept. 21, 2006) in view of Yokoyama; and
3. Claims 1 and 3–9 under 35 U.S.C. §103(a) as unpatentable over Sakurai⁴ (JP 2006-249230 published Sept. 21, 2006) in view of Yokoyama. First

³ Our reference to Miyoshi is to US 2009/0054549 A1 published in the name of Miyoshi on February 26, 2009. Appellants do not question the Examiner's reliance on US 2009/0054549 A1 as the English translation of WO 2006/098103 A1 published in the name of Miyoshi.

⁴ Our reference to Sakurai is to the English translation entered into the record by the Examiner on June 23, 2011.

Final Act. 1–3; Second Non-Final Act. 1–3; Second Final Act. 1–7; Ans. 2–9;
Appeal Br. 7–13; and Reply Br. 3.

DISCUSSION

Having considered the evidence on this appeal record in light of the respective positions advanced by the Examiner and Appellants, we affirm the Examiner's §103(a) rejections of claims 1 and 3–11 as unpatentable over Yokoyama and claims 1 and 3–9 as unpatentable over Sakurai in view of Yokoyama for the reasons set forth in the Final Action and the Answer, but reverse the Examiner's §103(a) rejection of claims 1, 3–5, 8, and 9 as unpatentable over Miyoshi in view of Yokoyama for the reasons set forth in the Appeal Brief. We add the following for emphasis and completeness.

I. Rejection 1

As evidence of obviousness of the subject matter recited in claims 1 and 3–11 under §103(a), the Examiner relies upon the disclosure of Yokoyama. Second Non-Final Act. 4–6; Second Final Act. 2–3. Yokoyama teaches a rubber composition useful for forming, for example, a tire tread, a tire side wall and a tire bead portion, which comprises 100 parts of by weight of a high molecular weight conjugated diene-based polymer component having a weight-average weight molecular weight of at least 30×10^4 (at least 300,000) in terms of polystyrene corresponding to the recited rubber component (A) and 30 to 120 parts by weight of a low molecular weight conjugated diene-based component having a weight-average molecular weight of from 0.2×10^4 (2000) to 8×10^4 (80,000) in terms of polystyrene and containing not greater than 30% by weight of bound styrene synthesized through an anionic solution polymerization corresponding to the

recited low-molecular weight conjugated diene-based polymer (B) synthesized through an anionic polymerization. *See* First Non-Final Act. 4–6, Second Non-Final Act 2–6 and Second Final Act. 2–3; *compare* Yokoyama, col. 2, ll. 25–49, col. 4, ll. 26–62, and col. 6, ll. 25–31, *with* claim 1 on appeal. Yokoyama also teaches that one of the two high molecular weight conjugated diene based polymer components used in its rubber composition is a conjugated diene polymer which may be obtained by polymerizing a conjugated diene hydrocarbon monomer, such as 1, 3 butadiene, isoprene, 2,3-dimethyl-1, 3-butadiene, 1, 3-pentadiene, octadiene, or a combination thereof. *See* Second Final Act. 4 and Ans. 2; *compare* Yokoyama, col. 4, ll. 26–41, *with* claim 1 on appeal. Yokoyama further exemplifies a high molecular weight conjugated diene (butadiene) polymer component having a weight-average weight molecular weight of 850,000 and a low molecular weight conjugated diene-based polymer component having a weight-average molecular weight of at least 20,000 in terms of polystyrene, a styrene content of 0 to 25%, and a vinyl content of 10 to 40%. *See* First Non-Final Act. 5 and Second Final Act. 2; *compare* Yokoyama, col. 7, l. 30–col. 8, l. 21 and col. 10, Table 1, *with* claim 1 on appeal.

Based on the above disclosures in Yokoyama, the Examiner concludes, and Appellants do not question, that a person having ordinary skill in the art would have been led to employ, *inter alia*, 30 to 60 parts by weight of a low molecular weight conjugated diene-based component having a weight-average molecular weight of 40,000 to 80,000 in terms of polystyrene, a styrene content of less than 5%, and a vinyl content of 40% (corresponding to the recited low-molecular weight conjugated diene-based polymer (B)) in the rubber composition taught by Yokoyama. *Compare* First Non-Final Act. 5 and Second Final Act. 2, *with* App. Br. 7–10; *see also In re Peterson*, 315 F.3d 1325, 1329–30 (Fed. Cir. 2003) (“In

cases involving overlapping ranges, we and our predecessor court have consistently held that even a slight overlap in range establishes a *prima facie* case of obviousness.”)

Appellants contend that one of ordinary skill in the art would not have been led to employ natural rubber or polyisoprene in the rubber composition of Yokoyama “because the rubber composition in Yokoyama does not comprise natural rubber and/or polyisoprene rubber as its essential component and because the Examples in Yokoyama comprise only butadiene rubber as the rubber component[.]” App. Br. 7. However, as correctly explained by the Examiner, Yokoyama, as a whole, would have suggested using, *inter alia*, a polyisoprene rubber as the high molecular weight conjugated diene-based polymer component of its rubber composition. Ans. 2 (citing Yokoyama, col. 4, ll. 26–30 and 35–37).⁵ In particular, Yokoyama, at column 4, lines 26–34, teaches that one of the two high molecular weight conjugated diene-based polymer components used in its rubber composition is a conjugated diene polymer which may be obtained by polymerizing a conjugated diene hydrocarbon monomer containing 4–12 carbon atoms, preferably 4–8 carbon atoms per molecule. Yokoyama further teaches (col. 4, ll. 35–41) that:

Examples of the conjugated diene hydrocarbon monomer usable in the present invention include 1, 3 butadiene, *isoprene*, 2, 3-dimethyl-1, 3-butadiene, 1, 3-pentadiene, and octadiene, with 1, 3-butadiene being particularly preferred. They can be used singly or in combination. As

⁵ Although Appellants appear to refer to Yokoyama’s disclosure of optionally employing a natural rubber in its rubber composition as describing a natural rubber as a non-essential component, such disclosure of Yokoyama would also have suggested employing the natural rubber in the amount recited in claim 1. *Compare* App. Br. 7, *with* Yokoyama, col., 5, ll. 52–62. In the event of further prosecution, both the Examiner and Appellants should also consider the applicability of this disclosure of Yokoyama as an additional basis for *prima facie* obviousness.

a conjugated diene polymer, polybutadiene is preferred in light of industrial productivity. [Emphasis added.]

The Examiner finds, and Appellants do not dispute, that polymerizing isoprene, one of the five listed conjugated diene monomers useful for forming a desired high molecular weight conjugated diene polymer corresponding to the recited rubber component (A), would result in a polyisoprene (isoprene rubber). *Compare* Second Final Act. 4 and Ans. 2, *with* App. Br. 7–10. Although Yokoyama exemplifies or prefers a polybutadiene as the high molecular weight conjugated diene-based polymer component of its rubber composition, it not limited to its examples or its preferred embodiment as is apparent from the above quoted passage of Yokoyama. Second Final Act. 4–5; Ans. 2–3; *see also Merck & Co. v. Biocraft Labs., Inc.*, 874 F.2d 804, 807 (Fed. Cir. 1989) (“[T]he fact that a specific [embodiment] is taught to be preferred is not controlling, since all disclosures of the prior art, including unpreferred embodiments, must be considered”) (*quoting In re Lamberti*, 545 F.2d 747, 750 (CCPA 1976)); *In re Chapman*, 357 F.2d 418, 424 (CCPA 1966) (“A reference can be used for all it realistically teaches, and is not limited to disclosures in its specific illustrative examples.”)

Consequently, we find no harmful error in the Examiner’s determination that the above passage of Yokoyama would have suggested using, *inter alia*, a polyisoprene as the high molecular weight conjugated diene-based polymer component of Yokoyama’s rubber composition, with a reasonable expectation of successfully forming a rubber composition useful for making tire parts. *Merck & Co., Inc. v. Biocraft Labs., Inc.*, 874 F.2d at 807 (“That the ’813 patent discloses a multitude of effective combinations does not render any particular formulation less obvious. This is especially true because the claimed composition is used for the identical purpose.”); *see also Bristol-Myers Squibb Co. v. Ben Venue Labs, Inc.*,

246 F. 3d 1368, 1380 (Fed. Cir. 2001) (“[T]he disclosure of a small genus may anticipate the species of that genus even if the species are not themselves recited.”).

Appellants contend that a Rule 132 Declaration executed by Eiju Suzuki on September 12, 2012 (“Suzuki Declaration”) demonstrates that the claimed rubber composition imparts unexpected results relative to the rubber composition taught by Yokoyama, the closest prior art. App. Br. 7–10. The Suzuki Declaration shows two rubber compositions (supposedly representative of the rubber compositions recited in claim 1) in Example 1 and Additional Example 1 as containing 60 parts by weight of a natural rubber or an isoprene rubber, 40 parts by weight of a butadiene rubber, 10 parts by weight of a “B-3” low molecular weight conjugated diene, 5 parts by weight of aromatic oil, 60 parts by weight of carbon black, 1.5 parts by weight of stearic acid, 1.5 parts by weight of zinc white, 1 part by weight of an antioxidant, 0.2 part by weight of a “DM” vulcanization accelerator, 0.5 part by weight of a “CZ” vulcanization accelerator, and 1 part by weight of sulfur. *See* the Suzuki Declaration, p. 2, Table A. The Suzuki Declaration also shows one rubber composition in Comparative Example 2, which is identical to that of Example 1, except for having no low molecular weight conjugated diene-based polymer and 15 parts by weight of an aromatic oil (3 times more than that employed in Example 1), another rubber composition in Additional Comparative Example 1, which is identical to that of Example 1, except for having 100 parts by weight of a butadiene rubber and no natural rubber, and another rubber composition in Additional Comparative Example 2, which is identical to that of Example 1, except for 100 parts by weight of a butadiene rubber, no natural rubber, no low molecular weight conjugated diene-based polymer, and 15 parts by weight of an aromatic oil (3 times more than that employed in Example 1). *Id.* The

Suzuki Declaration further shows another rubber composition in Additional Comparative Example 3, which is identical to that of Additional Example 1, except for having no low molecular weight conjugated diene-based polymer and 15 parts by weight of an aromatic oil (3 times more than that employed in Additional Example 1). *Id.* According to Appellants, Comparative Example 2 and Additional Comparative Examples 1, 2, and 3 are representative of the rubber compositions described in Yokoyama. App. Br. 7–8.

The specific natural rubber, isoprene rubber, butadiene rubber, low molecular weight conjugated diene, aromatic oil, antioxidant, and vulcanization accelerators referred to in the Suzuki Declaration are those disclosed in Table 2 of the above-identified application. *See* the Suzuki Declaration, p. 2. Table 2 referred to in the Suzuki Declaration is provided at paragraph 58 of the above-identified application. According to paragraph 60 of the above-identified application, the natural rubber used in Table 2 is identified as having a weight average molecular weight of 1,500,000, the polybutadiene rubber used in Table 2 is identified as having a weight average molecular weight of 550,000, the antioxidant used in Table 2 is identified as N-(1,3-dimethylbutyl)-N'-phenyl-p-phenylenediamine, the “DM” vulcanization accelerator is identified as di-2-benzothiazolyl disulfide, and the “CZ” vulcanization accelerator is identified as N-cyclohexyl-2-benzothiazolyl sulfonamide. Paragraph 52 of the above-identified application identifies the “B-3” low molecular weight conjugated diene used in Table 2 as having a weight average molecular weight of 80,000, a vinyl bond content of 45%, and no bound styrene content. The isoprene rubber employed in the Suzuki Declaration is not shown or described in Table 2 of the above-identified application. Spec. ¶ 60. Nor does the Suzuki Declaration indicate the weight average molecular weight or any other properties of the isoprene rubber used in its

Additional Example 1 and Additional Comparative Example 3. *See* the Suzuki Declaration 1–3.

Appellants bear the burden of showing unexpected results. *In re Klosak*, 455 F.2d 1077, 1080 (CCPA 1972) (“[T]he burden of showing of unexpected results rests on he who asserts them.”); *see also In re Heyna*, 360 F.2d 222, 228 (CCPA 1966) (“It was incumbent upon appellants to submit clear and convincing evidence to support their allegation of unexpected property.”) This burden requires Appellants to demonstrate that the claimed invention actually imparts unexpected results relative to the closest prior art, *In re Baxter Travenol Labs.*, 952 F.2d 388, 392 (Fed. Cir. 1991), and that such showing of unexpected results is reasonably commensurate in scope with the degree of protection sought by the claims on appeal, *In re Grasselli*, 713 F.2d 731, 743 (Fed. Cir. 1983); *In re Clemens*, 622 F.2d 1029, 1035 (CCPA 1980). “[U]nexpected results must be established by factual evidence. Mere arguments or conclusory statements in the specification do not suffice.” *In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984), *quoted with approval in In re Soni*, 54 F.3d 746, 750 (Fed. Cir. 1995).

Here, notwithstanding Appellants’ arguments to the contrary, Appellants do not demonstrate that the claimed invention imparts unexpected results relative to the closest prior art. Second Final Act. 6. Although the Suzuki Declaration shows some improvement in fracture strength and heat resistance in Example 1 and Additional Example 1 (supposedly representative of the claimed subject matter) relative to Comparative Example 2 and Additional Comparative Examples 1–3 (supposedly representative of the closest prior art), it does not aver that such improvement is unexpected by one of ordinary skill in the art. *In re Geisler*, 116 F.3d 1465, 1471 (Fed. Cir. 1997) (explaining that “Geisler made no such assertion [of unexpected results] in his application . . . [or] submit any such statement

through other evidentiary submissions, such as an affidavit or declaration”) (citing *In re Orfeo*, 440 F.2d 439, 441 (CCPA 1971)). Nor do Appellants adequately explain why the improvement is unexpected relative to the closest prior art despite the fact that Comparative Example 2 and Additional Comparative Examples 1–3 do not show Yokoyama’s exemplified rubber composition containing a high molecular weight conjugated diene (butadiene) having a weight average molecular weight of 850,000 (closer to the weight average molecular weight of the natural rubber employed in Example 1 allegedly representative of the claimed subject matter), a low molecular weight conjugated diene having either a weight average molecular weight of 20,000, a vinyl content of 40%, and a styrene content of 0% or a weight average molecular weight of 60,000, a vinyl content of 10%, and a styrene content of 0%, carbon black, stearic acid, antioxidant (N-(1,3-dimethylbutyl)-N’-phenyl-p-phenylenediamine), zinc oxide, the “DM” vulcanization accelerator (dibenzothiazyl disulfide) and the “DPG” vulcanization accelerator (diphenylguanidine). *Compare* Yokoyama, col. 10, Table 1, E6 and E11, *with* App. Br. 7–10. It is not clear from the Suzuki Declaration whether the improvement is due to the difference in the weight-average molecular weights of the natural rubber, polyisoprene, and butadiene employed, the amount of the specific low molecular weight conjugated diene employed, the amount of the aromatic oil employed, and/or a combination of the specific proportions of the specific ingredients employed. *In re Dunn*, 349 F.2d 433, 439 (CCPA 1965) (“While we do not intend to slight the alleged improvements, we do not feel it an unreasonable burden on appellants to require comparative examples relied on for non-obviousness to be truly comparative. The cause and effect sought to be proven is lost here in the welter of unfixed variables.”)

As also found by the Examiner, Appellants do not demonstrate that the showing relied upon is reasonably commensurate in scope with the degree of protection sought by the claims on appeal. Second Final Act. 5; Ans. 3–6. While the showing is limited to two particular rubber compositions having specific proportions of various ingredients, including a specific proportion of particular natural rubber or polyisoprene having a specific weight-average molecular weight and a specific proportion of a low molecular weight conjugated diene-based polymer having a weight average molecular weight of 80,000, a vinyl bond content of 45%, and no bound styrene content (Example 1 and Additional Example 1 shown in the Suzuki Declaration as indicated supra), the claims on appeal are not so limited. *See* Ans. 4–6; *See also In re Harris*, 409 F.3d 1339, 1344 (Fed. Cir. 2005) (“Even assuming that the results were unexpected, Harris needed to show results covering the scope of the claimed range. Alternatively Harris needed to narrow the claims.”); *In re Greenfield*, 571 F.2d 1185, 1189 (CCPA 1978) (“Establishing that one (or a small number of) species gives unexpected results is inadequate proof, for ‘it is the view of this court that objective evidence of non-obviousness must be commensurate in scope with the claims which the evidence is offered to support.’”) (quoting *In re Tiffin*, 448 F.2d 791, 792 (CCPA 1971)). On this record, Appellants do not show that the improvement resulting from employing the two rubber compositions shown in the Suzuki Declaration is also applicable to the multifarious rubber compositions encompassed by the claims on appeal. App. Br. 7–10.

Consequently, we find no reversible error in the Examiner’s determination that the evidence of obviousness, on balance, outweighs the evidence of non-obviousness relied upon by Appellants.

II. Rejection 2

As evidence of obviousness of the subject matter recited in claims 1, 3–5, 8, and 9 under §103(a), the Examiner relies upon the combined disclosures of Miyoshi and Yokoyama. Second Final Act. 3. The Examiner finds that Miyoshi teaches a rubber composition comprising 100 part by mass of natural rubber or synthetic diene-based rubbers and 5 to 60 parts by mass of a low-molecular weight conjugated diene-based polymer having a weight average molecular weight of 5,000 to 200,000, a vinyl bond content of 10 to 80% by mass, and an aromatic vinyl compound content of 5 to 80% by mass. *Id*; First Non-Final Act. 7; *see also* Miyoshi ¶¶ 7 and 18. To account for the recited weight average molecular weight of natural rubber or synthetic diene-based rubbers missing in Miyoshi, the Examiner relies upon Yokoyama's disclosure directed to the high molecular weight conjugated diene-based rubber, such as an isoprene rubber having the weight average molecular weight recited in claim 1. Second Non-Final Act. 5; Second Final Act. 3.

In terms of the amount of the aromatic vinyl compound content in the low-molecular weight conjugated diene-based polymer recited in claim 1, the Examiner takes the position that:

Miyoshi teaches that the amount of styrene units in the prior art LMW polymer is 5 to 80% by mass. It has been held that a *prima facie* case of obviousness exists where the claimed ranges and the prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties, *see Titanium Metals Corp. of America v. Banner* 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). [See Ans. 7; First Non-Final Act. 7.]

However, the Examiner do not show that the amount of styrene units in the prior art LMW polymer and the amount of styrene units in the LMW polymer recited in

claim 1 are close enough such that “one skilled in the art would have expected to have the same [or similar] properties” as required by *Titanium Metals Corp. of America*. Miyoshi teaches that its rubber composition is not expected to have the same or similar properties, when the bound aromatic vinyl compound content of the LMW polymer is reduced to less than 5% by mass. *See* Miyoshi ¶ 19 (“When the bound aromatic vinyl compound content is less than 5% by mass or exceeds 80% by mass, the low heat buildup and wet performance of the rubber composition cannot be sufficiently and simultaneously established.”). Thus, on this record, the Examiner does not establish that one of ordinary skill in the art would have been led to use the LMW polymer recited in claim 1 in Miyoshi’s rubber composition, with a reasonable expectation of successfully obtaining the same or similar properties imparted by the amount of styrene units in Miyoshi’s LMW polymer.

Accordingly, we concur with Appellants that the Examiner fails to carry the burden of establishing a prima facie case of obviousness.

III. Rejection 3

As evidence of obviousness of the subject matter recited in claims 1 and 3–9 under §103(a), the Examiner relies upon the combined disclosures of Sakurai and Yokoyama. Second Final Act. 3. The Examiner finds, and Appellants do not dispute, that

Sakurai discloses a composition comprising 100 parts by mass of a rubber component (A) such as natural rubber or polyisoprene rubber . . . (abstract, ¶0035), corresponding to claimed component (A) (for claim 1); 5 to 50 parts by mass of a softener (abstract); and carbon black . . . (¶0037). Said softener is high vinyl polybutadiene . . . having a molecular weight in the range of 3000 to 30000 (for claims 1,3, 4) and a vinyl bond content greater than or equal to 50% (¶0015,

0025), corresponding to claimed component (B) (for claim 1). Said polybutadiene is not reported to contain styrene; the styrene content is therefore 0% (for claim 1). The . . . [Sakurai] composition may be used for the production of pneumatic tire treads (for claim 9). [First Non-Final Act. 8–9 and Second Final Act. 3.]

The Examiner acknowledges that Sakurai does not mention its low molecular weight conjugated diene component (polybutadiene softener) as having the weight-average molecular weights recited in claim 1. *Id.* However, the Examiner finds, and Appellants do not dispute, that Yokoyama, like Sakurai, teaches that the LMW polybutadiene as an additive in the rubber composition used for tire parts and can have the weight average molecular weight taught by Sakurai or recited in claim 1 for the purpose of making a tire having improved gripping performance within a wide temperature range. *Compare* Second Final Act 3, *with* App. Br. 12–13; *see also* Yokoyama, col. 3, ll. 37–47.

Under the above circumstances, we concur with the Examiner that one of ordinary skill in the art would have been led to employ a polybutadiene additive having the weight-average molecular weight taught by Yokoyama in the rubber composition of Sakurai, with a reasonable expectation of successfully forming a rubber composition useful for tire parts.

Appellants “notes again that the unexpectedly superior properties of the presently claimed invention are achieved by not only the use of the presently recited molecular weight of component (B), but also by the combination of the rubber component (A) comprising natural rubber and/or isoprene rubber with the component (B).” However, as indicated above, we agree with the Examiner that Appellants do not demonstrate that the claimed invention imparts unexpected results relative to the closest prior art (either Yokoyama or Sakurai) and that the

showing relied upon is reasonably commensurate in scope with the degree of protection sought by the claims on appeal.

Consequently, we find no reversible error in the Examiner's determination that the evidence of obviousness, on balance, outweighs the evidence of non-obviousness relied upon by Appellants.

ORDER

Upon consideration of the record, and for the reasons given, it is ORDERED that the decision of the Examiner to reject claims 1 and 3–11 under 35 U.S.C. §103(a) as unpatentable over Yokoyama is AFFIRMED;

FURTHER ORDERED that the decision of the Examiner to reject Claims 1, 3–5, 8, and 9 under 35 U.S.C. §103(a) as unpatentable over Miyoshi in view of Yokoyama is REVERSED;

FURTHER ORDERED that the decision of the Examiner to reject Claims 1 and 3–9 under 35 U.S.C. §103(a) as unpatentable over Sakurai in view of Yokoyama is AFFIRMED; and,

FURTHER ORDERED that no time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED