



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
**United States Patent and Trademark Office**  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/396,788	10/24/2014	Takeshi Nishiyama	MIT00650P10150US	7511
32116	7590	09/26/2019	EXAMINER	
WOOD, PHILLIPS, KATZ, CLARK & MORTIMER 500 W. MADISON STREET SUITE 1130 CHICAGO, IL 60661			THOMPSON, CAMIE S	
			ART UNIT	PAPER NUMBER
			1786	
			NOTIFICATION DATE	DELIVERY MODE
			09/26/2019	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@woodphillips.com

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

*Ex parte* TAKESHI NISHIYAMA,  
SUSUMU TAKABA, and HISATO ISHIGURO

---

Appeal 2019-000340  
Application 14/396,788  
Technology Center 1700

---

Before MICHAEL P. COLAIANNI, GEORGE C. BEST, and  
DEBRA L. DENNETT, *Administrative Patent Judges*.

BEST, *Administrative Patent Judge*.

DECISION ON APPEAL

The Examiner finally rejected claims 1–7 of Application 14/396,788 under 35 U.S.C. § 103(a) as obvious. Final Act. 1, 2 (Mar. 1, 2017). Appellant<sup>1</sup> seeks reversal of the rejection pursuant to 35 U.S.C. § 134(a). We have jurisdiction under 35 U.S.C. § 6(b).

For the reasons set forth below, we *reverse*.

---

<sup>1</sup> Mitsuboshi Belting Ltd., is identified as the applicant and the real party in interest. Appeal Br. 1.

## BACKGROUND

The '788 Application describes a transmission belt, such as a V-belt, a V-ribbed belt, or a flat belt. *See* Spec. ¶ 1; Figs. 1, 2.

Claim 1 is representative of the '788 Application's claims and is reproduced below from the Claims Appendix to the Appeal Brief (emphasis added):

1. A transmission belt comprising a core wire extending in a lengthwise direction of the belt, *an adhesive rubber layer in contact with* at least a part of *the core wire*, a back surface rubber layer formed on one surface of the adhesive rubber layer, and *an inner surface rubber layer formed on the other surface of the adhesive rubber layer and engaging or in contact with a pulley*,

*wherein the adhesive rubber layer is formed by a vulcanized rubber composition comprising a rubber component, a fatty acid amide and a silica.*

Appeal Br. 15 (Claims App.).

## REJECTION

On appeal, the Examiner maintains the following rejection:

Claims 1–7 are rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Sueto<sup>2</sup> and Shibuya.<sup>3</sup>  
Final Act. 2; Answer 3.

---

<sup>2</sup> US 2008/0286529 A1, published Nov. 20, 2008.

<sup>3</sup> JP 2012-041973 A, published Mar. 1, 2012. We rely upon a translation that is of record in the '788 Application.

## DISCUSSION

Appellant argues for the reversal of the obviousness rejection of claims 1–7 on the basis of limitations present in independent claim 1 and dependent claims 2–7. *See generally* Appeal Br. 3–14; Reply Br. 1–7. For the reasons set forth below, we need only discuss claim 1.

The patent examiner bears the initial burden of establishing a prima facie case that an application’s claims would have been obvious based upon what was known in the prior art. *In re Dillon*, 919 F.2d 688, 701 (Fed. Cir. 1990). Here, the Examiner relied on Sueto, which discloses a power transmission belt in the form of a V-belt to reject claim 1. Final Act. 2 (citing Sueto ¶¶ 20, 39, 41, 52, 53). The Examiner found Sueto teaches that rubber adhesive layer **34** comprises a vulcanized rubber composition, which further comprises silica and a fatty acid derivative processing aid. *Id.* at 2–3 (citing Sueto ¶¶ 23, 41, 44, 45). According to the Examiner, Sueto describes each limitation of the claim, but does not teach or suggest that the fatty acid derivative processing aid in rubber adhesive layer **34** is a fatty acid amide. *Id.*

The Examiner, however, relied on Figure 1 of Shibuya, which is reproduced below.

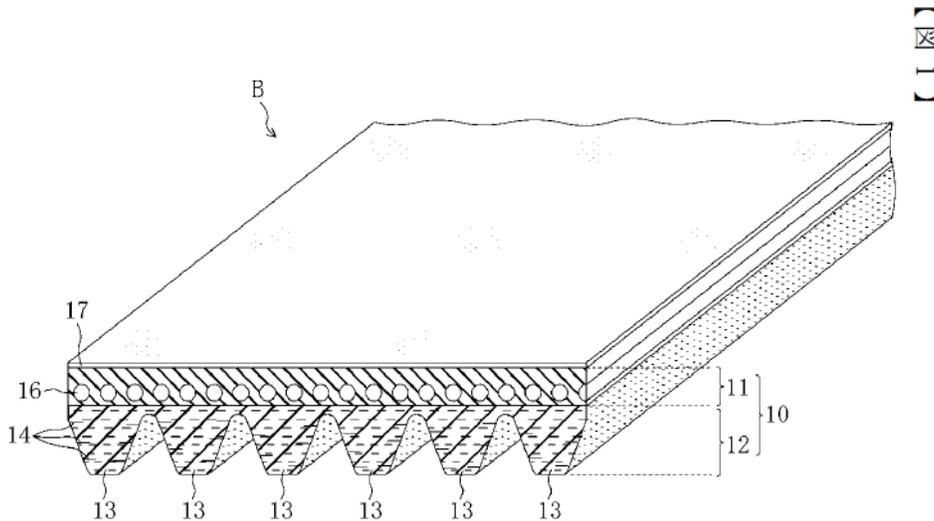


Figure 1 depicts adhesion rubber layer **11**, compression rubber layer **12**, and cord **16**. Shibuya ¶¶ 40, 42.

The Examiner found Shibuya teaches that the compression rubber layer **12**, which contacts a pulley, comprises “a fatty acid derivative such as a fatty acid amide” blended with an ethylene- $\alpha$ -olefin elastomer. Final Act. 3 (citing Shibuya ¶ 28, Fig. 1). The Examiner further found Shibuya teaches that the blended composition of compression rubber layer **12** “provides an abnormal noise suppressing effect.” *Id.* at 3–4 (citing Shibuya ¶ 20). The Examiner found Shibuya discloses that “adhesion rubber layer **11** and . . . compression rubber layer **12** may be formed of the same rubber composition.” *Id.* at 3 (citing Shibuya ¶ 40).

The Examiner determined that “one of ordinary skill in the art at the time of the invention would [have] utilize[d] the rubber composition of Shibuya[,] including a fatty acid amide in the adhesive layer of Suetto[,] for the benefit of providing an enhanced abnormal noise suppressing effect.” Final Act. 4.

Appellant argues that the Examiner has failed to “provide a legally supportable basis for modifying” Sueto’s rubber composition *in the adhesive layer* to include a fatty acid therein. Appeal Br. 5. Appellant does not dispute the Examiner’s finding that Shibuya’s compression layer **12**, which includes a fatty acid amide, provides enhanced suppression of abnormal noises caused by contact of compression layer **12** with a pulley. *Id.* at 6. Appellant, however, argues that “[t]he Examiner does not offer any evidence that inclusion of the same composition in the adhesive layer—not situated to contact a cooperating pulley like the compression section—would have any noise suppressing effect whatsoever.” *Id.* at 7. Appellant, thus, concludes that there would have been no reason or motivation for the ordinarily skilled artisan to modify Sueto’s power transmission belt. *Id.*

In response, the Examiner argued that Shibuya’s disclosure would have provided one of ordinary skill in the art the requisite motivation to attain “a structural/performance advantage” afforded by the proposed modification. Answer 7. In particular, the Examiner asserts “Shibuya discloses that the inclusion of the fatty acid derivative to the rubber composition for *the adhesive layer in contact with the core wire* provides an abnormal noise suppressing effect.” *Id.* (citing Shibuya ¶ 20) (emphasis added).

As Appellant persuasively argues, however, the Examiner relies upon a passage that is silent with respect to any abnormal noise, which is caused by Shibuya’s adhesive layer **11** contacting core wire **16**. Reply Br. 2; *see* Shibuya ¶ 20. We, furthermore, agree with Appellant that “Shibuya’s only identified sound suppressing capability is attributable to the maintenance of

a lubricating film on the surfaces of the [compression layer **12**] belt that engage[s] pulleys.” *Id.* at 3 (citing Shibuya ¶ 13).

On these facts, the Examiner reversibly erred in finding that Shibuya blends a fatty acid derivative, such as a fatty acid amide, with *the adhesive layer’s* rubber composition to provide an abnormal noise suppressing effect. To the extent that the Examiner found that Shibuya’s adhesion rubber layer **11** and compression rubber layer **12** may be formed of the same rubber composition, Final Act. 3, the Examiner has not provided a reasoned explanation as to why the ordinarily skilled artisan would have been motivated to modify Sueto’s rubber composition *in the adhesive layer* to include a fatty acid derivative, such as a fatty acid amide, therein. *See, e.g., KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (“[I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.”); *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”).

In view of the foregoing, we reverse the Examiner’s rejection of claims 1–7. 37 C.F.R. § 41.37(c)(1)(iv).

## CONCLUSION

For the reasons set forth above, we reverse the § 103 rejection of claims 1–7 of the ’788 Application.

REVERSED