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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/438,183	02/21/2017	Eric R. YERKE	83734166	5587
28395	7590	12/31/2019	EXAMINER	
BROOKS KUSHMAN P.C./FGTL			MONIKANG, GEORGE C	
1000 TOWN CENTER			ART UNIT	
22ND FLOOR			PAPER NUMBER	
SOUTHFIELD, MI 48075-1238			2651	
			NOTIFICATION DATE	DELIVERY MODE
			12/31/2019	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ERIC R. YERKE, HILLARY GREGORY, MICHAEL
MCELROY, and JAMES C. PEITZ

Appeal 2019-001540
Application 15/438,183
Technology Center 2600

Before MAHSHID D. SAADAT, ALLEN R. MacDONALD, and
NABEEL U. KHAN, *Administrative Patent Judges*.

KHAN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1, 4–7, and 9–15. Claims 2, 3, and 8 have been cancelled. Appeal Br. 1–2. We have jurisdiction under 35 U.S.C. § 6(b).

¹ We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Ford Global Technologies, LLC. Appeal Br. 1.

We affirm-in-part and enter new grounds of rejection pursuant to our authority under 37 C.F.R. § 41.50(b).

CLAIMED SUBJECT MATTER

Appellant describes the invention as relating to “aerodynamically vented subwoofers.” Spec. ¶ 1.

Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A vehicle subwoofer assembly, comprising:

an extractor duct configured to extract air from the vehicle via a vent opening at an exterior of the vehicle; and

a subwoofer assembly including a subwoofer vent² having a first duct extending from a backside of the subwoofer assembly, the first duct configured to connect the subwoofer vent to the extractor duct by receiving a second vent of the extractor duct, wherein the duct is configured to extract air from the vehicle and relieve back pressure for the subwoofer.

REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Tada	US 2013/0188806 A1	July 25, 2013
Esser	EP 2941011 A1	Nov. 4, 2015
Kelley	US 4,815,297	Mar. 28, 1989
Wegener	US 2014/0321686 A1	Oct. 30, 2014

² Appellant’s Specification appear to use the terms “subwoofer duct” and “subwoofer vent” interchangeably. *See e.g.*, Spec. ¶¶20, 21 (“a subwoofer duct 210 . . . may be arranged at the back plate 185 . . . Figure 3 illustrates a cross-sectional view of the subwoofer vent 210”). For purposes of this appeal, we also treat the terms “subwoofer duct” and “subwoofer vent” as interchangeable.

REJECTIONS

1. Claims 1, 4–7, 9, 11–13, and 15 stand rejected under 35 U.S.C. § 103 as unpatentable over Tada and Esser. Ans. 4–6.
2. Claim 10 stands rejected under 35 U.S.C. § 103 as unpatentable over Tada, Esser, and Wegener. Ans. 7.
3. Claims 14 stands rejected under 35 U.S.C. § 103 as unpatentable over Tada, Esser, and Kelley. Ans. 7–8.

OPINION

Claim 1

The Examiner finds the combination of Tada and Esser teach or suggest all the limitations of claim 1. More specifically, the Examiner finds Tada discloses an installation structure for a loudspeaker system of a vehicle that includes an air vent port that permits air to move between a back pressure space of the loudspeaker system to outside an interior of the vehicle. *See* Final Act. 4 (citing Tada ¶¶ 5, 6, 8, 11–13); *see also* Ans. 8. As found by the Examiner, Tada teaches the claimed “subwoofer assembly . . . having [a duct] . . . configured to extract air from the vehicle and relieve back pressure for the subwoofer” of claim 1, and Tada’s air vent port teaches or suggests the claimed “extractor duct” of claim 1. *See* Final Act. 4. The Examiner further finds Esser discloses a vehicle installation structure that comprises an extraction duct including a first duct part and a second duct part, where the extraction duct is configured to extract air from an inner space to an outer space of a vehicle through the first duct part and the second duct part. *See* Final Act. 4–5 (citing Esser at Abstract, Fig. 2); *see also* Ans. 8. As also found by the Examiner, Esser’s extraction duct teaches or suggests the claimed “subwoofer vent” of claim 1. *See* Final Act. 4–5.

Appellant argues that claim 1 requires that the “first duct is extending from a backside of the subwoofer assembly,” and further requires the “second vent of the extractor duct” is received by “the first duct” and the “extractor duct is configured to extract air from the vehicle.” *See* Appeal Br. 3. On the other hand, as argued by Appellant, Esser appears to pass air from the alleged second duct from inside the vehicle through the alleged first duct which extracts air to outside the vehicle. *See id.*; *see also* Reply Br. 2. Thus, according to Appellant, the alleged first duct of Esser extracts the air to the exterior of the vehicle, not the second duct part of the extraction duct. *See* Appeal Br. 3–4; *see also* Reply Br. 2. Appellant further argues the alleged first duct of Esser does not “connect the subwoofer vent to the extractor duct by [receiving] a second vent of the extractor duct,” as recited in claim 1. *See* Appeal Br. 4; *see also* Reply Br. 2.

We are not persuaded the Examiner erred. We agree with the Examiner that Esser’s first and second duct parts teach or suggest the claimed “first duct” and “second vent,” as Esser discloses that the second duct part opens into an air communication duct of a loudspeaker device as well as an interior space of a vehicle, extracts air from an interior space of a vehicle, and is formed integrally with a first duct part. *See* Esser ¶¶ 22, 23, 27, 28. The fact that Esser identifies the duct part that extracts air as a second duct part rather than a first duct part, and further identifies the duct part that communicates air from the interior space to the exterior space as the first duct part rather than a second duct part, does not demonstrate reversible error. In other words, we agree that Esser discloses the same claimed structure of the “subwoofer vent” recited in claim 1, even if Esser identifies the components differently than the claim. Thus, we agree with the

Appeal 2019-001540
Application 15/438,183

Examiner that Esser, in combination with Tada, teaches or suggests the claimed “subwoofer vent” of claim 1.

Accordingly, we sustain the Examiner’s rejection of independent claim 1. The Examiner rejects independent claims 7 and 15 on the same basis as claim 1, and therefore we also sustain the Examiner’s rejection of claims 7 and 15. We also sustain the rejection of dependent claims 4, 5, 9, 10, 12, and 14, as they are not separately argued by Appellant.

Claim 6

The Examiner finds the combination of Tada and Esser does not explicitly disclose a vehicle subwoofer assembly including “at least one flap arranged over the vent opening and configured to open to release air from the extractor duct and the subwoofer,” as recited in claim 6. *See* Final Act. 6. The Examiner further takes Official Notice that both the concept and advantages of including a flap configured to open within a structure is well known, and thus, it would have been obvious at the time of the claimed invention to include a flap within the installation structure disclosed in Tada. *See id.*; *see also* Ans. 8–9. Appellant argues that the Examiner’s taking of Official Notice regarding the flap does not involve recitations that are capable of instant and unquestionable demonstration as being well-known, and thus, is improper. *See* Appeal Br. 5; *see also* Reply Br. 2.

We are persuaded by Appellant’s argument. As neither Tada nor Esser teach or suggest a flap arranged over a vent opening configured to open to release air, we do not sustain the Examiner’s rejection of claim 6. The Examiner rejects claim 13 on the same basis, and therefore, we also do not sustain the Examiner’s rejection of claim 13.

However, Vacca et al., U.S. Patent Application Publication No. 2017/0043659 (herein “Vacca”) discloses an air guide for a motor vehicle

Appeal 2019-001540
Application 15/438,183

that includes an air supply duct that communicates with an air inlet duct upstream of a flap panel including flaps mounted on the panel, where the flaps are controlled between a vertical closed position blocking passage of air and a horizontal open position where a flow of air may circulate. *See* Vacca ¶¶ 40–42. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to modify the installation structure of Tada as modified by the disclosure in Esser to include the flap disclosed in Vacca for the purpose of being able to control air flow between different spaces. Thus, pursuant to our authority under 37 C.F.R. § 41.50(b), we enter a new ground of rejection for claims 6 and 13 under 35 U.S.C. § 103 as unpatentable over Tada, Esser, and Vacca.

Claim 11

The Examiner finds the combination of Tada and Esser does not explicitly disclose a vehicle vent assembly including a first duct and a second duct, “wherein a diameter of the first duct is greater than a diameter of the second duct,” as recited in claim 11. *See* Final Act. 6. The Examiner further finds it would have obvious to one of ordinary skill in the art at the time of the claimed invention that to connect the ducts disclosed in Esser, as used to modify the installation structure disclosed in Tada, one of the ducts would have to have a slightly larger diameter for the purpose of being able to flush the ducts together. *See id.*; *see also* Ans. 9.

Appellant argues Esser is silent as to how the first duct and second duct fit together, and there is no support for the Examiner’s statement that it would have been obvious for the ducts to have differing diameters “for the purpose of being able to flush the ducts together.” *See* Appeal Br. 6. To the extent the Examiner is making an inherency rejection, Appellant further argues the fact that a certain result or characteristic may occur or be present

Appeal 2019-001540
Application 15/438,183

in the prior art is not sufficient to establish the inherency of that result or characteristic. *See* Appeal Br. 6–7; *see also* Reply Br. 2.

We are persuaded by Appellant’s argument. As neither Tada nor Esser teach or suggest a diameter of a first duct being greater than a diameter of a second duct, we do not sustain the Examiner’s rejection of claim 11.

However, Khan et al., U.S. Patent Application Publication No. 2016/0123511 (herein “Khan”) discloses a duct assembly including a first duct integrated with a first connector, where the diameter of the first connector is larger than the diameter of the first duct. *See* Khan ¶¶ 25, 33. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to modify installation structure of Tada as modified by the disclosure in Esser to have the diameter of the first duct to be greater than the diameter of the second duct consistent with the disclosure of Khan for the purpose of being able to couple the ducts together. Thus, pursuant to our authority under 37 C.F.R. § 41.50(b), we enter a new ground of rejection for claim 11 under 35 U.S.C. § 103 as unpatentable over Tada, Esser, and Khan.

CONCLUSION

We sustain the Examiner’s rejection of claims 1, 4, 5, 7, and 9, 10, 12, 14, and 15 under 35 U.S.C. § 103.

We reverse the Examiner’s rejection of claims 6, 11, and 13 under 35 U.S.C. § 103.

We enter a new ground of rejection for claims 6, 11, and 13 under 35 U.S.C. § 103.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed	New Ground
1, 4-7, 9, 11-13, 15	103	Tada, Esser	1, 4, 5, 7, 9, 12, 15	6, 11, 13	
10	103	Tada, Esser, Wegener	10		
14	103	Tada, Esser, Kelley	14		
6, 13	103	Tada, Esser, Vacca			6, 13
11	103	Tada, Esser, Khan			11
Overall Outcome			1, 4, 5, 7, 9, 10, 12, 14, 15	6, 11, 13	6, 11, 13

37 C.F.R. § 41.50(b)

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b), which provides that "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

Section 41.50(b) also provides that Appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new grounds of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the prosecution will be remanded to the examiner

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same Record

Appeal 2019-001540
Application 15/438,183

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-IN-PART
37 C.F.R. § 41.50(b)³

³ Should there be further prosecution of these claims, the Examiner's attention is directed to the following concerns:

- (a) Claims 1 and 15 recite a "second vent," but it appears that "second duct" was intended as the term "second vent" is not used in Appellant's Specification;
- (b) Claim 1 recites "wherein the duct is configured to extract air," but it is unclear whether "duct" refers to "first duct," "extractor duct," or "second vent," as previously recited in the claims; and
- (c) Claim 15 recites "the first vent," but there does not appear to be sufficient antecedent basis for a "first vent."