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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/633,337	06/26/2017	Joshua Kompa	1129-151.101	5033
22145	7590	09/23/2020	EXAMINER	
KLEIN, O'NEILL & SINGH, LLP 30 CORPORATE PARK SUITE 211 IRVINE, CA 92606			VU, HIEN D	
			ART UNIT	PAPER NUMBER
			2831	
			NOTIFICATION DATE	DELIVERY MODE
			09/23/2020	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOSHUA KOMPA, DAVID WANG, and TONY QUACH

Appeal 2020-001204
Application 15/633,337
Technology Center 2800

Before ERIC B. CHEN, CARL L. SILVERMAN, and
MICHAEL J. ENGLE, *Administrative Patent Judges*.

ENGLE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant¹ appeals under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1–3, 6–13, 16–18, and 20, which are all of the claims pending in the application. A telephonic hearing was held on September 10, 2020. A transcript of the telephonic hearing will be placed in the record. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies Bal Seal Engineering, Inc. as the real party in interest. Supp. Appeal Br., Replacement Sheet 2.

TECHNOLOGY

The application relates to “electrical connectors capable of high density electrical connections.” Spec. 1:5–6.

ILLUSTRATIVE CLAIM

Claim 1 is illustrative and reproduced below:

1. A connector assembly comprising:

a pin comprising an insulator material, a groove, and an electrical contact;

a housing comprising an exterior surface and an interior surface defining a bore;

a canted coil spring contact;

a direction of insertion of said pin into said bore of said housing;

wherein the pin comprises an axis in the direction of insertion;

wherein the canted coil spring contact is retained with the groove of the pin prior to insertion of the pin into the bore of the housing;

wherein the electrical contact comprises a contact band where contact is to be established with the canted coil spring contact, said contact band at least partially surrounds the insulator material around the axis of the pin;

wherein said electrical contact comprises a tab extending from the contact band and along at least a length of the pin; and

wherein the canted coil spring contact establishes an electrical path between the pin and the housing.

REJECTION

Claims 1–3, 6–13, 16–18, and 20 stand rejected under 35 U.S.C. § 103 as obvious over Pavlovic (US 2007/0117433 A1; May 24, 2007), Changsrivong (US 9,482,255 B2; Nov. 1, 2016), and Kompa (US 2014/0259617 A1; Sept. 18, 2014). Final Act. 2.

ISSUE

Did the Examiner err in finding the combination of Pavlovic with Changsrivong and Kompa did not teach away from claim 1?

ANALYSIS

Appellant argues that combining Pavlovic with Changsrivong and Kompa would change Pavlovic’s principle of operation and render the combination inoperable for Pavlovic’s intended purpose. Appeal Br. 8–13. In particular, Appellant argues that “the combination of Pavlovic/Changsrivong/Kompa cannot solve a major concern addressed by the Pavlovic design, such as wiping debris and liquid deposits from within the groove of the combination.” Appeal Br. 11–12.

Pavlovic discloses “vehicle interior power supply connections,” such as for a removable seat in a vehicle. Pavlovic ¶¶ 5, 7. Pavlovic identifies the following as one of several concerns for such a connection: “[B]eing that the electrical connection to a vehicle seat is typically made at the floor level, an exposed connector may be susceptible to debris and liquids spilled on the floor which may lead to the corrosion or damage to the electrical contact.” *Id.* ¶ 8. Pavlovic solves that particular problem by using a “seal 86” “for preventing debris from entering the end portion 88 when the power supply connector 30 and the releasable connector 32 are coupled.” *Id.* ¶ 35. “As

the first and second terminal male contacts 40 and 42 slidingly contact the seal 86, fluid and debris are wiped from each respective contact.” *Id.* ¶ 36.

The Examiner determines that Pavlovic’s wiping seal 86 is not Pavlovic’s principle of operation or intended purpose because “the Examiner does not think the seal of [the] Pavlovic device as shown in Fig. 5 for wiping debris could be critical to the current transfer function, but the main concern should be the pin with terminal contacts 40, 42 for making good connection with the main body 66” and “therefore, it would have been obvious that the seal could be omitted in such combination since the seal is not [an] essential part of the device and the device will operate adequately without wiping.”

Ans. 3. “The principle of operation of [Pavlovic] has not changed since the combination was used [to] provide a better connection.” *Id.* at 4.

Given the record before us, we agree with the Examiner that Appellant has not sufficiently shown that the combination would change Pavlovic’s principle of operation or render the combination inoperable for Pavlovic’s intended purpose. First, although the seal 86 may be one feature disclosed in Pavlovic, it does not appear to be a major part of Pavlovic’s invention. The “seal” is referenced in only three paragraphs of Pavlovic. Pavlovic ¶¶ 32, 35, 36. The seal is never mentioned in Pavlovic’s Title, Abstract, or Brief Summary of the Invention. *See id.* at code (54), Abstract, ¶¶ 9–12. Similarly, the seal is never mentioned in the claims of either the publication (US 2007/0117433 A1) or the application as originally filed (11/286,504). Instead, Pavlovic’s Abstract, Brief Summary of the Invention, and claims all focus on other aspects of Pavlovic, such as a “switching circuit [that] measures an impedance of the electrical supply system and selectively energizes the power supply connector” (e.g., “disconnects power

to the power supply connector when the impedance is outside of a predetermined range”). *Id.* at Abstract. Thus, on the record before us, we are not persuaded that seal 86 is Pavlovic’s principle of operation or that Pavlovic sufficiently teaches away from a combination without seal 86.

The Federal Circuit’s decision in *In re Mouttet*, 686 F.3d 1322 (Fed. Cir. 2012), is instructive. In that case, the prior art Falk’s claim 1 recited the term “optical” fifteen times and the specification expressly emphasized the “fundamental difference” between “optical” and “electrical” systems, yet the Federal Circuit still agreed with the Board that “eliminating the optical components of Falk would not destroy its principle of operation.” 686 F.3d at 1331–32; US 5,249,144, at 1:6–17, claim 1 (Sept. 28, 1993). The court similarly agreed with the Board that Falk’s principle of operation was its “high level ability” and not limited to a specific “optical” implementation. *Id.* at 1332.

The same is true here where Pavlovic’s high level ability (e.g., electrical connectors with a switching circuit that disconnects power when the impedance is outside of a predetermined range) is not limited to one particular implementation with a wiping seal. At best, the Examiner’s combination omitting Pavlovic’s wiping seal may be *one factor* to consider in whether a person of ordinary skill in the art would have combined the references, but it is by no means a dispositive change in Pavlovic’s principle of operation as Appellant suggests.

Second, Appellant has not persuaded us that the problem of debris is as large as Appellant suggests. Pavlovic suggests that debris or spilled fluid only occur when a vehicle seat has been removed and one connector is exposed, but Appellant provides no indication how often a vehicle seat

would actually be removed. *See* Pavlovic ¶ 8. Further, the Examiner finds that “adequate electrical connection can be made without wiping of debris.” Ans. 4. Indeed, as the Examiner points out, Kompa is assigned to Appellant, yet Kompa makes no mention of a wiping seal or debris being a problem. *Id.*

Therefore, we are not persuaded by Appellant’s arguments that Pavlovic teaches away from a combination with Changsrivong and Kompa.

Accordingly, we sustain the Examiner’s rejection of claim 1, and claims 2, 3, 6–13, 16–18, and 20, which Appellant argues are patentable for similar reasons.² *See* Appeal Br. 12–13; 37 C.F.R. § 41.37(c)(1)(iv).

OUTCOME

The following table summarizes the outcome of each rejection:

Claims Rejected	35 U.S.C. §	References	Affirmed	Reversed
1–3, 6–13, 16–18, 20	103	Pavlovic, Changsrivong, Kompa	1–3, 6–13, 16–18, 20	

TIME TO RESPOND

No time for taking subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.36(a)(1)(iv).

AFFIRMED

² Although Appellant introduced a new argument at the hearing with respect to the limitation in independent claim 16 of “said tip section having a diameter that is larger than a diameter of the tail section,” this argument was not in the briefing and therefore was waived. *See* 37 C.F.R. §§ 41.37(c)(1)(iv) (“Except as provided for in §§ 41.41, 41.47 and 41.52, any arguments or authorities not included in the appeal brief will be refused consideration by the Board for purposes of the present appeal.”), 41.47(e).