



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.
12/225,962	10/01/2008	Siegfried Hofler	169068.169079	3736
140334	7590	08/20/2020	EXAMINER	
Warner Norcross + Judd LLP - IP Group In re WABCO 1500 Warner Building 150 Ottawa Ave NW Grand Rapids, MI 49503			SCHINDLER, DAVID M	
			ART UNIT	PAPER NUMBER
			2858	
			NOTIFICATION DATE	DELIVERY MODE
			08/20/2020	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):

patents@wnj.com
rpeck@wnj.com
vciaravino@wnj.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SIEGFRIED HOFLER and GUNTHER SINGBARTL

Appeal 2019-000186
Application 12/225,962
Technology Center 2800

Before KAREN M. HASTINGS, RAE LYNN P. GUEST, and
DEBRA L. DENNETT, *Administrative Patent Judges*.

GUEST, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant¹ requests our review under 35 U.S.C. § 134 of the Examiner's non-final decision rejecting claims 1–8, 15, 16, 18–28, and 31–34. We have jurisdiction over the appeal 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 the real party in interest as WABCO GmbH (Appeal Br. 2).

CLAIMED SUBJECT MATTER

Claim 1 is illustrative of the subject matter on appeal (emphasis added to highlight key limitation in dispute):

1. An inductive sensor, comprising:
an electric coil subassembly disposed in a housing, the coil subassembly comprising:
a coil former, a coil winding wound about the coil former, a wire end extending from the coil winding, an electrical terminal element, and a terminal point extending from the electrical terminal element, the wire end being wound about the terminal point and the coil subassembly being at least partly coated with an injection-molding compound;

and

at least one barrier disposed between the terminal point and an entry point of the injection-molding compound, each of *at least two rounded corners of the at least one barrier* abutting immediately against an inner surface of the housing, *a first rounded corner of the at least two rounded comers being disposed diagonally opposite a second rounded corner* of the at least two rounded corners, a first portion of the injection-molding compound being situated between the at least one barrier and the wire end, *a plurality of holes defined through the at least one barrier, each hole of the plurality of holes extending from a top surface of the at least one barrier to a bottom surface of the at least one barrier*, the electrical terminal element extending through a first hole of the plurality of holes, an additional terminal element extending through a second hole of the plurality of holes, a second portion of the injection-molding compound being disposed through a third hole of the plurality of holes, the third hole being disposed between the first and second holes.

Claims Appendix; Appeal Br. 19.

Independent claim 33 is similar to claim 1 but requires only that the barrier has one rounded corner abutting against an inner surface and does not recite any holes in the barrier. Claims Appendix; Appeal Br. 24.

Initially, Appellant's arguments are directed to claim 1. Appeal Br. 5–14. Appellant does not present substantially different arguments for independent claim 33. *Id.* 14. Appellant then argues specific limitations of dependent claims 27 and 34, separately. *Id.* 14–17. For the claims that are not separately argued (*id.* 17), we select claim 1 as a representative claim. *See* 37 C.F.R. § 41.37(c)(1)(iv). Accordingly, claims 2–8, 15, 16, 18–26, 28, and 31–33 will stand or fall with independent claim 1.

REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Adachi et al.	US 4,305,863	Dec. 15, 1981
Kohen	US 4,680,543	July 14, 1987
Buchschnid et al.	US 5,039,942	Aug. 13, 1991
Singbartl	US 5,896,029	Apr. 20, 1999
Palfenier et al.	US 6,424,144 B1	July 23, 2002
Fathauer	US 2007/0176595 A1	Aug. 02, 2007

REJECTION

Claims 1–3, 5, 15, 16, 18–20, 23–27, 31–33 are rejected under 35 U.S.C. § 103 as being unpatentable over Kohen and Palfenier.

Claim 4 is rejected under 35 U.S.C. § 103 over Kohen and Palfenier, further in view of Buchschmid.

Claims 6–8 are rejected under 35 U.S.C. § 103 over Kohen and Palfenier, further in view of Adachi.

Claims 21–22 are rejected under 35 U.S.C. § 103 over Kohen and Palfenier, further in view of Fathauer.

Claims 28 and 34 are rejected under 35 U.S.C. § 103 over Kohen and Palfenier, further in view of Singbartl.

ANALYSIS

We review the appealed rejections for error based upon the issues identified by Appellant and in light of the arguments and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential), cited with approval in *In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011) (“[I]t has long been the Board’s practice to require an applicant to identify the alleged error in the examiner’s rejections.”). After considering the evidence presented in this Appeal and each of Appellant’s arguments, we are not persuaded that Appellant identifies reversible error. Thus, we affirm Examiner’s rejections for the reasons expressed in the Non-Final Office Action and the Answer. We add the following for emphasis.

Appellant argues primarily that 1) the claimed “holes defined through at least one barrier” do not encompass the notches of Kohen, 2) there are no rounded corners disposed diagonally opposite each other in Kohen, and 3) it would not have been obvious to modify Kohen by Palfenier. Appeal Br. 5–17.

“[A]s an initial matter, the PTO applies to the verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the

art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant's specification.” *In re Morris*, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997).

We disagree with Appellant that the broadest reasonable interpretation of the term “hole” requires an opening entirely surrounded by barrier material and therefore, the notches of Kohen are not “an opening through something” as recited in the Examiner’s definition. Appeal Br. 7. The Appellant’s Specification has not provided a particular definition and there is no indication that the example configuration represented in the figures, without additional structural claim language, should limit the scope of the broad “hole” language recited in claim 1.

While there is no *in haec verba* requirement for claim language, the Specification never utilizes the term “hole” now in dispute. The “holes” Appellant relies upon, namely 102, 103, 104 of Figure 11, are referred to instead as “openings” – but so are openings 105, 106, 107, and 108. Spec. 8–9. Those “openings” 105, 106, 107, and 108 are not completely surrounded by the barrier (Spec. Fig. 11) and are not structurally distinguished from the former “openings” in the Specification or by use of the term “holes.” Because of the breadth reasonably given to the express language of the claims in light of the Specification’s lack of limiting description of “holes,” the Examiner’s interpretation, though broad, is not unreasonable.

We are further persuaded by the Examiner’s analogizing to hole in a piece of paper made by a paper hole puncher. Ans. 6. The Examiner points out that a hole formed on the perimeter of a planar surface, not entirely

surrounded by the surface, is still a hole punched through the paper. *Id.* Without more structural limitation in the claims, Kohen's notch, an area with material removed in order to create an opening through a barrier, can broadly but reasonably be construed as a "hole." Ans. 5–6. In Kohen, the notch runs the length of the barrier, therefore, it is "through" the barrier. *Id.*

Appellant further argues that the rounded corners do not encompass the edges of the barrier of Kohen. Appeal Br. 8–10; Reply Br. 3–4. Using the Appellant's own definition of corner as "the place or angle where converging sides or edges meet" (Appeal Br. 8), the Examiner points out that the corner of Kohen has two converging sides meeting – the planar surface of the top of the barrier (Examiner's "top surface") and the rounded edge of the portion that abuts housing 18. Ans. 9–10 (depicted in the annotated figures). Since Kohen's housing is circular, that corner with those two edges meeting is rounded to follow the circular shape of the housing. *Id.* Although Appellant then attempts to distance from the definition provided and rely instead on the Specification, we are not persuaded of any error. Reply Br. 3–4. In the Specification, Figure 11's depiction of a generally square plate, with four rounded corners where the corners of a square generally would be does not expressly limit the meaning of the term "corner" recited in the claims, as argued by Appellant (*see* Reply Br. 3–5), because the barrier in the claims is not structurally limited to, for example, a generally regularly polygonal shape, such as the generally square shaped barrier in Figure 11. Nor does the additional adjective of "rounded" appended to "corner" of the claim further limit the barrier to be the generally square plate with rounded corners exemplified in Figure 11. "Though understanding the claim language may be aided by the explanations

contained in the written description, it is important not to import into a claim limitations that are not a part of the claim.” *Superguide Corp. v. DirectTV Enterprises, Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004). The Examiner’s broad interpretation of the term “rounded corner” is reasonable.

While Appellant also maintains that the diagonal opposition of the rounded corners is not taught by Kohen (Reply Br. 2 (merely stating “Kohen’s protuberances 16 are not ‘diagonally disposed opposite’ each other”)), this argument is little more than repeating what the claim states and arguing that the feature is not present, without addressing the Examiner’s reasoned findings that the corners are not limited to corners of the face of the barrier on one side, but can fairly be considered to be where the top and bottom surface of the barrier meet the housing. Ans. 9 (as shown in the marked up figure).² Such general and conclusory statements are not considered arguments for separate patentability of these claims. See 37 C.F.R. § 41.37(c)(l)(vii); See *In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) (holding that the Board had reasonably interpreted 37 C.F.R. § 41.37(c)(l)(vii) as requiring “more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art”).

Appellant additionally argues that the modification of Kohen with Palfenier would not have been obvious to a person of ordinary skill in the art

² For similar reasons, we are not persuaded by Appellant’s separate arguments with respect to claim 27 (App. Br. 14–15), which are not directed to and do not rebut the Examiner’s specific finding and rationale in rejecting claim 27 set forth in the Non-Final Rejection. See Non-Final Rej. 15, 23–24; Ans. 18–19.

at the time of the invention because Kohen does not disclose where the coil wire terminates and where the conducting wire begins (Reply Br. 5) and the modification would increase complexity by adding the terminal of Palfenier with no apparent benefit. Appeal Br. 12. While the Examiner maintains that the Palfenier's solution would still reduce overall time and costs because there would then be no need for varnishing or tapering the coil (Ans. 13–14), Appellant alleges that Kohen's invention already removed the need for those steps by encapsulation to immobilize the wire ends. Reply Br. 6.

We are not persuaded of any error in the Examiner's reasoning. While Kohen might not disclose explicitly where the coil wire terminates and where the conducting wire begins, an obviousness analysis "need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR Int'l v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). The Examiner persuasively explains that the location of where wire coil 13 is attached to conducting wires 7 is not an imaginary location but a real physical location. Ans. 12 ("this physical wire end portion of coil 13 is the intermediate element that Appellant argues is not found in Kohen"). Indeed, Kohen states that "[t]he ends of the welding wire 13 are connected to the conducting wires 7 or to the snap contacts." Kohen, col. 3, ll. 21–23. Further, Palfenier's teaching of winding a coil before attaching to a terminal, even if it did involve additional handling of the wire, is persuasively argued by the Examiner (Ans. 11–17) to be well within the creativity of the ordinarily skilled artisan such that it would have been an obvious modification. *In re Fritch*, 972 F.2d 1260, 1264–65 (Fed. Cir. 1992) (a reference stands for all of the specific teachings

thereof as well as the inferences one of ordinary skill in the art would have reasonably been expected to draw therefrom).

Additionally, Appellant's argument that there would be no reason to modify since the encapsulation technique of Kohen removes the problem about maintaining fixed wire positions is likewise unpersuasive. The Examiner is not relying on the teachings of Palfenier to replace the encapsulation of the coil taught by Kohen. Rather, the Examiner relies on Palfenier's teaching as an improved alternative to soldering or using snap contacts *to connect the wires* in the manner taught by Kohen. Ans. 15 (“[T]he coil end is wound around a terminal point instead of being soldered/wired to it”). The Examiner notes the additional security taught by Palfenier's connection should the wires become slack and the coil undesirably unwind. Ans. 14 (citing Palfenier, col. 1, ll. 15–19). The Examiner notes that Kohen does not rely on the encapsulating material to keep the coil wound, so as to be unnecessary with the alternative terminal connection taught by Palfenier. Ans. 14. Rather, the Examiner, in determining a sensor having both Palfenier's terminal connection and Kohen's encapsulation would have been obvious to the skilled artisan, even with additional costs and processing steps, finds that Kohen teaches different and alternative benefits to using encapsulation material, namely in that it “protects the coil from mechanical, physical, or chemical aggressions from the surrounding medium[, i.e.] protects the coil from the external environment.” *Id.*; *see also* Kohen, col. 1, ll. 1417.

Finally, we are not persuaded that Appellant has demonstrated superior improvement in thermal fatigue resistance in a sensor by using a barrier for the injection molding compound because Kohen teaches

substantially the same configuration and Appellant has not compared the thermal fatigue resistance of the claimed sensor to that of the closest prior art, so as to demonstrate criticality or results that are superior or unexpected vis-à-vis the teaching of Kohen. Secondary considerations are generally not persuasive when the prior art possesses the same characteristics relied upon by the patent owner in the evidence of the secondary consideration. *In re Baxter Travenol Labs.*, 952 F.2d 388, 392 (Fed. Cir. 1991); *J.T. Eaton & Co., Inc. v. Atlantic Paste & Glue Co.*, 106 F.3d 1563, 1571 (Fed. Cir. 1997). For a secondary consideration to be persuasive evidence of nonobviousness, it must be connected to the features of the claimed invention beyond what was readily available in the prior art. *Id.*

Accordingly, Appellant has shown no reversible error in the Examiner's rejection of independent claims 1 and 33 as being unpatentable in view of Kohen and Palfenier.

Claim 34

Claim 34 recites an "opening" in the barrier "being entirely defined within the barrier." The Examiner, in distinguishing the broader "hole" language recited in claim 1, acknowledges that Kohen's barrier defines opening, but not openings "entirely defined within the barrier." Non-Final Rej. 28. The Examiner determines that it would have been obvious to modify Kohen in view of Palfenier with Singbartl, which teaches a barrier having opening entirely defined by the barrier, since the opening "entirely defined by the barrier" could have fixed the position of the coil carrier, insured that the sensing mechanism stays stationary, and provide additional material surrounding the terminals to control their movement. *Id.* 28–29.

Appellant contends that the elastic barrier taught by Singbartl would not have accommodated an accurately centered body because it is not rigid like the barrier of Kohen. Appeal Br. 15–16. We agree with at least one of the Examiner’s purported rationales. *See* Ans. 20. We note that the Examiner lists a variety of reasons why it would have been obvious for the skilled artisan to have changed the openings of Kohen’s barrier through which the terminal element passes to be entirely defined within the barrier, as taught by Singbartl. *Id.* Appellant’s arguments about elasticity does not address the Examiner’s rationale for merely changing the opening structure of Kohen to be entirely defined by the barrier. The multiple reasons the Examiner provides for utilizing the completely defined hole of Singbartl in the barrier of Kohen and Palfenier are persuasive.

Accordingly, Appellant has shown no reversible error in the Examiner’s rejection of claim 34 as being unpatentable in view of Kohen and Palfenier.

To the extent Appellant presents any substantive arguments for any of the remaining dependent claims, no reversible error has been identified. *See* Ans. 2–21.

Thus, Appellant has not persuasively presented facts or reasons to convince us that Examiner failed to establish a prima facie case of obviousness as to any of the claims on appeal.

Accordingly, we sustain the § 103 rejections of all of the claims on appeal.

The decision of the Examiner is affirmed.

In summary:

Claims Rejected	35 U.S.C. §	Reference/Basis	Affirmed	Reversed
1-3, 5, 15, 16, 18-20, 23, 27, 31-33	103	Kohen, Palfenier	1-3, 5, 15, 16, 18-20, 23-27, 31-33	
4	103	Kohen, Palfenier, Buchschmid	4	
6-8	103	Kohen, Palfenier, Adachi	6-8	
21, 22	103	Kohen, Palfenier, Fathauer	21, 22	
28 and 34	103	Kohen, Palfenier, Singbartl	28 and 34	
OVERALL			1-8, 15, 16, 18-28, 31-34	

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).

AFFIRMED