



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.
15/494,781	04/24/2017	Neal Koenig	83782118	4350
121691	7590	09/10/2020	EXAMINER	
Ford Global Technologies, LLC/ King & Schickli, PLLC 800 CORPORATE DRIVE, SUITE 200 Lexington, KY 40503			KOTTER, KIP T	
			ART UNIT	PAPER NUMBER
			3617	
			NOTIFICATION DATE	DELIVERY MODE
			09/10/2020	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):

laura@iplaw1.net
uspto@iplaw1.net

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte NEAL KOENIG

Appeal 2020-001239
Application 15/494,781
Technology Center 3600

Before JOHN C. KERINS, KEVIN F. TURNER, and
JEREMY M. PLENZLER, *Administrative Patent Judges*.

KERINS, *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, 3–7, 9–13, and 15–20, the only claims currently pending in the application. As detailed below, claims 3, 6, 7, and 9–11 are no longer subject to any rejection on appeal. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ The term “Appellant” is used herein to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies Ford Global Technologies LLC, as the real party in interest. Appeal Br. 3.

THE CLAIMED SUBJECT MATTER

Appellant's invention relates to a system and method of connecting a wheel attachment to a vehicle wheel hub. Claim 1 is illustrative, and is reproduced below:

1. A system for connecting a vehicle wheel attachment, comprising:

a wheel hub fabricated of a first material and including an interiorly threaded bore; and

at least one threaded insert fabricated of a second material that is different from the first material and having an exteriorly threaded surface adapted to mate with the interiorly threaded bore;

wherein the at least one threaded insert includes an interiorly threaded surface adapted to mate with an exteriorly threaded flange carried by the vehicle wheel attachment.

THE REJECTIONS

The Examiner rejects:

(i) claims 4, 10, 15, 16, and 17 under 35 U.S.C. § 112(b) as being indefinite;² and

² This ground of rejection was withdrawn as to claims 3, 6, 7, 9, and 11 in the Examiner's Answer. Ans. 5. The inclusion of claim 10 in the grouping of the claims for which the rejection was withdrawn appears to be an inadvertent error, in that claim 10 depends from canceled claim 8, and the Examiner maintains the indefiniteness rejection as to claims 4, 15, and 17 on that same basis. We thus regard claim 10 as being subject to this rejection.

(ii) claims 1, 5, 12, 13, and 15–20 under 35 U.S.C. § 103 as being unpatentable over Panter (GB 2341, issued Oct. 14, 1909) in view of Schumacher (US 4,376,554, issued Mar. 15, 1983).³

ANALYSIS

Claims 4, 10, 15, 16, and 17--§ 112(b)--Indefiniteness

Claims 4, 10, 15, and 17 are rejected as being indefinite on the basis that each of these claims, as presented on appeal, depends from a canceled claim. Final Act. 4. Appellant does not respond substantively to this rejection, nor has Appellant amended these claims to overcome this defect. The rejection is summarily sustained.

Claims 16 and 17 are rejected on an additional indefiniteness ground. The Examiner indicates that independent claim 12, from which claims 16 and 17 depend, recites a method of connecting a wheel attachment to a vehicle wheel hub that includes the step of mating a central interiorly threaded bore with at least one threaded insert having an exteriorly threaded surface. Ans. 6. The Examiner further observes that claims 16 and 17 each require a plurality of threaded inserts, and that applying this further limitation to the method of claim 12 results in a method in which a plurality of threaded inserts are mated with the central interiorly threaded bore. *Id.* at 7. The Examiner finds it unclear as to how a plurality of threaded inserts would be capable of being mated with the centrally interiorly threaded bore, especially in view of the absence in the Specification of any disclosure of

³ This ground of rejection was withdrawn as to claims 3, 4, 6, 7, and 9–11 in the Examiner's Answer. Ans. 6.

how two or more of the plurality of inserts could be simultaneously mated with the wheel hub. *Id.*

Appellant argues that claims 16 and 17 do not require the simultaneous use (mating with the wheel hub) of two or more of the plurality of inserts. Appeal Br. 11. Appellant asserts that the claims require only “a plurality of threaded inserts, albeit interchangeably usable one at a time.” *Id.* Addressing, in addition, the requirement in claim 16 that each of the plurality of threaded inserts has an exterior diameter that is different from at least one other of the plurality of threaded inserts, Appellant takes the position that this clearly would be understood as providing a plurality of inserts that may be fit (one at a time) into wheel hubs of differing interior diameters. *Id.* at 11–12.

The Examiner, in withdrawing the rejection of claims 3, 6, 7, 9, and 11 on this same ground, implicitly draws a distinction between system-type claims, as are independent claims 1 and 6, from which claims 3, 7, and 9, depend, and method claims, the category to which claims 12, 16, and 17 belong. In the system-type claims currently pending, the Examiner appears to take the position that the recitation of a plurality of threaded inserts and a wheel hub sufficiently and clearly connotes that one or more of the plurality of threaded inserts will not be mated to the recited wheel hub at any given point in time.

Method claim 12, in contrast, recites the affirmative operative step of mating the bore of the wheel hub with the recited at least one threaded insert. We agree with the Examiner that it is unclear how this mating step would be accomplished with the plurality of threaded inserts required by dependent claims 16 and 17, in that the wheel hub includes only one central interiorly

threaded bore. This is even more so the case, when considering that claims 16 and 17 require that each of the inserts have an exterior diameter that is different from at least one of the other of the plurality of threaded inserts. It appears from this claim requirement that one or more of the plurality of threaded inserts would not be of a proper size to be mated with the bore of the wheel hub. As such, the language of these claims is unclear in describing and defining the claimed invention. *In re Packard*, 751 F.3d 1307, 1311 (Fed. Cir. 2014).

The rejection of claims 16 and 17 as being indefinite on this basis is also sustained.

Claims 1, 5, 12, 13, and 15–20 --§ 103--Panter/Schumacher

Claims 1, 5, 12, 13, 15, and 18–20

Appellant presents the same arguments for independent claims 1 and 12, and does not separately argue dependent claims 5, 13, 15, and 18–20. We select claim 1 as representative of this group of claims, and claims 5, 12, 13, 15, and 18–20 stand or fall with claim 1. Appellant presents additional arguments directed to dependent claims 16 and 17, which we address separately below.

The Examiner relies on Panter as disclosing a wheel hub B having an interiorly threaded bore, and a threaded insert A having an exteriorly threaded surface adapted to mate with the interiorly threaded bore, and a vehicle wheel attachment H. Final Act. 5. The Examiner finds that Panter discloses that the insert has a second exteriorly threaded surface configured to mate with an interiorly threaded surface of vehicle wheel attachment H, in contrast to the claimed insert having an interior thread and the vehicle wheel

attachment having a mating exterior thread. *Id.* The Examiner points out that Panter discloses that the vehicle wheel attachment may be alternatively fixed by other easily removable connections. *Id.*, citing Panter, p. 2, ll. 12–13. Figure 1 of Panter, reproduced below for convenient reference, illustrates the axle and wheel hub bearing assembly, together with the reference letters used in the discussion herein.

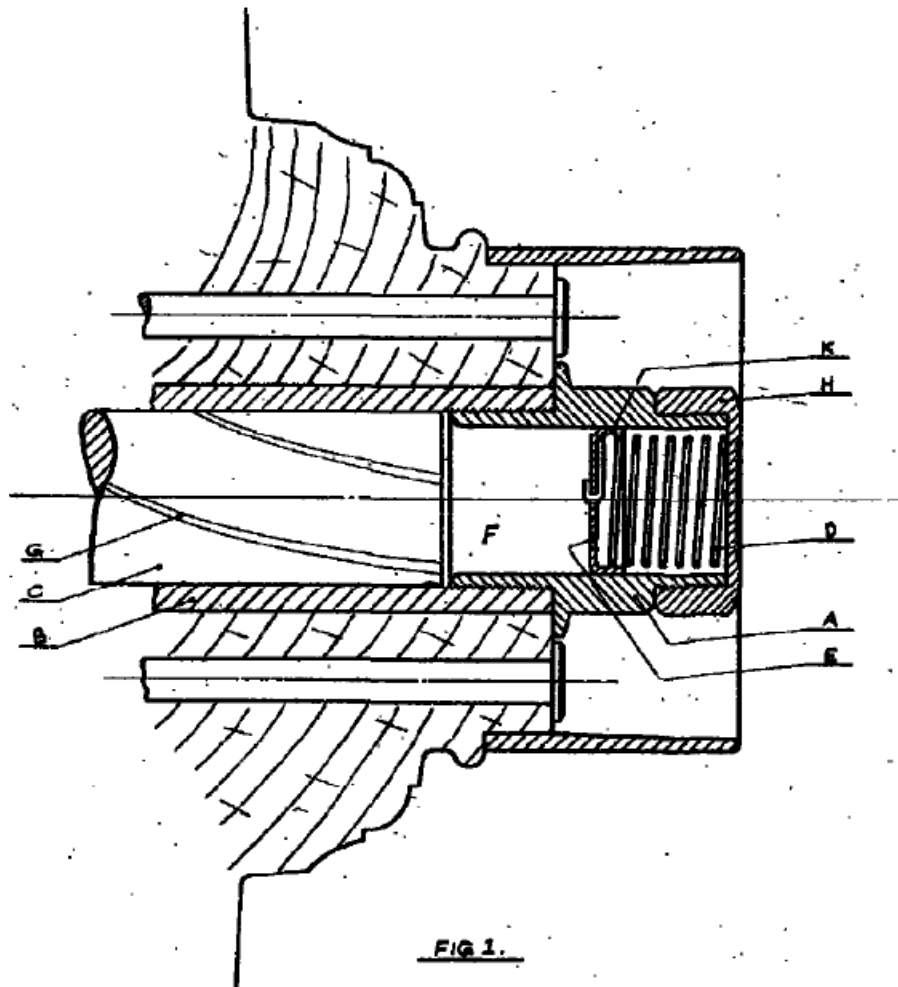


Figure 1 of Panter, above, is a cross-sectional view of a wheel hub bearing assembly.

The Examiner additionally relies on Schumacher as teaching a system and method for connecting a vehicle wheel attachment 142 to a wheel hub

112 via a threaded insert 128, in which the threads of the insert are on an interior surface, with the threads of the mating vehicle wheel attachment being on its exterior surface. Final Act. 5. The Examiner concludes that it would have been obvious to modify Panter in view of the teachings of Schumacher so that the end of the Panter insert that is to couple with the vehicle wheel attachment would include threading on its interior surface, and the vehicle wheel attachment would have mating threads on its exterior surface. *Id.* The Examiner takes the position that this reversal of thread positioning is a well-known alternative connection as evidenced by Schumacher, and would provide predictable results in securing the vehicle wheel attachment to the threaded insert in the Panter arrangement. *Id.* at 5–6.

Appellant first argues that the Schumacher insert is not threaded, but is welded in place, and that the Examiner has not shown “how Schumacher’s exteriorly unthreaded ‘insert’ could be incorporated into Panter’s wheel hub.” Appeal Br. 12. The argument is not responsive to the rejection as articulated, which does not propose to modify Panter to bodily incorporate the Schumacher insert into the Panter construction, as confirmed by the Examiner in the Answer. *See* Ans. 7. The argument is not indicative of error in the rejection.

Appellant argues that the proposed reversal of the positioning of the threads in Panter, such that the insert would include threading on its interior surface, would potentially interfere with free travel of spring D and piston E positioned within the insert, such that “the modification would not be favored by the skilled artisan.” Appeal Br. 13. The argument does not point to error in the rejection. The piston in Panter is located well inboard of the

threaded end portion of the insert, which would remain the case were the threaded connection brought to the interior of the insert. Figure 1 of Panter additionally illustrates ample clearance between spring D and the interior wall of the insert, which clearance would also seemingly remain in the proposed modification. In addition, an unthreaded interior surface of the wheel attachment would overlies the interiorly-disposed insert threads in the proposed modification, and interference with movement of the spring would thus not appear to be an issue.

Appellant additionally argues that the reversal of the position of the threaded sections of the insert and vehicle wheel attachment would provide escape routes for lubricant to travel from space F, around piston E, into space occupied by spring D, thereby likely rendering the Panter construction unsuitable for its intended purpose. Appeal Br. 13. First, as above, the threaded connection in the proposed modification would be well outboard of piston E, provided that the length of the threaded connection remains the same in the modified structure. Thus, the same danger of leakage past piston E exists in both the unmodified and modified Panter constructions. We note as well that, if there is leakage past piston E, the lubricant would find, in both the unmodified and modified constructions, a tortuous path through a threaded connection in order to completely exit the region enclosed by the vehicle wheel attachment.

As such, Appellant's arguments do not apprise us of error in the rejection of claim 1. We sustain the rejection. Claims 5, 12, 13, 15, and 18–20 fall with claim 1.

Claims 16 and 17

Appellant argues, for claims 16 and 17, that the combination of Panter and Schumacher does not disclose or suggest the provision of a plurality of threaded inserts. Appeal Br. 16–17. Having determined that these claims are indefinite, as discussed in the preceding section, we cannot sustain the rejection of these claims under 35 U.S.C. § 103 because to do so would require speculation as to the scope of the claims. *See In re Aoyama*, 656 F.3d 1293, 1300 (Fed. Cir. 2011) (holding that the Board erred in affirming an anticipation rejection of indefinite claims); *In re Steele*, 305 F.2d 859, 862–63 (CCPA 1962) (holding that the Board erred in affirming a rejection of indefinite claims under 35 U.S.C. § 103(a) because the rejection was based on speculative assumptions as to the meaning of the claims). It should be understood, however, that our decision in this regard is based solely on the indefiniteness of the claimed subject matter, and does not reflect on the adequacy of the prior art evidence applied in support of the rejection.

DECISION

The rejection of claims 4, 10, 15, 16, and 17 as being indefinite is affirmed.

The rejection of claims 1, 5, 12, 13, 15, and 18–20 as being unpatentable over Panter and Schumacher is affirmed. The rejection of claims 16 and 17 as being unpatentable over Panter and Schumacher is reversed, pro forma.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
4, 10, 15, 16, 17	112(b)	Indefiniteness	4, 10, 15, 16, 17	
1, 5, 12, 13, 15–20	103	Panter, Schumacher	1, 5, 12, 13, 15, 18–20	16, 17
Overall Outcome			1, 4, 5, 10, 12, 13, 15–20	

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