

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte STEPHEN A. DEBELIUS

Appeal No. 2002-0354
Application No. 09/293,455

HEARD: Feb. 5, 2003

Before KRASS, RUGGIERO, and BARRY, *Administrative Patent Judges*.
BARRY, *Administrative Patent Judge*.

DECISION ON APPEAL

A patent examiner rejected claims 1-4, 6-11, 13-18, 20, and 21. The appellant appeals therefrom under 35 U.S.C. § 134(a). We affirm.

BACKGROUND

The invention at issue on appeal concerns electric motors. In an electric motor, an armature and stator must be aligned to prohibit axial movement or end play of the motor's armature shaft. Excessive axial movement is known to cause noise, vibration, and excessive wear during operation. (Spec. at 2.)

The appellant's electric motor (14) includes an armature shaft (42), which is retained at one end by a retainer (100). Figure 2 of his specification shows that the retainer (100) fits within an enlarged portion (84) of a central bore (82) of a bearing (80). More specifically, the retainer (100) seats on a shoulder (86) of the bearing to register the bearing (80) and a commutator (50).

A further understanding of the invention can be achieved by reading the following claim.

1. An armature shaft comprising:

a shaft having two ends;

a commutator on said shaft;

at least one bearing on said shaft, said bearing adjacent one of said ends of said shaft, said bearing having a central bore sized to support said shaft during rotation, said central bore having an enlarged portion opening towards said one end of said shaft; and

a retainer on said shaft for retaining said bearing on said shaft, said retainer positioned within said enlarged bore portion of said bearing.

Claims 1-4, 7-11, 14-18, and 21 stand rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 3,624,434 ("Dafler") and U.S. Patent No. 4,801,252 ("Wrobel"). Claims 6, 13, and 20 stand rejected under § 103(a) as obvious over Dafler, Wrobel, and U.S. Patent No. 3,829,722 ("Rosenthal").

OPINION

At the outset, we recall that claims that are not argued separately stand or fall together. *In re Kaslow*, 707 F.2d 1366, 1376, 217 USPQ 1089, 1096 (Fed. Cir. 1983) (citing *In re Burckel*, 592 F.2d 1175, 201 USPQ 67 (CCPA 1979)). Here, the appellant stipulates, "[c]laims 1-4, 6 and 7 stand or fall together. Claims 8-11, 13 and 14 stand or fall together. Claims 15-18, 20 and 21 stand or fall together." (Appeal Br. at 3.) Despite the stipulation, he fails to argue the patentability of the claims separately. Therefore, claims 2-4, 6-11, 13-18, 20, and 21 stand or fall with representative claim 1.

With this representation in mind, before addressing the positions of the examiner and the appellant, we find that Wrobel alone would have suggested the limitations in question. "Analysis begins with a key legal question -- *what* is the invention *claimed*?" *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1567, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987). In answering the question, "the Board must give claims their broadest reasonable construction. . . ." *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1668 (Fed. Cir. 2000). "Moreover, limitations are not to be read into the claims from the specification." *In re Van Geuns*, 988 F.2d 1181, 1184, 26 USPQ2d 1057, 1059 (Fed. Cir. 1993) (citing *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)).

Here, claim 1 specifies in pertinent part the following limitations: "said central bore having an enlarged portion opening towards said one end of said shaft; and a retainer on said shaft for retaining said bearing on said shaft, said retainer positioned within said enlarged bore portion of said bearing." Giving the representative claim its broadest, reasonable construction, the limitations require that a retainer fit within an enlarged portion of a central bore of a bearing.

Having determined what subject matter is being claimed, the next inquiry is whether the subject matter would have been obvious. The question of obviousness is "based on underlying factual determinations including . . . what th[e] prior art teaches explicitly and inherently. . . ." *In re Zurko*, 258 F.3d 1379, 1386, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966); *In re Dembiczak*, 175 F.3d 994, 998, 50 USPQ 1614, 1616 (Fed. Cir. 1999); *In re Napier*, 55 F.3d 610, 613, 34 USPQ2d 1782, 1784 (Fed. Cir. 1995)). "A *prima facie* case of obviousness is established when the teachings from the prior art itself would . . . have suggested the claimed subject matter to a person of ordinary skill in the art." *In re Bell*, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (quoting *In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)).

Here, Wrobel discloses a "bearing support [for] the shaft of [a] driving motor." Col. 1, l. 12. "FIG. 3 is a partial cross-sectional view, on an enlarged scale, of a first embodiment of the bearing support. . . ." Col. 2, ll. 3-5. Therein, the "shaft is axially secured in one direction by means of a thrust washer 43 and a retaining ring 44." Col. 3, ll. 41-42. We find that the Figure shows that the reference's thrust washer 43 and retaining ring fit within an enlarged portion of a central bore of a "bearing unit 15." Col. 2, ll. 47-48. Therefore, we are persuaded that teachings from the Wrobel¹ would have suggested the claimed subject matter to a person of ordinary skill in the art.

Turning to the positions of the examiner and the appellant, rather than reiterate those positions *in toto*, we address the two points of contention between the examiner and the appellant. First, the examiner asserts, "Wrobel teaches motivation in that the bearing with the retainer during operation and reduces noise (col. 1, lines 12-22)." (Examiner's Answer at 5-6.) The appellant argues, "the Examiner has failed to provide any motivation as to why one skilled in the art would combine these two references as he has suggested." (Reply Br. at 2.)

¹In sustaining a rejection based on a combination of references, the Board of Patent Appeals and Interferences may rely on only one of the references without the reliance "amount[ing] to rejection on a new ground." *In re Bush*, 296 F.2d 491, 496, 131 USPQ 263,267 (CCPA 1961). See also *In re Boyer*, 363 F.2d 455, 458 n.2, 150 USPQ 441, 444 n.2 (CCPA 1966) ("We think legal support for our reliance on Harris alone, under these circumstances, can be found in *In re Bush*. . .").

“The presence or absence of a motivation to combine references in an obviousness determination is a pure question of fact.” *In re Gartside*, 203 F.3d 1305, 1316, 53 USPQ2d 1769, 1776 (Fed. Cir. 2000) (citing *In re Dembiczak*, 175 F.3d 994, 1000, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999)). “[T]he question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination.” *In re Beattie*, 974 F.2d 1309, 1311-12, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992) (quoting *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1462, 221 USPQ 481, 488 (Fed. Cir. 1984)). “[E]vidence of a suggestion, teaching, or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved. . . .” *Dembiczak*, 175 F.3d at 999, 50 USPQ2d at 1617 (citing *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996); *Para-Ordnance Mfg. v. SGS Imports Int’l, Inc.*, 73 F.3d 1085, 1088, 37 USPQ2d 1237, 1240 (Fed. Cir. 1995)).

Here, we find that evidence of a suggestion, teaching, or motivation to combine flows from the references themselves. Dafler relates to “bearing support . . . for small dynamoelectric machines of the type having a rotor shaft. . . .” Col. 1, ll. 5-8. More specifically, “[a] thrust collar 84 formed by a metal ring having a tight interference fit with the shaft end 76 is press fitted on the terminal section of the shaft end 76.” Col. 4,

II. 12-14. Although the reference does not mention that its thrust collar fits within an enlarged portion of a central bore of bearings, we find that Dafler invites modifications to it embodiment. Specifically, the reference asserts that "other forms may be adopted. . . ." Col. 5, l. 74.

We further find that Wrobel recognize a problem facing bearings. Specifically, "[i]n particular during long periods of operation, at high temperature differences and/or higher rotational speeds, the bearings would become loose in their seats . . . and would cause increasingly operating noises which finally would lead to the requirement that . . . the bearing would have to be exchanged." Col. 1, ll. 15-22.

We also find that the latter reference solves the problem of loose bearings. Specifically, Wrobel constructs a bearing so that "axial play or clearance which results in operation is automatically compensated." *Id.* at ll. 45-46. Besides solving the problem, the reference's invention offers the advantage that "preparation of the assembly with the same is itself simple. . . ." *Id.* at ll. 43-44. We previously found that Wrobel's thrust washer 43 and retaining ring 44 fit within an enlarged portion of a central bore of bearing unit 15. Because Dafler invites modifications to it embodiment, and Wrobel's embodiment solves the problem of loose bearings and simplifies

assembly, we find that a suggestion, teaching, or motivation to combine flows from the references themselves.

Second, the appellant alleges, "to modify Dafler as suggested by Wrobel would most likely render the bearing of Dafler inoperable." (Appeal Br. at 6.) Unfortunately, he does not explain how Dafler would allegedly, "most likely," be rendered inoperable. Moreover, "[w]hat appellant[] overlook[s] is that it is not necessary that the inventions of the references be physically combinable to render obvious the invention under review." *In re Sneed*, 710 F.2d 1544, 1550, 218 USPQ 385, 389 (Fed. Cir. 1983) (citing *Orthopedic Equip. Co. v. United States*, 702 F.2d 1005, 1013, 217 USPQ 193, 200 (Fed. Cir. 1983); *In re Andersen*, 391 F.2d 953, 958, 157 USPQ 277, 281 (CCPA 1968)). See also *In re Nievelt*, 482 F.2d 965, 968, 179 USPQ 224, 226 (CCPA 1972) ("Combining the teachings of references does not involve an ability to combine their specific structures."). The test for obviousness is not whether the features of a reference may be bodily incorporated into the structure of another reference but what the combined teachings of those references would have suggested to one of ordinary skill in the art. *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981).

Here, combining the teachings of Dafler and Wrobel does not involve an ability to combine their specific structures. The appellant's argument overlooks "the relevant

combined teachings of the references." *Andersen*, 391 F.2d at 958, 157 USPQ at 281 (dismissing the argument that a combination would result in an inoperative structure). Therefore, we affirm the rejection of claim 1 and of claims 2-4, 6-11, 13-18, 20, and 21, which fall therewith.

CONCLUSION

In summary, the rejection of claims 1-4, 6-11, 13-18, 20, and 21 under § 103(a) is affirmed. "Any arguments or authorities not included in the brief will be refused consideration by the Board of Patent Appeals and Interferences. . . ." 37 C.F.R. § 1.192(a)(2002). Accordingly, our affirmance is based only on the arguments made in the briefs. Any arguments or authorities not included therein are neither before us nor at issue but are considered waived. No time for taking any action connected with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

ERROL A. KRASS
Administrative Patent Judge

JOSEPH F. RUGGIERO
Administrative Patent Judge

LANCE LEONARD BARRY
Administrative Patent Judge

)
)
)
)
)
) BOARD OF PATENT
) APPEALS
) AND
) INTERFERENCES
)
)
)
)

Appeal No. 2002-0354
Application No. 09/293,455

Page 11

HARNES, DICKEY & PIERCE P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303