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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte BERTRAND LECOINTE

Appeal 2011-012684
Application 12/305,216
Technology Center 1700

Before PETER F. KRATZ, JEFFREY T. SMITH, and
LINDA M. GAUDETTE, *Administrative Patent Judges*.

KRATZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1-17. We have jurisdiction pursuant to 35 U.S.C. § 6.

Appellant's claimed invention is directed to a method of evaluating the dilution ratio of the lubricating oil by fuel in an internal combustion engine. Claim 1 is illustrative and reproduced below:

1. A method for evaluating the dilution ratio of the lubricating oil of an internal-combustion engine operating with a fuel containing at least a biofuel part, wherein the radioactivity of an oil sample is measured so as to subsequently evaluate the ratio of dilution of the oil by the fuel, characterized in that it comprises carrying out at least one measurement of the radioactivity of at least one of the constituents of the biofuel contained in the oil sample.

The Examiner relies on the following prior art references as evidence in rejecting the appealed claims:

Stein	US 4,249,491	Feb. 10, 1981
Dequenne (Dequenne '240)	FR 2,864,240	Jun. 24, 2005
Dequenne (Dequenne '161)	US 2007/0150161 A1	Jun. 28, 2007

Buchholz, B.A. et al. "Quantifying the Contribution of Lubrication Oil Carbon to Particulate Emissions from a Diesel Engine," Society of Automotive Engineers, JSAE20030100, vol. 01, No. 1987, (January 31, 2003).

The Examiner maintains the following grounds of rejection:

Claims 1-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dequenne[1] in view of Buchholz. Claims 12-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dequenne in view of Buchholz and Stein.

[1] The Examiner employs Dequenne '161 as an English language equivalent for purposes of translating the applied Dequenne '240. Accordingly, we employ Dequenne '161 as an English language translation of the applied reference (Dequenne '240). It follows that our citation references to Dequenne are directed to Dequenne '161.

We affirm the stated rejections.

Concerning the first stated rejection, Appellant argues the rejected claims together as a group (App. Br.4-6). Thus, we select claim 1 as the representative claim on which we decide this appeal as to this ground of rejection.

It is not disputed that Dequenne discloses a method of evaluating the dilution of an engine lubricating oil with a fuel containing a radioactive material (tracer) by measuring the radioactivity emitted by a sample of the oil diluted with the fuel and calculating, using a computer, the rate of dilution of the oil by the fuel based on these measurements (Ans. 3; App. Br. 4; Dequenne, abstract, ¶ ¶ 0001, 0011-0014, 0023, and 0028).

The Examiner has found that the representative claim 1 method differs from Dequenne by requiring that the fuel that is used includes at least a biofuel part, which biofuel part contains a radioactive constituent that is measured (Ans. 3-4). Concerning this difference, the Examiner turns to Buchholz for teaching that biofuel includes carbon 14, a measurable radioisotope, in amounts three orders of magnitude greater than found in conventional lubricating oil (Ans. 4; Buchholz, p.2, ¶ 2). In this regard, the Examiner has found without dispute that "it is well known that biofuels contain safe levels of ^{14}C . . ." (*Id.* 4; *see generally* App. Br.). Moreover, the Examiner has reasonably determined that the use of ^{14}C as a measurable isotope avoids "the need for the production and disposal of radiotracers" (Ans. 4).

Based, *inter alia*, on the aforementioned findings, the Examiner has reasonably determined that "it would have been obvious to one of ordinary

skill in the art at the time of the invention to replace the tracer addition of Dequenne by using the biofuel of Buchholz" (Ans. 4).

Appellant contends that (a) Dequenne does not disclose using biofuel, (b) Buchholz does not disclose evaluation of the dilution of an engine oil by the fuel, and, (c) one of ordinary skill in the art would not have an apparent reason to employ biofuel as disclosed by Buchholz as at least part of the fuel in Dequenne's engine and measuring the lubricating oil dilution ratio of Dequenne by using the biofuel's radioisotope ^{14}C content for the radioactive material needed by Dequenne for such measurement (App. Br. 5 and 6).

Based on the combined teachings of the applied references, as discussed above and in the Examiner's Answer, we are not persuaded of substantive error in the Examiner's rationale for using the ^{14}C content of biofuel, as known to be already present therein, as the radioactive material of Dequenne by this argument. In particular, Dequenne teaches or suggests that the radioactive material employed therein should be compatible with the fuel and/or lubricating oil (¶ 0023). One of ordinary skill in the art would have readily recognized that employing a known and naturally present radioactive component (^{14}C) of a biofuel (*see* Buchholz) as the radioactive tracer component in Dequenne's process would have merely been matching a source with a need and would have been attended by expected results.

Moreover, it is our view that Appellant's oversimplify or misconstrue the Examiner's rationale for the proposed modification in addressing the Examiner's use of the term "simpler" as appears in the second paragraph of page 2 of Buchholz (Reply Br. 2; Ans. 4, 6 and 7). In this regard and as disclosed in the aforementioned paragraph 2 of page 2 of Buchholz, Buchholz makes it plain to an ordinarily skilled artisan that the "simpler

approach" that is first discussed with reference to the use of a bio-derived hydrocarbon as a lube oil would apply to the disclosed alternative where the lube oil is a conventional one and the fuel is bio-derived; that is, the fuel is a biofuel or has a biofuel component.

Hence, a person having ordinary skill in the art would have had good reason to apply the teachings of Buchholz with respect to the known radioactive ^{14}C content of a biofuel to Dequenne by using such a biofuel as at least a part of the fuel of Dequenne with its ^{14}C content being used as the desired radioactive tracer component of the fuel of Dequenne for measuring the dilution of the lubricating oil by the fuel as otherwise taught by Dequenne.

After all, the Supreme Court stated that "[w]hen a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one." *KSR Int'l Co. v. Teleflex Inc.,* 550 U.S. 398, 416 (2007). According to *KSR*, "[i]f a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability." *Id.* Moreover, it is instructive to remember that a person of ordinary skill in the art has been held to be a person of ordinary creativity, not an automaton. *Id.* at 421.

We therefore affirm the Examiner's first stated rejection on this record.

As for the Examiner's second stated obviousness rejection pertaining to dependent claims 12-17 further relying on the teachings of Stein, Appellant relies on substantially the same arguments as made against the base rejection and does not contest this separate rejection on the bases for which the Examiner relies on Stein (App. Br. 6). It follows that we shall

likewise affirm the Examiner's second stated obviousness rejection on this record.

ORDER

The Examiner's decision to reject the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136.

AFFIRMED

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