

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BRUCE W. PAGE

Appeal 2006-2404
Application 10/884,619
Technology Center 1700

Decided: September 28, 2006

Before GARRIS, WALTZ, and GAUDETTE, *Administrative Patent Judges*.

WALTZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal from the Primary Examiner's Final Rejection of claims 1 through 7, which are the only claims pending in this application. We have jurisdiction pursuant to 35 U.S.C. § 134.

According to Appellant, the invention is directed to a method of removing methyl tertiary butyl ether (MTBE) from an aqueous solution by passing the solution through a counter-current air stripper packed with open

spherical balls having internal ribs (Br. 2).¹ Claims 1 and 7 are illustrative of the invention and are reproduced below:

1. A method of removing MTBE from an aqueous solution comprising providing a counter-current air stripper in the form of a substantially cylindrical column, said substantially cylindrical column having a top and a bottom, a substantially circular cross section, longitudinal axis, inlet for said aqueous solution proximate said top and inlet for air proximate said bottom such that said aqueous solution is caused to gravitationally fall within said column and said air is caused to rise within said column counter-current thereto, said column being at least partially packed with open spherical balls having internal ribs.

7. A method of removing MTBE from an aqueous solution comprising providing a counter-current air stripper in the form of a substantially cylindrical packed column, said substantially cylindrical column having a top and a bottom, a substantially circular cross section, longitudinal axis, inlet for said aqueous solution containing MTBE proximate said top and inlet for air proximate said bottom such that said aqueous solution is caused to gravitationally fall within said column and said air is caused to rise within said column counter-current thereto, said column being operated at approximately 100-200 millibars of pressure resulting in substantial removal of MTBE from said aqueous solution.

The Examiner, in addition to Appellant's admitted prior art (AAPA), has relied upon Wasinger, U.S. 6,197,206, issued Mar. 6, 2001, as evidence of obviousness.

Claims 1-7 stand rejected under 35 U.S.C. § 112, second paragraph, "as failing to set forth the subject matter which applicant(s) regard as their invention" (Answer 2). Claims 1-7 also stand rejected under 35 U.S.C.

¹ We refer to and cite from the amended Appeal Brief dated Mar. 3, 2006. This Brief does not number the pages. Therefore, we refer to the pages as numbered from the first page containing the "Real Party in Interest."

§ 103(a) as unpatentable over the combined teachings of Wasinger and the AAPA (*id.*).

We REVERSE the rejections of claims 1-6 under both § 112, second paragraph, and § 103(a) essentially for the reasons stated in the Brief, as well as those reasons set forth below. We AFFIRM the rejections of claim 7 under both § 112, second paragraph, and § 103(a) for the reasons stated below. Accordingly, the decision of the Examiner is AFFIRMED-IN-PART.

OPINION

A. The Rejection under § 112, second paragraph

The Examiner submits evidence that claims 1-7 fail to correspond in scope with that which Appellant regards as the invention, referring to the statement by Appellant in the Paper dated Oct. 17, 2003 (Answer 2). Accordingly, the Examiner finds that Appellant “has not claimed all of the specific limitations that would limit the invention to the use of only Jaeger Tri-Packs” (*id.*).

Appellant argues “that the specification in referring to Jaeger Tri-Packs is nothing more than an example of a commercially available material providing ‘open spherical balls having internal ribs’ and that the citation to these commercial products should not be considered limiting” (Br. 5). Appellant notes that the Summary of the Invention and the claims, as originally filed, are not so limited (*id.*).

If the scope of the subject matter embraced by a claim is clear, and if the Appellant has not otherwise indicated that he intends the claims to be of a different scope, then the claim does particularly point out and distinctly claim the subject matter which the Appellant regards as his invention. *See*

In re Cormany, 476 F.2d 998, 1000-02, 177 U.S.P.Q. 450, 451-53 (C.C.P.A. 1973); *In re Borkowski*, 422 F.2d 904, 909, 164 U.S.P.Q. 642, 645-46 (C.C.P.A. 1970); and *In re Prater*, 415 F.2d 1393, 1404, 162 U.S.P.Q. 541, 550 (C.C.P.A. 1969). On the facts in this record, we agree with Appellant that the invention is using “open spherical balls having internal ribs” as the packing material in a counter-current air stripper, with Jaeger Tri-Packs exemplary of this type of packing. The statement quoted by the Examiner (Answer 2) merely reiterates this same fact, namely that the stripper must employ spherical balls as packing, as exemplified by packing known as Jaeger Tri-Packs. As correctly argued by Appellant, support for this fact resides throughout the original specification and claims. See the “Summary of the Invention” (Specification 5, ll. 24-25) and original Claim 1. Although Appellant teaches that the selection of the packing is “critical to the performance of an air stripper,” the specification clearly is not limited to Jaeger Tri-Packs (Specification 6, l. 16). Accordingly, we determine that the Examiner has not met the burden of proof in establishing that Appellant intends the claims to be of a different scope. Therefore, we cannot sustain the rejection of claims 1-6 under the second paragraph of § 112.

The subject matter of claim 7 presents a different issue. As discussed above, we agree with Appellant that the invention is regarded as the use of “open spherical balls with internal ribs” as packing in a counter-current air stripper to remove MTBE from an aqueous solution. However, claim 7 recites that the air stripper contains a “packed column” but never specifies what packing is employed (see claim 7, l. 2). Appellant recognizes that claim 7 does not restrict the packing material to the open spherical balls having internal ribs (Br. 2-3). However, this summary of claim 7 is

contradicted by Appellant's arguments concerning what the "invention" is in this application (Br. 5-7), as well as Appellant's previous remarks (see the Paper dated Oct. 17, 2003) and the original specification and claims. Furthermore, Appellant discloses that the "concept" recited by claim 7, namely operating a packed tower counter-current stripper under a total pressure of 100 to 200 millibars, was known (Specification 7, ll. 12-14). Accordingly, the evidence on this record establishes that Appellant has indicated that he intends claim 7 to be of a different scope. Therefore, the rejection of claim 7 under § 112, second paragraph, is AFFIRMED.

B. The Rejection under § 103(a)

The Examiner finds that Wasinger teaches air stripping of MTBE from groundwater but fails to disclose the use of "open spherical balls having internal ribs" as packing (Answer 2). The Examiner relies on the AAPA at pages 6-7 of the specification for the teaching of employing Jaeger Tri-Packs as packing in the environmental field to achieve high removal efficiencies (Answer 3). From these findings, the Examiner concludes that it would have been obvious to one of ordinary skill in this art at the time of the invention to employ column packing materials that were "the standard in the U.S. environmental field" when stripping MTBE from contaminated groundwater in the process of Wasinger in order to obtain very high removal efficiencies and to avoid the known problem of "bridging" (*id*).

Appellant argues that Wasinger not only fails to disclose the claimed open spherical balls having internal ribs but does not employ the claimed method of counter-current air stripping and further requires the use of ozone as a necessary constituent in removing MTBE from water (Br. 8). Appellant

argues that there is not enough in Wasinger when viewed in light of the AAPA to support the conclusions reached by the Examiner (*id.*).

We agree with the Examiner that Wasinger discloses air stripping of MTBE from groundwater (see Fig. 1; col. 3, ll. 39-65). Since the inlet for the air/ozone treated water of the Wasinger process is near the top of the column and the remaining gas/air escapes from the top of this column, one of ordinary skill in this art would have presumed that the air stripping is counter-current, with air/ozone entering at the bottom of the column, and that packing material at least partially filled the column (Wasinger, Fig. 1; and col. 4, ll. 12-17). Appellant also admits that counter-current air stripping of groundwater contaminated with MTBE was known in the art (Specification 4-5). However, it is incumbent upon the Examiner, when combining references, to establish some reasoning, suggestion or motivation suggesting the desirability of the proposed combination. *See In re Jones*, 958 F.2d 347, 351, 21 U.S.P.Q.2d 1941, 1943 (Fed. Cir. 1992). “[T]here must be some logical reason apparent from positive, concrete evidence of record which justifies a combination of primary and secondary references.” *In re Regel*, 526 F.2d 1399, 1403 n.6, 188 U.S.P.Q. 136, 139 n.6 (C.C.P.A. 1975). On this record, we determine that the Examiner has not established convincing reasoning supporting the proposed combination of references. The general statement in the AAPA that Jaeger Tri-Packs “became the standard in the U.S. environmental field where very high removal efficiencies were often necessary” does not provide the requisite motivation to employ such packing in the specific process of Wasinger, especially since Wasinger uses the pressurized tank 17 and air/ozone microbubbling to remove MTBE from water while employing the air stripper to drive the

residual ozone from the water (Fig. 1; col. 3, ll. 59-65; and col. 4, ll. 7-11). Any showing of a suggestion or motivation must be clear and particular, not general statements. *See In re Dembiczaik*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999).

For the foregoing reasons, we determine that the Examiner has not established a *prima facie* case of obviousness in view of the reference evidence. Therefore, we REVERSE the rejection of claims 1-6 under 35 U.S.C. § 103(a) over the combined teachings of Wasinger and AAPA.

As noted above, the scope of claim 7 presents a different issue. As discussed above, the process disclosed by Wasinger presumably employs counter-current air stripping of an aqueous solution of MTBE with a packed column. As correctly found by the Examiner (Answer 3), the pressure taught by Wasinger for the pressurized contact tank is approximately the same as the claimed pressure and would presumably have been employed by the artisan in the subsequent air stripping. Additionally, we note that Appellant admits that use of various pressures for the air stripper was known in the art, as was the specifically claimed pressure range (Specification 4-5 and 7). Therefore, from the combined teachings of Wasinger and AAPA, we determine that every limitation of claim 7 on appeal would have been suggested to one of ordinary skill in this art. Accordingly, the rejection of claim 7 under 35 U.S.C. § 103(a) over the combined teachings of Wasinger and AAPA is AFFIRMED.

C. Summary

The rejection of claims 1-6 under 35 U.S.C. § 112, second paragraph, is REVERSED. The rejection of claim 7 under 35 U.S.C. § 112, second paragraph, is AFFIRMED.

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The rejection of claims 1-6 under 35 U.S.C. § 103(a) over Wasinger and AAPA is REVERSED. The rejection of claim 7 under 35 U.S.C. § 103(a) over Wasinger and AAPA is AFFIRMED.

The decision of the Examiner is AFFIRMED-IN-PART.

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-IN-PART

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