UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LARRY WAYNE PAYNE

Appeal 2008-4850
Application 11/325,280
Technology Center 1600

Decided: December 8, 2008

Before DONALD E. ADAMS, RICHARD M. LEBOVITZ, and MELANIE L. McCOLLUM, *Administrative Patent Judges*.

ADAMS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal under 35 U.S.C. § 134 involves claims 29, 30, 33, and 34, the only claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

STATEMENT OF THE CASE

The claims are directed to a phenol composition. Claims 29 and 30 are illustrative:

29. A phenol composition made by a method comprising purifying a phenol product, comprising phenol and a contaminating concentration of an hydroxyketone, by contacting, under suitable contacting conditions, said phenol product with a treatment catalyst consisting essentially of alumina and a Group VIA metal.

30. A high purity phenol composition, comprising:
at least 95 weight percent phenol and less than 5 ppmw benzofuran wherein the phenol composition has been treated with a catalyst having a low silica content and comprises alumina and a Group VIA metal.

The Examiner relies on the following prior art references to show unpatentability:

Keeble	US 3,029,294	Apr. 10, 1962
Larson	US 3,454,653	Jul. 8, 1969

The rejections as presented by the Examiner are as follows:

1. Claim 29 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Keeble.
2. Claim 29 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Larson.
3. Claims 29, 30, 33, and 34 stand rejected under 35 U.S.C § 103(a) as unpatentable over the combination of Keeble and Larson.

We affirm.

FINDINGS OF FACT

1. Claim 29 is drawn to a phenol composition of undefined purity. The claim requires the phenol composition to be made by contacting the composition, under suitable conditions, with a treatment catalyst consisting essentially of alumina and a Group VIA metal.

2. Appellant does not dispute and therefore concedes to the Examiner's finding that Keeble teaches the purification of phenol containing an α-hydroxy carbonyl compound contaminate using an alumina catalyst (Ans. 4).

3. Appellant does not dispute and therefore concedes to the Examiner's finding that Larson teaches a phenol composition comprising carbonyl contaminants which is treated with a catalyst consisting of alumina and a Group VI metal oxide (*id.*).

4. Claim 30 is drawn to a high purity phenol composition. The claim requires the phenol composition to comprise at least 95 weight percent phenol and less than 5 ppmw benzofuran. In addition, the claim states that the phenol composition has been treated with a catalyst having a low silica content that comprises alumina and a Group VIA metal.

Appellant's Specification defines the term "low silica content" to mean

> that the amount of silica in the treatment catalyst composition is at a sufficiently low concentration so as to provide a treatment catalyst having desired catalytic properties for the inventive process. That is to convert the hydroxyketone contaminants of the phenol product stream without the formation of significant quantities of benzofurans. Such a concentration of silica is less than about 25 weight percent of the total weight of the treatment catalyst composition.

(Spec. 4: 28 - 5: 5.)

5. Appellant does not dispute and therefore concedes that the combination of Keeble and Larson teach a high purity phenol composition comprising at least 95 weight percent phenol and less than 5 ppmw benzofuran.

LEGAL PRECEDENT

On appeal to this Board, Appellant must show that the Examiner has not sustained the required burden.[1]

Arguments not made are waived. *See* 37 C.F.R. § 41.37(c)(1)(vii) ("Any arguments or authorities not included in the brief or a reply brief ... will be refused consideration by the Board, unless good cause is shown.").

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). Analysis of whether a claim is patentable over the prior art under 35 U.S.C. § 102 begins with a determination of the scope of the claim. We determine the scope of the claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech.*

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[1] *See* (1) *Ex parte Yamaguchi*, Appeal 2007-4412, slip op. at 5 and 23 (Bd. Pat. App. & Int. Aug. 29, 2008); (2) *Ex parte Fu*, Appeal 2008-0601, slip op. at 5 and 20 (Bd. Pat. App. & Int. Mr. 31, 2008); (3) *Ex parte Catan*, Appeal 2007-0820, slip op. at 3 and 21 (Bd. Pat. App. & Int. Jul. 3, 2007) and (4) *Ex parte Smith*, Appeal 2007-1925, slip op. at 4, 9 and 23 (Bd. Pat. App. & Int. Jun. 25, 2007). Opinions in support of the decisions in these four appeals are (a) precedential opinions of the Board and (b) available on the USPTO website.

Ctr., 367 F.3d 1359, 1364 (Fed. Cir. 2004). The properly interpreted claim must then be compared with the prior art.

"It is well settled that a prior art reference may anticipate when the claim limitations not expressly found in that reference are nonetheless inherent in it. Under the principles of inherency, if the prior art necessarily functions in accordance with, or includes, the claimed limitations, it anticipates." *In re Cruciferous Sprout Litig.,* 301 F.3d 1343, 1349 (Fed. Cir. 2002) (citations and internal quotation marks omitted).

"[A] prima facie case of anticipation [may be] based on inherency." *In re King,* 801 F.2d 1324, 1327 (Fed. Cir. 1986). Once a prima facie case of anticipation has been established, the burden shifts to the Appellant to prove that the prior art product does not necessarily or inherently possess the characteristics of the claimed product. *In re Best,* 562 F.2d 1252, 1255 (CCPA 1977) ("Where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the Patent and Trademark Office can require [an] applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product."). *See also In re Spada,* 911 F.2d 705, 708-09 (Fed. Cir. 1990).

"[A]nticipation is the epitome of obviousness." *In re McDaniel*, 293 F.3d 1379, 1385 (Fed. Cir. 2002).

"The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1740 (2007).

Anticipation over Keeble:

ISSUE

Does the evidence support a conclusion that Keeble's phenol composition is the same as Appellant's claimed phenol composition?

ANALYSIS

Appellant does not dispute the Examiner's finding that Keeble teaches the purification of phenol containing an α-hydroxy carbonyl compound contaminate using an alumina catalyst (FF 2). Arguments not made are waived. *See* 37 C.F.R. § 41.37(c)(1)(vii). Instead, Appellant contends that "Keeble does not disclose a catalyst consisting essentially of alumina and a Group VIA metal" (App. Br. 4). We are not persuaded. Keeble teaches a phenol composition (FF 2). "Where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product." *In re Best,* 562 F.2d at 1255; *see also In re Spada,* 911 F.2d at 708-09. Appellant failed to establish that Keeble's phenol composition produced using an alumina catalyst is different from the phenol composition set forth in claim 29.

CONCLUSION OF LAW

The preponderance of the evidence on this record supports a conclusion that Keeble's phenol composition is inherently the same as Appellant's claimed phenol composition.

The rejection of claim 29 under 35 U.S.C. § 102(b) as being anticipated by Keeble is affirmed.

Anticipation over Larson:

ISSUE

Does the evidence support a conclusion that Larson's phenol composition is the same as Appellant's claimed phenol composition?

ANALYSIS

Appellant does not dispute the Examiner's finding that Larson teaches the purification of phenol containing an α-hydroxy carbonyl compound contaminate using an alumina catalyst (FF 3). Arguments not made are waived. *See* 37 C.F.R. § 41.37(c)(1)(vii). Instead, Appellant contends that Larson's "catalyst does not 'consist essentially of alumina and a Group VIA metal" (App. Br. 4). We are not persuaded. Larson teaches a phenol composition (FF 3). "Where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product." *In re Best,* 562 F.2d at 1255; *see also In re Spada,* 911 F.2d at 708-09. Appellant failed to establish that Larson's phenol composition produced using a catalyst consisting of alumina and a Group VI metal oxide is different from the phenol composition set forth in claim 29.

CONCLUSION OF LAW

The preponderance of the evidence on this record supports a conclusion that Larson's phenol composition is inherently the same as Appellant's claimed phenol composition.

The rejection of claim 29 under 35 U.S.C. § 102(b) as being anticipated by Larson is affirmed.

Obviousness:

Appellant provides separate arguments for the following two groups of claims (I) claim 29 and (II) claims 30, 33, and 34. Therefore, we limit our discussion to claims 29 and 30. 37 C.F.R. § 41.37(c)(1)(vii).

Claim 29:

ISSUE

Based on the combined teaches of Keeble and Larson (FF 2 and 3), the Examiner concludes that it would have been prima facie "obvious for one of ordinary skill in the art at the time of the present invention to prepare . . . a phenol composition as set forth in the claims" (Ans. 6).

Appellant contends that "[t]here is no teaching or suggestion in the cited references of a phenol composition that has been treated with a catalyst in accordance to the present invention" (App. Br. 4).

Does the evidence support a conclusion that Keeble and Larson alone, or in combination, teach a phenol composition that is the same as Appellant's claimed phenol composition?

ANALYSIS

For the reasons set forth above, we find that claim 29 is anticipated by each of Keebler and Larson. Anticipation is the epitome of obviousness. *In re McDaniel*, 293 F.3d at 1385.

CONCLUSION OF LAW

The preponderance of the evidence on this record supports a conclusion that Keebler or Larson alone teach a phenol composition that is the same as Appellant's claimed phenol composition.

The rejection of claim 29 under 35 U.S.C § 103(a) as unpatentable over the combination of Keeble and Larson is affirmed.

Claim 30:

ISSUE

Does the combination of Keeble and Larson teach a high purity phenol composition that comprises at least 95 weight percent phenol and less than 5 ppmw benzofuran?

ANALYSIS

We are not persuaded by Appellant's contention that "[t]here is no teaching or suggestion in the cited references of a phenol composition that has been treated with a catalyst in accordance . . . [with] the present invention" (App. Br. 4). Appellant does not dispute and therefore concedes that the combination of Keeble and Larson teach a high purity phenol composition comprising at least 95 weight percent phenol and less than 5

ppmw benzofuran (FF 5). Arguments not made are waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

As the Examiner explains "[t]he use of the two differen[t] catalysts appears to be interchangeable, while the reaction forming the phenol remains the same. Thus, it would appear that the composition of the art would be of the same level of purity as the instantly claimed [highly purified phenol composition]" (Ans. 9). "Where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product." *In re Best,* 562 F.2d at 1255. Appellant failed to establish that a phenol composition produced by the combination of Keeble and Larson is different from the phenol composition set forth in claim 30.

CONCLUSION OF LAW

The preponderance of the evidence on this record supports a conclusion that the combination of Keeble and Larson teaches a high purity phenol composition that comprises at least 95 weight percent phenol and less than 5 ppmw benzofuran.

The rejection of claim 30 under 35 U.S.C § 103(a) as unpatentable over the combination of Keeble and Larson is affirmed. Claims 33 and 34 fall together with claim 30.

CONCLUSION

In summary, we affirm the rejections of record.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

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