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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOHN KAARTO, ALECHIA CROWN,
LI-MIN TAU, and GERT J. CLAASEN

Appeal 2015-003989
Application 12/859,499
Technology Center 1700

Before CHUNG K. PAK, JEFFREY T. SMITH, and
WESLEY B. DERRICK, *Administrative Patent Judges*.

PAK, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants¹ appeal under 35 U.S.C. § 134(a) from the Examiner's decision finally rejecting claims 1 through 6, 8 through 13, and 18.² We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM-IN-PART.

¹ Appellants identify the Real Party in Interest as Braskem America, Inc. (Appeal Brief filed August 25, 2014 (“App. Br.”), 1.)

² Final Office Action entered March 25, 2015 (“Final Act.”).

APPEALED SUBJECT MATTER

The subject matter on appeal is directed to, *inter alia*, a polypropylene impact copolymer composition comprising a matrix phase and a dispersed phase that comprises a propylene/alpha-olefin copolymer having from 6 to 40 mol percent of units derived from ethylene or C₄-C₁₀ alpha olefins. (Spec. 1, ll. 3–10.) Details of the appealed subject matter are recited in representative claim 1, which is reproduced below from the Claims Appendix to the Appeal Brief:

1. A polypropylene impact copolymer composition comprising:
 - a) from 60 to 90 percent by weight of the impact copolymer composition of a matrix phase, said matrix phase comprising a homopolymer polypropylene or random polypropylene copolymer having from 0.1 to 7 mol percent of units derived from ethylene or C₄-C₁₀ alpha olefins; and
 - b) from 10 to 40 percent by weight of the impact copolymer composition of a dispersed phase, said dispersed phase comprising a propylene/alpha-olefin copolymer having from 6 to 40 mol percent of units derived from ethylene or C₄-C₁₀ alpha olefins, wherein the dispersed phase has a comonomer content which is greater than the comonomer content in the matrix phase, wherein the impact copolymer is characterized by having a beta/alpha (β/α) ratio of 0.9 or less,

$$\text{with } \beta/\alpha = \frac{(MFR_1/MFR_2)^{0.213} - 1}{(F_c/100)} + 1$$

where MFR₁ is the first reactor (matrix phase only), MFR₂ is the second reactor (overall impact copolymer), and F_c is the

percent by weight of the dispersed phase in the impact copolymer composition,

the polypropylene impact copolymer composition further characterized as having a melt flow rate in the range of from 25 to 65 g/10 min.

(App. Br. 7, Claims Appendix.)

REJECTIONS

Appellants seek review of the following grounds of rejection maintained by the Examiner in the Answer entered on December 19, 2014 (“Ans.”):

Claims 1–6, 8–11, and 18 under 35 U.S.C. § 103(a) as unpatentable over the disclosure of U.S. Patent 6,197,886 B1, issued in the name of Chatterjee et al. on March 6, 2001 (hereinafter referred to as “Chatterjee”)³;

Claims 12 and 13 under 35 U.S.C. § 103(a) as unpatentable over the disclosure of Chatterjee in view of U.S. Patent application publication 2006/0173132 A1, published in the name of Mehta et al. on August 3, 2006 (hereinafter referred to as “Mehta”)⁴; and

³ The statement of this rejection is set forth in the Non-Final Office Action entered December 18, 2013, and is incorporated by reference into the Final Office Action entered March 25, 2014, from which the instant appeal was taken.

⁴ The statement of this rejection is set forth in the Non-Final Office Action entered December 18, 2013, and is incorporated by reference into the Final Office Action entered March 25, 2014, from which the instant appeal was taken.

Claims 1, 11, and 12 provisionally rejected for non-statutory, obviousness-type double patenting over claims 1, 15, and 16, respectively, of copending application 12/859,500 filed August 19, 2010.⁵

DISCUSSION

Upon consideration of the evidence on this appeal record in light of the arguments advanced by the Examiner and Appellants, we concur with Appellants that the Examiner does not carry the burden of establishing a prima facie case of obviousness regarding the subject matter recited in claims 1–6, 8–13, and 18 within the meaning of 35 U.S.C. § 103(a). Accordingly, we reverse the Examiner’s § 103(a) rejections of these claims for the reasons set forth in the Appeal and Reply Briefs, but affirm the Examiner’s provisional rejection of claims 1, 11, and 12 for non-statutory, obviousness-type double patenting for the reasons set forth in the December 16, 2011, Office Action and the Answer. We add the discussion below primarily for emphasis and completeness.

Rejections under 35 U.S.C. § 103(a)⁶

The Examiner has the burden of establishing a prima facie case of obviousness regarding the subject matter recited in the claims on appeal. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992) (“[The] [patent] examiner

⁵ The statement of this rejection is set forth in the Non-Final Office Action entered December 16, 2011, and the rejection was maintained in the Final Office Action entered March 25, 2014, from which the instant appeal was taken.

⁶ For the purposes of this appeal, we select claim 1 as representative, which is the broadest of claims 1–6, 8–13, and 18, and decide the propriety of the rejections under 35 U.S.C. § 103(a) based on claim 1 alone.

bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability.”); *see also In re Jung*, 637 F.3d 1356, 1365–66 (Fed. Cir. 2011) (explaining that while “the applicant must identify to the Board what the examiner did wrong, . . . the examiner retains the burden to show invalidity”).

The Examiner finds that Chatterjee discloses impact copolymers comprising a propylene homopolymer phase that may contain up to 5% by weight of a comonomer, such as ethylene (corresponding to the matrix phase recited in claim 1) and 25% to 60% of an ethylene/propylene copolymer rubber phase (corresponding to the disperse phase recited in claim 1). (Dec. 18, 2013 Office Act. 3.) The Examiner acknowledges that Chatterjee does not disclose that the rubber (dispersed) phase has an ethylene content of 6 to 40 mole percent as recited in claim 1, but the Examiner finds that Chatterjee teaches that reducing the ethylene content of the rubber phase reduces the tensile strength of the impact copolymers. (Dec. 18, 2013 Office Act. 4.) The Examiner determines that the ethylene content of the rubber phase is therefore a known, result-effective variable that can be optimized through routine experimentation. (Ans. 3.) The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to decrease the ethylene content of the rubber phase of the impact copolymers disclosed in Chatterjee for applications in which reduced tensile strength is desired. (Dec. 18, 2013 Office Act. 4; Ans. 3.)

However, we agree with Appellants that the Examiner fails to establish *prima facie* obviousness for at least the following reasons. Chatterjee discloses impact copolymers having a propylene homopolymer phase combined with a propylene/ethylene copolymer rubber phase that has

an ethylene content of about 78 to about 95 percent *by weight*. (Chatterjee col. 1, ll. 28–32.) The Examiner does not question Appellants’ determination that 78 to 95 percent by weight of ethylene in the rubber phase of the impact copolymers disclosed in Chatterjee corresponds to 82 to 97 mole percent ethylene, which is significantly outside the range of 6 to 40 mole percent recited in claim 1. (*Compare* Ans. 3–5, *with* App. Br. 4.)

As the Examiner points out, Chatterjee also discloses that increasing the ethylene content in the rubber phase of the impact copolymers increases the modulus of the copolymers, thus recognizing that the ethylene content in the rubber phase is a result-effective variable that can be optimized. (Dec. 18, 2013 Office Act. 4; Chatterjee col. 4, ll. 13–15; col. 8, ll. 32–34.) However, Chatterjee discloses that the ethylene content of the rubber phase is preferably between about 80 weight percent to about 84 weight percent, and Figures in Chatterjee illustrate that the properties of the impact copolymers can be rendered inferior if the ethylene content is reduced below the disclosed range of about 78 to about 95 weight percent. (Chatterjee col. 1, ll. 53–56; Figs. 1–10.) Thus, Chatterjee teaches that the optimum ethylene content in the rubber phase lies within the disclosed range of about 78 to about 95 percent by weight (82 to 97 mole percent). (Chatterjee col. 1, ll. 53–56.) *In re Sebek*, 465 F.2d 904, 907 (CCPA 1972) (“Where, as here, the prior art disclosure suggests the outer limits of the range of suitable values, and that the optimum resides within that range, and where there are indications elsewhere that in fact the optimum should be sought within that range, the determination of optimum values outside that range may not be obvious.”) On this record, the Examiner does not identify any disclosure in Chatterjee, which provides any apparent reason or suggestion to decrease the

amount of ethylene in the rubber (dispersed) phase of the impact copolymers significantly below the disclosed range of about 78 to about 95 weight percent (82 to 97 mole percent) to arrive at 6 to 40 mole percent, as recited in claim 1.

Under these circumstances, we find that the teaching in Chatterjee relied upon by the Examiner would not have suggested a polypropylene impact copolymer composition comprising a dispersed (rubber) phase comprising a propylene/alpha-olefin copolymer having 6 to 40 mol percent of units derived from ethylene or C₄-C₁₀ alpha olefins as recited in claim 1. Accordingly, we are constrained to reverse the Examiner's rejections of claims 1-6, 8-13, and 18 under 35 U.S.C. § 103(a).

Provisional Rejection of Claims 1, 11, and 12 for Non-statutory,
Obviousness-type Double Patenting

The Examiner determines that claims 1, 11, and 12 are not patentably distinct from claims 1, 15, and 16, respectively, of copending application number 12/859,500 because the claims of the copending application recite a fabricated article comprising a polypropylene impact copolymer composition that is substantially the same as the composition recited in the instant claims. (Dec. 16, 2011 Office Act. 3.)

Appellants argue that according to MPEP § 804, because the instant and reference applications were filed on the same day, and because the composition of the present application is the "base" invention, while the article of the reference application is the improvement, "a Terminal Disclaimer is not applicable in this case, and should be held in abeyance at this time." (App. Br. 6.)

However, in instances of provisional nonstatutory double patenting rejections in which both applications were filed on the same day, the current version of MPEP § 804 indicates that:

The provisional nonstatutory double patenting rejection made in each of the applications should be maintained until applicant overcomes the rejections by either filing a reply showing that the claims subject to the provisional nonstatutory double patenting rejections are patentably distinct or filing a terminal disclaimer in each of the pending applications.

(Manual of Patent Examining Procedure (MPEP) § 804(I)(B)(1) (9th ed. July 2015).)

Because Appellants do not identify reversible error in the Examiner's determination that claims 1, 11, and 12 are not patentably distinct from claims 1, 15, and 16, respectively, of copending Application 12/859,500, we summarily affirm the provisional, non-statutory, obviousness-type double patenting rejection of claims 1, 11, and 12 maintained by the Examiner.

ORDER

In view of the reasons set forth above, the Examiner's § 103(a) rejections of claims 1–6, 8–13, and 18 are reversed, but the Examiner's provisional rejection of claims 1, 11, and 12 for non-statutory, obviousness-type double patenting 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(a)(1)(iv).

AFFIRMED-IN-PART