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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MICHAEL E. EVANS and PATRICK M. GAVIN

Appeal 2017-011758
Application 12/924,974
Technology Center 1700

Before KAREN M. HASTINGS, JEFFREY R. SNAY, and
MICHAEL G. McMANUS, *Administrative Patent Judges*.

SNAY, *Administrative Patent Judge*.

DECISION ON APPEAL¹

Appellant² appeals under 35 U.S.C. § 134(a) from the Examiner’s decision rejecting claims 1, 3, 4, 6, 7, 9, 10, 12, 13, 15, 16, 18, 19, 21, 22, and 24–26. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

¹ We cite to the Specification (“Spec.”) filed October 8, 2010, as amended; Final Office Action (“Final Act.”) dated November 1, 2016; Appellant’s Appeal Brief (“Appeal Br.”) dated March 27, 2017; Examiner’s Answer (“Ans.”) dated July 26, 201, and Appellant’s Reply Brief (“Reply Br.”) dated September 22, 2017.

² Appellant identifies Owens Corning Intellectual Capital, LLC as the real party in interest. Appeal Br. 2.

BACKGROUND

The subject matter on appeal relates to loosefill insulation material comprising tufts. Spec. ¶ 7. A tuft is a cluster of insulative fibers. *Id.* ¶ 37. The insulative value (so-called R-value) of loosefill insulation material is affected by certain inter- and intra-tuft physical properties. Appeal Br. 11. To that end, the Specification describes loosefill material in terms of: size, frequency, and distribution of inter-tuft voids (Spec. ¶¶ 38, 51–53); major tuft dimension (*id.* ¶¶ 41, 55); tuft density (*id.* ¶¶ 42, 57); percent surface projections (*id.* 42, 60); quantity of hairs extending from surface projections (*id.* ¶¶ 44, 61); and size, frequency, and distribution of intra-tuft gaps (*id.* ¶¶ 45, 65–67). Claim 1 is illustrative:

1. A loosefill insulation material comprising:
a multiplicity of tufts formed from unbonded individual fibers of insulative material, each of the unbonded individual fibers having a fiber diameter, wherein each of the unbonded individual fibers has the same fiber diameter, the tufts having a plurality of voids between the tufts, wherein when installed in an insulation cavity, the tufts have an outer surface that includes a plurality of irregularly-shaped projections, the tufts having an average major tuft dimension;
wherein when installed in an insulation cavity, the average major tuft dimension of the tufts of the unbonded loosefill insulation material has a length in a range of from about 2.5 mm to about 7.6 mm.

App. Br. 32 (Claims Appendix).

Claims 4, 7, 10, 13, 16, 19, 22, and 25 also are in independent form, and are directed to a loosefill insulation material defined by one or more of the above-listed physical characteristics. Each remaining claim on appeal depends from an independent claim.

REJECTIONS

- I. Claims 1, 3, 7, 9, 10, 12, 13, 15, 16, 18, 19, 21, 22, and 24–26 stand finally rejected under 35 U.S.C. § 103(a) as unpatentable over Babbitt³ and Evans.⁴
- II. Claims 4 and 6 stand finally rejected under 35 U.S.C. § 103(a) as unpatentable over Babbit, Evans, and Earle.⁵

OPINION

Common to all the independent claims is the recitation that “each of the unbonded individual fibers has the same fiber diameter.” *See* claims 1, 4, 7, 10, 13, 16, 19, 22, and 25. The Examiner finds that Babbitt discloses loosefill insulation material comprising nodules formed from individual fibers, but that Babbitt is silent regarding relative fiber diameter. Final Act. 3, 12; Ans. 19. For that feature of the claims, the Examiner finds that Evans teaches “individual unbonded fibers with the same fiber diameter in order to effect thermal conductivity.” Final Act. 12 (citing Evans 2:60–3:16, 7:41–45). In light of Evans, the Examiner determines it would have been obvious to use fibers with the same fiber diameter “in order to effect thermal conductivity.” *Id.*

Appellant argues, *inter alia*, that the Examiner erred in finding that Evans would have provided a reason to use same-diameter fibers in Babbitt’s material. Appeal Br. 11–13. We agree.

Evans discloses a loose-fill insulation product having irregularly shaped glass fibers. Evans Abstract. The irregularity of the glass fiber

³ US 5,624,742, issued April 29, 1997.

⁴ US 5,786,082, issued July 28, 1998.

⁵ US 3,584,796, issued June 15, 1971.

shape is said to provide a uniform volume filling nature, such that voids or gaps in the installed insulation are avoided. *Id.* at 2:18–25. At the passages relied upon by the Examiner, Evans refers to an obtained resistance to heat flow or R value for an insulation product having “a standard 3.5 inch (8.9 cm) sidewall at an *effective diameter* of 5 microns.” Evans 3:6–9 (emphasis added). Evans also compares the disclosed product with a prior art product at “a fixed product density . . . and fixed fiber diameter.” *Id.* at 7:41–45. We do not view these passages as evidence to support the Examiner’s finding that Evans teaches use of same-diameter fibers, much less that use of same-diameter fibers would advantageously affect thermal conductivity of the insulation material. Evans does not explain what is meant by *effective diameter*. Nor does the Examiner provide evidence or technical reasoning to show that the effective fiber diameter in the context of a loose-fill product would have been viewed as meaning a singular diameter. Likewise, Evans’ reference to a “fixed” diameter to identify a comparative equivalence of the tested product and a product taken from the prior art does not require either product to have been formed from fibers having the same diameter. For example, Evans uses the word, “fixed,” to identify a range of values. *Id.* at 7:42 (quantifying the fixed product density as “4.8 to 9.6 Kg/m³”). Of particular significance, Evans expressly states that “[n]o two fibers are exactly alike.” *Id.* at 6:15–16. Lastly, even if Evans were read as disclosing use of same-diameter fibers, that disclosure alone would not support the Examiner’s stated reason for using same-diameter fibers in Babbitt’s material. We are directed to no teaching in Evans that use of same-diameter fibers would have affected thermal conductivity of the produced insulative material.

Appellant additionally argues that Babbitt teaches away from using fibers having the same diameter. Appeal Br. 11–12 (citing Declaration of Patrick M. Gavin, filed June 20, 2014). Although we find no express disclosure in Babbitt that would require fibers of different diameter, we note that Babbitt does require a blend of groups of fibers differing in size. Babbitt 2:35–42. To the extent that differently-sized fibers would have implied or suggested fibers of different diameters, Babbitt also does not support the Examiner’s finding that one of ordinary skill would have had a reason to provide form the disclosed insulation from same-sized fibers.

The Examiner has the initial burden of establishing a *prima facie* case of obviousness based on an inherent or explicit disclosure of the claimed subject matter under 35 U.S.C. § 103. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992) (“[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability.”). To establish a *prima facie* case of obviousness, the Examiner must show that each and every limitation of the claim is described or suggested by the prior art or would have been obvious based on the knowledge of those of ordinary skill in the art or the inferences and creative steps a person of ordinary skill in the art would have employed. *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988); *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007).

In light of the foregoing teachings in Evans, we are persuaded that a preponderance of evidence does not support the Examiner’s finding that the relied-upon prior art teaches a reason to use same-diameter fibers in Babbitt’s loose-fill insulation material, absent the use of impermissible hindsight. The fact finder must be aware “of the distortion caused by

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hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning.” *KSR*, 550 U.S. at 421 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 36 (1966) (warning against a “temptation to read into the prior art the teachings of the invention in issue”)). Accordingly, we do not sustain Rejection I.

Rejection II

The Examiner’s obviousness determination in Rejection II is premised on the same unsupported finding discussed above. *See* Final Act. 17. Accordingly, Rejection II is not sustained for the same reasons.

DECISION

The Examiner’s decision rejecting claims 1, 3, 4, 6, 7, 9, 10, 12, 13, 15, 16, 18, 19, 21, 22, and 24–26 is reversed.

REVERSED