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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DOMINIQUE PONSOLLE,
ROBERT BLACKBURN, BILLY HARMON,
RICHARD PRICE, and MARC DOYLE

Appeal 2015-007523
Application 13/307,383
Technology Center 1700

Before ROMULO H. DELMENDO, CHRISTOPHER C. KENNEDY, and
AVELYN M. ROSS, *Administrative Patent Judges*.

ROSS, *Administrative Patent Judge*.

DECISION ON APPEAL¹

Appellants² appeal under 35 U.S.C. § 134(a) from a final rejection of claims 1, 4–6, and 8. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ In our Decision below we refer to the Specification filed November 30, 2011 (Spec.), the Final Office Action mailed September 19, 2014 (Final Act.), the Appeal Brief filed February 16, 2015 (Appeal Br.), the Examiner's Answer mailed June 17, 2015 (Ans.), and the Reply Brief filed August 11, 2015 (Reply Br.).

² Appellant identifies the real party in interest as Cytec Technology Corp. Appeal Br. 2.

STATEMENT OF CASE

The claims are directed to melt-blown and calendered resin-soluble veils useful in the manufacture of composite articles. Spec. ¶¶ 7–12. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A non-woven engineered veil manufactured by a melt-blown process followed by a calendering process, the veil comprising a plurality of fibers having a mean diameter of between 10 μm and 16 μm , wherein less than 20% of the fibers have a diameter of less than 8 μm ,

wherein the veil has a fabric areal weight of between 5 grams per square meter and 80 grams per square meter, a fabric areal weight variation of less than 10% across the width of the veil, and a thickness of between 20 μm and 90 μm , which is achieved by a calendering process, and

wherein the plurality of fibers are formed from a polymer having a native solid phase and adapted to undergo at least partial phase transition to a fluid phase on contact with a component of a curable composition in which the polymer is soluble at a temperature which is less than the temperature for substantial onset of curing of the curable composition and which temperature is less than the inherent melting temperature of the non-woven engineered veil.

Claims Appendix at Appeal Br. 10.

REJECTIONS

The Examiner maintains the following rejections:

A. Claims 1, 4–6, and 8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over LoFaro³ in view of Burrows.⁴ Final Act. 2.

³ LoFaro et al., US 2006/0252334 A1, published November 9, 2006 (“LoFaro”).

⁴ Robert D. Burrows, US 2005/0064166 A1, published March 24, 2005 (“Burrows”).

- B. Claims 1, 4–6, and 8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over LoFaro in view of Burrows and Raghavendran.⁵ *Id.* at 5.

OPINION

Rejection A — Obviousness (claims 1, 4–6, and 8)

The Examiner rejects claims 1, 4–6, and 8 as obvious in view of LoFaro and Burrows. Final Act. 2. The Examiner finds that LoFaro teaches

a resin-soluble thermoplastic veil toughening element for a curable composition, wherein the polymer element is a non-woven veil in solid phase adapted to undergo at least partial phase transition to fluid phase on contact with a component of the curable resin matrix composition in which it is soluble at a temperature which is less than the temperature for substantial onset of curing of the curable composition and which temperature is less than the polymer elements melt temperature (LoFaro, Abstract).

Id. The Examiner finds that LoFaro teaches a veil that has an areal weight from about 2 to 50 grams per square meter and where the fibers have a diameter of 1.0 to about 50 microns. *Id.* at 3. While LoFaro does teach the diameter of its fibers, the Examiner acknowledges that LoFaro does not “specifically disclose the claimed *mean diameter*.” *Id.* (emphasis added). But, the Examiner finds that Burrows, teaching a similar fibrous veil, has fibers that have an average of 11 to 14 micrometers. *Id.* The Examiner explains that “[i]t is reasonable for one of ordinary skill in the art to expect that a substantial amount of all of the fibers would have fiber diameters between approximately 11–14 μm thereby resulting in a veil having uniform

⁵ Raghavendran et al., US 2006/0240242 A1, published October 26, 2006 (“Raghavendran”).

characteristics.” *Id.* The Examiner explains that it would have been obvious to adjust and vary the fiber diameter taught by Burrows in the veil of LoFaro

wherein all of the fibers comprise a uniform diameter or diameters within the average fiber diameter range, motivated by the desire of forming a conventional nonwoven veil having an average fiber diameter known in the art as being predictably suitable for resin impregnated nonwoven veils, which would predictably result in uniform characteristics, thereby allowing for uniform flow and delivery of matrix resin, suitable for the intended application.

Id. The Examiner also finds that “LoFaro teaches that heat can be applied in any manner, such as under pressure applied by using a press, nip rollers and the like” which is within the scope of the Appellants calendaring process.

Id. at 3 and 4. The Examiner explains that it is reasonable to expect that the application of heat, pressure, and rollers would “result[] in a nonwoven veil having uniform basis weight at least across the width and/or thickness.” *Id.* at 4.

Appellants present several arguments in opposition to the Examiner’s rejection including that the Examiner fails to establish a prima facie case of obviousness because neither LoFaro nor Burrows discloses a veil “wherein less than 20% of fibers have a diameter of less than 8 μm ” as claimed. Appeal Br. 5; Reply Br. 3. Because we find Appellants’ argument persuasive, we do not reach Appellants’ additional arguments.

The Examiner does not make any express findings with respect to the requirement of claim 1 that less than 20% of the veil fibers have a diameter less than 8 μm . *See e.g.*, Final Act. 2–5. Rather, the Examiner explains that “[i]t is reasonable for one of ordinary skill in the art to expect that a

substantial amount of all of the fibers would have fiber diameters between approximately 11–14 μm thereby resulting in a veil having uniform characteristics.” *Id.* at 3. However, the Examiner does not explain why, through citation to record evidence, it is reasonable to expect a substantial amount of veil fibers to have similar diameters. Nor does the Examiner explain why a veil “wherein less than 20% of fibers have a diameter of less than 8 μm ”—a very specific parameter—would be suggested by LoFaro or Burrows. The Examiner’s argument that Appellants are attacking the references individually (Ans. 9) does not remedy the Examiner’s initial error—i.e., that no prima facie showing of obviousness has been made. Thus, on this record we are constrained to overrule the Examiner’s rejection.

Rejection B — Obviousness (claims 1, 4–6, and 8)

The Examiner rejects claims 1, 4–6, and 8 as obvious in view of LoFaro, Burrows and Raghavendran. Final Act. 5. In addition to the findings above, the Examiner further finds that Raghavendran teaches a fiber reinforced thermoplastic sheet that forms a skin where “the skins have a thickness of about 25 micrometers to about 2.5 mm.” *Id.* at 6.

Because the error identified above in Rejection A is not cured by the Examiner in addressing Rejection B or through the inclusion of Raghavendran in the rejection, we similarly reverse the rejection of claims 1, 4–6, and 8 as unpatentable in view of LoFaro, Burrows and Raghavendran (Rejection B).

CONCLUSION

The Examiner reversibly erred in rejecting claims 1, 4–6, and 8 as unpatentable in view of LoFaro and Burrows and/or in view of LoFaro, Burrows, and Raghavendran.

DECISION

For the above reasons, the Examiner's rejection of claims 1, 4–6, and 8 is reversed.

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).

REVERSED