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ea@wenderoth.com
kmiller@wenderoth.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MATTHIAS SCHWENDER, ANDREAS SCHMITZ, and
EDWIN KOCH

Appeal 2018-007832
Application 13/261,514
Technology Center 1700

BEFORE KAREN M. HASTINGS, MICHAEL G. McMANUS, and
SHELDON M. McGEE, *Administrative Patent Judges*.

McGEE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 11–16, 18–26, and 28–48. We have jurisdiction. 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Hydac Filtertechnik GmbH. Appeal Br. 1.

CLAIMED SUBJECT MATTER

The subject matter on appeal concerns fluid filter materials and filter elements having a support structure comprising a specific arrangement of warp and weft threads. Claim 11, reproduced below, is illustrative of the claimed subject matter:

11. A filter material for fluids, comprising:

at least one first layer of filter medium; and

a support structure resting flatly on at least one side of said filter medium and formed of at least a first individual fabric having a set of warp threads and a set of weft threads, at least one of said sets forming a long weave with each of said threads thereof passing over at least three adjacent threads of the other set and then over a single thread of the threads of the other set in sequence, all of said warp threads and said weft threads being of a plastic material.

The prior art relied upon by the Examiner is:

Name	Reference	Date
Pall	US 3,057,481	Oct. 9, 1962
Haerle	US 5,266,279	Nov. 30, 1993
Kahlbaugh	US 5,672,399	Sept. 30, 1997
Hansson	US 7,059,361 B1	June 13, 2006
Schindelin	US 2010/0224554 A1	Sept. 9, 2010
Miyagi	EP 0139822 A2	May 8, 1985

The Examiner's rejections are set forth at pages 3–19 of the Non-Final Action dated August 30, 2017. Each rejection was maintained by the Examiner in the Answer dated June 15, 2018. Ans. 4.

OPINION

We review appealed rejections for reversible error based on the arguments and evidence the appellant provides for each issue the appellant identifies. 37 C.F.R. § 41.37(c)(1)(iv) (2017); *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential) (cited with approval in *In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011) (Explaining that even if the Examiner had failed to make a prima facie case, “it has long been the Board’s practice to require an applicant to identify the alleged error in the examiner’s rejections.”)).

Upon consideration of the evidence relied upon in this appeal and each of Appellant’s contentions, we affirm the Examiner’s rejections of claims 11–16, 18–26, and 28–48 under 35 U.S.C. § 103(a) for the reasons set forth in the Final Action, the Answer, and below. We address the claims separately to the extent they are so argued by Appellant.

Independent Claims 11, 21, 31, and 40

The Examiner rejected independent claims 11 and 21 over the combined disclosure of Miyagi and Schindelin. Final Act. 3–4, 7–8. In rejecting independent claims 31 and 40, the Examiner relied on this same combination of references, along with Pall for claims 31 and 40. *Id.* at 10–12, 14–16.

Appellant argues limitations recited in each of the independent claims 11, 21, 31, and 40, focusing mainly on the Examiner’s reliance on Schindelin. Appeal Br. 4–7. Relevant to this appeal, the Examiner finds that Schindelin discloses a filter “support structure formed with a twill weave wherein one weft thread run[s] over every two warp threads,” and “suggests that one of ordinary skill in the art can modify the twill weave of

the support structure under at least one warp thread and over *at least two warp thread[s]*. . . which would include a twill weave comprising a warp thread over three warp threads.” Final Act. 4 (citing Schindelin ¶¶ 11, 48; Fig. 4) (emphasis added). Appellant asserts that such disclosure of “at least two warp threads” is not enabling for the recited limitation of “at least three threads.” Appeal Br. 5. That argument amounts to little more than a naked assertion of the prior art’s non-enablement and is, therefore, unpersuasive. Here, Appellant offers no explanation regarding Schindelin’s disclosure to persuasively establish it is not enabled, particularly in view of our reviewing court’s holding “that a prior art printed publication cited by an examiner is presumptively enabling barring any showing to the contrary by a patent applicant.” *In re Antor Media Corp.*, 689 F.3d 1282, 1288 (Fed. Cir. 2012).

We also are unpersuaded by Appellant’s assertion that the Examiner’s rejection lacks the requisite motivation that would have led the skilled artisan to arrive at the claimed invention. Appeal Br. 5. On the record before us, the Examiner provides ample explanation and evidence to support the obviousness conclusion. *See* Final Act. 4 (citing Schindelin ¶¶ 28, 53). Specifically, the Examiner correctly finds that Schindelin suggests its “twill weave increases the mechanical load bearing capacity of the filter and lowers the through flow resistance by allowing fluid to flow with relatively little flow loss from the pleated filter medium.” *Id.*

Claims 12, 22, 32, and 41

Appellant contests the rejection of these claims, asserting that the Examiner’s reliance on Haerle “for teaching a satin weave” is improper because “the [Haerle] satin weave is for the filter medium and not for a

supporting structure to be used on a side of a filter medium layer.” Appeal Br. 7. This argument is not persuasive for several reasons.

First, it is directed to the Haerle reference individually, and does not address the relevant obviousness inquiry—i.e., what the disclosure of Haerle would have taught, or suggested to, the person of ordinary skill. *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (“Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references. . . . [The reference] must be read, not in isolation, but for what it fairly teaches in combination with the prior art as a whole.”).

Furthermore, Appellant’s assertion appears to be technically incomplete because Haerle’s woven fabric, which can be in the form of a satin weave, is a component part of “a substantially homogenous woven fabric.” Haerle 1:66–67, 3:59–63. Haerle’s filter has “a multilayer woven or knitted fabric [] used as the base material, wires or fibres being placed flat on top of one another in several layers.” *Id.*, 1:14–16. That “woven fabric is in the form of a twilled wire fabric,” and then sintering material, such as “powder, granules, fibre fragments or chips” is introduced into the twilled wire fabric meshes. *Id.* at 1:9–11, 51–55. Haerle discloses “[t]he twilled wire fabric moreover provides a *spatial structure* in which the sintering material can be embedded.” *Id.* at 2:25–26 (emphasis added); *see also id.* at 2:53–60 (discussing how certain design parameters of “the wires or fibres of the woven fabric” provides “an even better spatial structure for a layer and even more sintering material can be introduced.”). Based on such disclosure, we are unpersuaded by Appellant’s assertion that Haerle’s twill weave is “not for a supporting structure.” Appeal Br. 7. Rather, the skilled

artisan would have understood that Haerle’s twill weave—of which the satin weave is a “special form” (Haerle 3:59–63)—provides structural support to the embedded sintering material.

Claims 13–16, 18, 23–26, 28, 33–37, and 42–46

For these claims, Appellant argues that the Examiner’s reliance on Hansson is erroneous because Hansson’s multi-layer fabrics “only form the filter medium and not a support structure for a filter medium.” Appeal. Br 7–8. Appellant’s argument against the rejection of these claims is unpersuasive because it does not squarely address the rejection as set forth by the Examiner. Specifically, the Examiner does not rely on Hansson to disclose multiple fabric layers, but rather for its disclosure of *binding threads connecting* multiple layers. Final Act. 5; *see also* Ans. 6 (“The combination of Miyagi, Schindelin, with Pall, and/or Haerle further discloses a support structure with a first individual fabric and a second individual fabric” (citing Schindelin, Fig. 5)). Notably, Appellant does not contest this finding. *See* Reply Br. 4. Instead, Appellant again focuses on the teachings of the applied reference individually, rather than what the reference would have taught or suggested to the skilled artisan when combined with the other references discussed in the rejection. *Id.*; Appeal Br. 7–8. Appellant’s argument, therefore, reveals no reversible error in the Examiner’s reliance on Hansson’s disclosure of a binding thread to connect individual fabric layers for the purpose of increasing the forming layers’ structural stability. Final Act. 5; Ans. 6–7.

Claims 19, 29, 38, and 47

The Examiner relies on Kahlbaugh to evince lamination of a nonwoven to an individual fabric. Final Act. 6; Kahlbaugh 16:65–17:17.

Appellant argues that Kahlbaugh does not specifically mention lamination. Appeal Br. 8. This argument is unpersuasive. The Examiner finds that the skilled artisan would have understood Kahlbaugh's disclosure of adhering layers using hot melt spray or hot melt sheets as the recited lamination. Ans. 8. This finding is not contested by Appellant. *See Reply Br., generally.* Thus, Appellant has failed to identify reversible error in the rejection.

Claims 20, 30, 39, and 48

The Examiner relies on Kahlbaugh's disclosure of coarse polyester fibers (Kaulbach 18:41–42) which are taught to be secured to fine fibers by an adhesive, such as “wet-laid water soluble or solvent based resin systems” (*id.* at 17:2–11). Appellant argues that Kahlbaugh fails to disclose “a coated polyester nonwoven.” Appeal Br. 8. Appellant also asserts that the cited portions of Kahlbaugh relied on by the Examiner “do not necessarily result in a coated polyester non-woven or a support resting flatly on one side of a filter medium as required by these claims.” Reply Br. 4.

These arguments are not persuasive. Appellant again addresses the teachings of Kahlbaugh in a vacuum, and also fails to explain how Kahlbaugh's “coarse support compris[ing] polyester fibers” is not evidence that a “coated polyester nonwoven” was known in the prior art. Kahlbaugh 18:41–42. Kahlbaugh discloses “the coarse fiber layer may comprise . . . a non-woven substantially continuous fiber matrix,” and that “[w]et-laid materials may be utilized for the non-woven support.” *Id.* at 16:3–9. Such wet-laid adhesives may be applied to the coarse fiber layer. *Id.* at 17:2–9. Thus, the preponderance of evidence supports the Examiner's position that Kahlbaugh discloses the disputed limitation.

CONCLUSION

Because Appellant fails to identify reversible error in any of the rejections, we affirm the decision of the Examiner to reject claims 11–16, 18–26, and 28–48.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Basis	Affirmed	Reversed
11, 21	103(a)	Miyagi, Schindelin	11, 21	
12, 22	103(a)	Miyagi, Schindelin, Haerle	12, 22	
13–16, 18, 23–26, 28	103(a)	Miyagi, Schindelin, Haerle, Hansson	13–16, 18, 23–26, 28	
19, 20, 29, 30	103(a)	Miyagi, Schindelin, Kahlbaugh	19, 20, 29, 30	
31, 40, 41	103(a)	Miyagi, Schindelin, Pall	31, 40, 41	
32, 41	103(a)	Miyagi, Schindelin, Pall, Haerle	32, 41	
38, 39, 47, 48	103(a)	Miyagi, Schindelin, Pall, Kahlbaugh	38, 39, 47, 48	
33–37, 42– 46	103(a)	Miyagi, Schindelin, Pall, Haerle, Hansson	33–37, 42– 46	
Overall Outcome			11–16, 18– 26, 28–48	

TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED