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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JORGE C. GOMES, DIDEM ONER-DELIORMANLI, and
CAGATAY K. BERILGEN

Appeal 2018-008774
Application 15/223,391
Technology Center 1700

Before KAREN M. HASTINGS, MICHAEL P. COLAIANNI, and
JANE E. INGLESE, *Administrative Patent Judges*.

HASTINGS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant¹ appeals under 35 U.S.C. § 134 from the Examiner's rejection under 35 U.S.C. § 103(a) of claims 1–7 and 9–15 as unpatentable over the combined prior art of Keung (US 2009/0081474 A1, published March 26, 2009) and Mazzola (US 2013/0288032 A1, published October 31,

¹ We use the word “Appellant” to refer to the “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies Dow Global Technologies LLC as the real party in interest (Appeal Br. 2).

2013). An oral hearing was conducted on January 23, 2020. We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We AFFIRM.

CLAIMED SUBJECT MATTER

Claim 1 is representative and reproduced below:

1. A multilayer cast film suitable for use as a paper replacement comprising:
 - a. a first layer comprising a linear polyethylene having a density greater than 0.93 g/cm^3 and a melt index greater than or equal to 2.0 g/10 min;
 - b. a second layer comprising a linear polyethylene having a density greater than 0.94 g/cm^3 and a melt index less than or equal to 1.3 g/10min;
 - c. a third layer comprising a linear polyethylene having a density greater than 0.93 g/cm^3 and a melt index greater than or equal to 2.0 g/10min;wherein the first layer and the third layer are each an external layer of the film, and wherein the film has been subjected to post-extrusion mono- or biaxial orientation and has an overall thickness of at least 125 microns.

All of the claims are argued as a group (Appeal Br. 5–9), except for dependent claim 9 which recites “wherein the film contains less than five percent filler by weight of the film” (Appeal Br. Claims Appendix 13; Appeal Br. 9, 10).

OPINION

Upon consideration of the evidence of record and each of Appellant’s contentions as set forth in the Appeal Brief, as well as the Reply Brief, we determine that Appellant has not demonstrated reversible error in the

Examiner's rejection (e.g., *generally* Ans.). *In re Jung*, 637 F.3d 1356, 1365–66 (Fed. Cir. 2011) (explaining the Board's long-held practice of requiring Appellant to identify the alleged error in the Examiner's rejection). We sustain the rejection for the reasons expressed by the Examiner in the Final Office Action and the Answer.

We add the following primarily for emphasis.

It is well established that when claimed ranges overlap, or lie inside ranges of the prior art, a *prima facie* case of obviousness is established. *In re Peterson*, 315 F.3d 1325, 1329 (Fed. Cir. 2003) (“In cases involving overlapping ranges, we and our predecessor court have consistently held that even a slight overlap in range establishes a *prima facie* case of obviousness.”).

Appellant's argument that Keung does not disclose or suggest the specific thickness of “at least 125 microns” because of its conflicting and/or ambiguous statements in paragraph 83 regarding layer thickness versus overall film thickness (Appeal Br. 5, 6; Reply Br. 2, 3) is not persuasive of reversible error. Appellant has not adequately disputed that one of ordinary skill in the art would have appreciated that the claimed range of film thickness reasonably encompasses the applied prior art of Keung for reasons set forth by the Examiner (*generally* Ans.; Appeal Br.; Reply Br.). As the Examiner pointed out, Keung explicitly states that film thickness can be as high as 250 microns (Ans. 8, 9; Keung ¶ 83).

Moreover, it is well settled that it would have been obvious for an artisan with ordinary skill to develop workable or even optimum ranges for result-effective parameters. *In re Woodruff*, 919 F.2d 1575, 1577 (Fed. Cir. 1990); *In re Boesch*, 617 F.2d 272, 276 (CCPA 1980); *In re Aller*, 220 F.2d

454, 456 (CCPA 1955). “A recognition in the prior art that a property is affected by the variable is sufficient to find the variable result-effective.” *In re Applied Materials, Inc.*, 692 F.3d 1289, 1297 (Fed. Cir. 2012).

Keung states that the thickness of the film is “not particularly limited” and “is determined according to the desired properties of the film” (Keung ¶ 83). Keung also states the thickness of individual layers of a multilayered film “can be adjusted based on desired end use performance, resin or copolymer employed, equipment capability, and other factors” (Keung ¶ 91). Accordingly, substantial evidence supports the Examiner’s obviousness determination of the claimed film thickness range.

Appellant does not rely upon any evidence of unexpected results due to the claimed thickness.

Appellant does not dispute that Keung teaches a genus of materials for its layers that encompass the claimed materials, but argues that the showing in the Specification established the recited materials work better than other members within the genus (Appeal Br. 7, 8). This showing is not persuasive, since Keung explicitly lists HDPE (high density polyethylene) and MDPE (medium density polyethylene) for its layers and that three layers may be A/B/A (Ans. 9; Keung ¶¶ 27, 86). Furthermore, the rejection is not based on Keung alone (e.g., Ans. 10). In any event, Appellant has not shown how the Specification comparison of multilayered films of different material layers to a film comprising only one material (all comparative examples contain only one material) is a comparison to the closest prior art (as noted above, even Keung discloses layers of different materials), or how the showing is commensurate in scope with the claims, which are e.g., open-ended and do not preclude additional layers.

There is no dispute that Mazzola teaches a three layer film of the same materials as recited in claim 1. Rather, Appellant argues that there is no reason to combine Mazzola with Keung because Mazzola's film is taught to be clear with an overall thickness of from 7 to 30 microns, and has a modulus property that Keung has already (thus Appellant argues there is no reason to improve the modulus property of Keung's film) (Appeal Br. 8, 9; Reply Br. 4). We disagree for the reasons set forth by the Examiner (Ans. 10, 11). Both references are directed to a multilayered cast film that comprise layers that may comprise HDPE and that may be used for similar purposes, inclusive of packaging with printing thereon (*id.*). Mazzola, like Keung, teaches that its film may be cast and subjected to mono or biaxial orientation (Mazzola ¶ 38; Keung ¶ 89). Mazzola teaches that its selection of materials results in improved film properties such as high gloss, high stiffness, and low haze (e.g., Mazzola ¶ 13). Appellant has not shown error in the Examiner's determination that one of ordinary skill in the art, using no more than ordinary creativity, would have used the materials taught in Mazzola in the multi-layered film of Keung.

Accordingly, a preponderance of the evidence supports the Examiner's obviousness determination of the claimed subject matter.

We thus affirm the rejection.

Dependent Claim 9

Appellant argues that Keung does not teach that its film contains less than 5% filler as recited in claim 9, mainly because Keung likely has an excess of 5% cavitating agent, as all its examples have 50% by weight cavitating agent (Appeal Br. 9, 10; Reply Br. 4, 5). However, Appellant has not established that a cavitating agent is a filler as recited in claim 9. To the

contrary, as pointed out by the Examiner, Keung teaches that various additives, such as cavitating agents and fillers, may or not be present in any of the layers (Keung ¶¶ 65–67; Ans. 11). As previously discussed, it is well settled that it would have been obvious for an artisan with ordinary skill to develop workable ranges for result-effective parameters. *In re Woodruff*, 919 F.2d at 1577; *In re Boesch*, 617 F.2d at 276; *In re Aller*, 220 F.2d at 456. Thus, absent any evidence of criticality of the claimed filler amount (and absent any specific definition of what is included or excluded by the term “filler”), the Examiner’s obviousness determination is reasonable.

In light of these circumstances, we affirm the Examiner’s rejection of all the claims on appeal.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–7, 9–15	103	Keung, Mazzola	1–7, 9–15	

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)(1)(iv).

AFFIRMED