

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOELLEN DEPORTER and LAWRENCE M. FODOR

Appeal No. 1996-3306
Application No. 08/145,380

ON BRIEF

Before WINTERS, WILLIAM F. SMITH and LORIN, Administrative Patent Judges.

LORIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the final rejection of claims 1-16, which are all the claims pending in the application. On consideration of the record, we reverse the examiner's decision rejecting these claims under 35 U.S.C. §103.

Claim 1 is illustrative of the claims on appeal and reads as follows:

1. A process to produce a multicomponent ethylene polymer composition said process comprising:

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(a) contacting an organic peroxide with at least one post consumer ethylene polymer resin that has a density from about 0.95 to 0.97 grams per cubic centimeter and a melt index from about 0.3 to about 1 gram per ten minutes; and thereafter

(b) blending the composition formed in (a) with at least one virgin ethylene polymer resin that has a density from about 0.93 to 0.945 grams per cubic centimeter and a melt index from about 0.01 to about 0.16 grams per ten minutes;
to form said multicomponent ethylene polymer composition.

The references relied upon by the examiner are:

Mack et al. (Mack)	4,603,173	Jul. 29, 1986
Anzini	5,073,598	Dec. 17, 1991

The rejections presented for our review are

Claims 1-12 are rejected under 35 U.S.C. § 103 as being unpatentable over Anzini either alone or in view of Mack.

Claims 13-16 are rejected under 35 U.S.C. § 103 as being unpatentable over Anzini in view of Mack.

The examiner has failed to establish a prima facie case of obviousness. After careful review of the examiner's position and the evidence in support of that position, we conclude that the examiner has impermissibly used appellants' specification as a blueprint to reach the claimed invention from the prior art disclosure.

The claimed invention is a method with two steps. In the first step, at least one post-consumer polyethylene, with a density from about 0.95 to 0.97 grams per cubic centimeter and a melt index from about 0.3 to about 1 gram per ten minutes, is contacted with an organic peroxide. In the second step, the result of the first step is blended with at least one

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virgin polyethylene with a density from about 0.93 to 0.945 grams per cubic centimeter and a melt index from about 0.01 to about 0.16 grams per ten minutes.

Anzini teaches a process of making a polyethylene blend "comprised of at least two polyethylene components having at least one dissimilar rheological property" (Abstract). Before the two components are blended, at least one rheological parameter, such as melt index, is determined for each component (column 5, lines 4-9). The two components are then "matched," whereby one of the components is treated with a free radical generator, such as benzoyl peroxide (col. 5, line 26), until its rheological property is substantially similar to that of the other component (col. 6, lines 20-36). Thereafter, the components are blended together in melt form (column. 9, lines 1-13). In one place in the Anzini reference (column 4, line 44 to column 5, line 3), a wide variety of polyethylenes of various densities and melt indexes are disclosed as acceptable candidates. This disclosure broadly encompasses the densities and melt indexes specified for the claimed polyethylenes but there is no suggestion or indication to employ the particular polyethylenes claimed.

In another place (col. 7, lines 44-53), Anzini discloses the possibility of applying a free radical treatment to a recycled polyethylene component and blending that with a virgin component. This is similar to what the claims describe: contacting post-consumer polyethylene with organic peroxide and blending the result with virgin polyethylene. Here too the disclosure does not indicate or suggest employing post-consumer and virgin components of polyethylenes with the melt indices and densities in the ranges claimed.

And finally, in yet another place (column 6, line 30), as the examiner emphasizes (examiner's answer, p. 3), Anzini discloses that when melt index is the rheological parameter to be "matched," "it is preferred that the melt index values for the various blend constituents be brought to within about 0.5 grams/10 minutes of each other."

At first blush, it would appear, as examiner states in the examiner's answer (p. 3), that "[t]his preferred variance coincides with the variance of the separate components claimed by Appellants with respect to melt index." Actually, the preferred melt index variance described by Anzini refers to the melt index variance resulting from the "matching" step (see column 5, lines 18-21). What the melt index variance of the separate components is before the components are processed is unclear and examiner has not explained how a final melt index variance would suggest a similar variance between the components before processing. We note that there is no similar disclosure for density. Examiner acknowledges this (examiner's answer, p. 3) but considers it "extremely common as utilized (like melt index) as a rheological parameter". How its conventionality as a rheological property would suggest the claimed variance in densities is not explained however.

What is clear therefore is that Anzini discloses a method for blending polyethylenes of a wide range of melt indices and densities, any one of which could be contacted with a free radical generator. The number possible candidates and processing combinations is enormous. There is nothing in this reference however which would lead one to select the

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particular polyethylenes claimed, with melt indices and viscosities in the ranges specified, and combine these with an organic peroxide in the manner and order claimed. What we have instead is a myriad of possibilities, one of which could be the claimed invention. We have no doubt that each of the claimed components are known and taught and that the order in which they are combined is a possibility. The mere fact that the prior art could be modified does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). Something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., 730 F.2d 1452, 1462, 221 USPQ 481, 488 (Fed. Cir. 1984). Here examiner has not pointed to anything in the reference which would lead one to the claimed combination and we can find none.

The only reason for selecting the components and combining them as claimed is provided by appellant's disclosure. On pages 2 -4 of the specification, appellants indicate that by providing post-consumer and virgin polyethylenes with melt indices and densities in the ranges claimed, certain processing properties, such as stiffness and environmental stress crack resistance, are improved. By combining these components in the manner and order claimed the resulting blend shows improved environmental stress crack resistance and die swell (specification, p. 8, Table 2, method 2). However, it is impermissible to use these disclosures from appellants' specification as a blueprint to reach the claimed

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invention from the prior art disclosure. "When prior art references require selective combination by the court to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gleaned from the invention itself." Uniroyal Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. Denied, 488 U.S. 825 (1988). Since the only reason for selecting the claimed components and combining them as claimed is provided by the specification, we conclude that a prima facie case of obviousness of the claims over Anzini has not been established.

We note that the rejection is also formulated as being over Anzini in view of Mack.

Mack discloses a blow molding resin composition comprising a low molecular and a high molecular weight component polyethylene where an organic peroxide is used to lightly branch the composition to impart improved processing properties to the composition. Like Anzini, a myriad of possible polyethylenes are disclosed and there is no suggestion to select those specified in the claims or that they be combined with an organic peroxide in the manner and order claimed. Accordingly, with respect to the claimed polyethylene components and their combination, Mack does not strengthen examiner's prima facie case of obviousness.

Mack is cited solely because "it teaches that it would be preferable to use less than 100 ppm peroxide to provide improvement in processability by reducing flare swell and die swell of the treated component (abs)" (examiner's answer, p. 4). This would apply only to claims 13-16. The other claims allow for higher levels of peroxide. Why Mack has been

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applied to claims 1-12 is unclear. Nevertheless, given our conclusion that a prima facie case of obviousness has not been established for the claimed method irrespective of the level of peroxide (e.g., claim 1), our conclusion is not affected by what Mack discloses.

The decision of the examiner is reversed.

REVERSED

SHERMAN D. WINTERS
Administrative Patent Judge

WILLIAM F. SMITH
Administrative Patent Judge

HUBERT C. LORIN
Administrative Patent Judge

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Richmond, Phillips, Hitchcock & Carver
P.O. Box 2443
Bartlesville, OK 74005

HCL/jlb