

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today
(1) was not written for publication in a law journal and
(2) is not binding precedent of the Board.

Paper No. 45

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ICHIRO TOMINAGA, TAKETO MATSUKI, TETSUO YAMAGUCHI, HIROOMI
MATSUSHITA and KUNIO NIWA

Appeal No. 95-4648
Application No. 07/952,137¹

HEARD: March 9, 1999

Before SOFOCLEOUS, WALTZ, and SPIEGEL, Administrative Patent Judges.
WALTZ, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the
examiner's final rejection of claims 28 through 47, which are
the only claims remaining in this application.

¹ Application for patent filed September 28, 1992. According to
appellants, the application is a continuation of Application No.
07/403,263, filed September 5, 1989; which is a continuation-in-part
of Application No. 07/019,981, now abandoned.

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According to appellants, the invention is directed to a molded article comprising a polyamide resin reinforced with a reinforcing material of a continuous fiber or filament having a length of at least 1 mm (Brief, page 2). Appellants state that "[t]he claims are to a single group" (Brief, page 3). We construe this statement as meaning that the claims stand or fall together (see 37 CFR § 1.192(c)(5)(1993)). Therefore we select claim 28 from the group and decide this appeal as to the ground of rejection on the basis of claim 28 alone. See *Ex parte Schier*, 21 USPQ2d 1016, 1018 (Bd. Pat. App. & Int. 1991). Illustrative claim 28 is reproduced below:

Claim 28. A molded article comprising a polyamide resin reinforced by a reinforcing material which is at least one selected from the group consisting of continuous fiber and filament having a length of at least 1 mm, said molded article being obtained by a monomer casting method comprising the steps of:

(1) treating said reinforcing material with an agent for improving the adhesion between said reinforcing material and said polyamide resin, wherein said agent is soluble in alcohol or water or in both alcohol and water;

(2) arranging said treated reinforcing material in a desired shape;

(3) placing the thus arranged reinforcing material in a mold;

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(4) pouring a molten **T**-lactam composition containing a polymerization catalyst and an initiator into said mold; and

(5) heating the molten **T**-lactam composition to obtain a polyamide resin, thereby forming said molded article.

The examiner relies upon the following references as evidence of obviousness:

Kobayashi et al. (Kobayashi)	4,356,228	Oct. 26, 1982
Kumazawa et al. (Kumazawa)	4,528,223	Jul. 9, 1985

Claims 28-47 stand rejected under 35 U.S.C. § 103 as unpatentable over Kobayashi in view of Kumazawa (Answer, page 2).² We *affirm* this rejection for reasons which follow.

OPINION

Appealed claim 28 is directed to a molded article which is obtained by a monomer casting method comprising five recited steps. Appellants argue that the three processes disclosed by Kobayashi³ "are distinct from the process steps of forming Applicants' molded article." (Brief, page 5).

²The examiner's final rejection mistakenly omitted claim 28 from the rejection and only included claims 29-47 (see pages 1 and 2 of the final rejection dated Jan. 12, 1994, Paper No. 27). The Brief and the Answer are correctly directed to the rejection of claims 28 through 47 (Brief, page 2, and the Answer, page 2). Accordingly, the claims before us on appeal are claims 28 through 47.

³See column 4, line 15 *et seq.*

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Appellants also submit that "[n]either of the references [Kobayashi or Kumazawa] teach or suggest alone or in combination the article of Applicants' Claim 28 as prepared by the requirements of that claim." (Brief, page 5, emphasis added).

Appellants' arguments are not well taken since claim 28 is drawn to a product-by-process. Concerning product-by-process claims, it is the patentability of the products defined by these claims, and not the processes for making them, that must be gauged in light of the prior art. *In re Wertheim*, 541 F.2d 257, 271, 191 USPQ 90, 103 (CCPA 1976). The court has made the following observation⁴ regarding the patentability of product-by-process claims:

art be than a 102 or acceptable. not myriad of	We are therefore of the opinion that when the prior discloses a product which reasonably appears to either identical with or only slightly different product claimed in a product-by-process claim, a rejection based alternatively on either section 103 of the statute is eminently fair and As a practical matter, the Patent Office is equipped to manufacture products by the processes put before it and then obtain
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⁴*In re Fessman*, 489 F.2d 742, 744, 180 USPQ 324, 325 (CCPA 1974), quoting from *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972).

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prior art products and make physical comparisons therewith.

The Office has a lesser burden of proof in making out a case of *prima facie* obviousness for product-by-process claims because of their peculiar nature. See *In re Fessman*, 489 F.2d at 744, 180 USPQ at 326.

Accordingly, the examiner must cite prior art which discloses a product that reasonably appears to be identical to or only slightly different than the claimed product to establish a *prima facie* case of obviousness. We agree that the examiner has met this burden. Kobayashi discloses a molded article comprising a polyamide resin reinforced by carbon fibers having lengths such as 12 mm (see Example 3 and the Answer, pages 2-3).⁵ The molded article of Kobayashi is made by processes where the polyamide (e.g., nylon) is mixed with the reinforcing fibers and then molded (see column 4, line 15 *et seq.*, and Example 3) while appellants' process forms the polyamide *in situ* with the reinforcing fibers in the

⁵Kumazawa was applied by the examiner to show various features of the dependent claims (see the Answer, page 3). Since the claims stand or fall together with independent claim 28 (see the discussion above), a discussion of Kumazawa is unnecessary to our decision.

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mold. For the foregoing reasons, we determine that the examiner has reasonable belief that the molded article of Kobayashi and the claimed molded article are identical or only slightly different. Therefore the examiner has shifted the burden of proof to appellants to submit factual evidence demonstrating that actual, unobvious differences exist between the claimed and prior art molded article. *In re Fessman*, 489 F.2d at 745, 180 USPQ at 326; *Ex parte Phillips*, 28 USPQ2d 1302, 1303 (Bd. Pat. App. & Int. 1993).

Appellants have submitted the Niwa Declaration under 37 CFR § 1.132 dated July 12, 1994 (Paper No. 30) as evidence that "[t]he product produced by the monomer casting method of the present claimed invention has unexpected properties when compared with the reference products." (Brief, pages 5-6, see also the Reply Brief, pages 2-3). However, this Declaration is not persuasive for several reasons. The prior art "C" molded article is *not* surface treated while Examples S₁ and S₂ representing the claimed subject matter are surface treated in 0.5% alcohol-soluble nylon A-70. Kobayashi specifically teaches that "[i]n order to improve the adhesion to a

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thermoplastic resin, these carbon fibers may be surface treated." (column 3, lines 23-25). Therefore one of ordinary skill in the art would have expected better results if the reinforcing fibers had been surface treated.

Furthermore, the fibers of each comparative example are of different lengths (Example "C" uses 12 mm lengths, Example S₁ uses 12.5/25 mm length fibers, and Example S₂ uses 50 mm length fibers). The matrix resin also differs between the prior art Example and the Examples representing the claimed subject matter. Different types of polyamide apparently were used in these Examples. See the listings under "Material" in Table 1 of the Declaration, where UX-21 is formed from a caprolactam (specification, page 7) while "CM1010 of Toray" is unspecified other than "Nylon 6". The cause and effect sought to be proven is lost here when so many variables are unfixed. *In re Dunn*, 349 F.2d 433, 439, 146 USPQ 479, 483 (CCPA 1965).

Appellants also argue that a "critical distinction" between the present claims and Kobayashi is the number of reinforcing agents (Brief, page 6, and Reply Brief, pages 1-2). Appellants' argument is not well taken since claim 28 is not limited to one reinforcing agent by both the words "at

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least one" and the transitory word "comprising". *Genentech Inc. v. Chiron Corp.*, 112 F.3d 495, 501, 42 USPQ2d 1608, 1613 (Fed. Cir. 1997)("Comprising" used in claim language means that the named element is essential but other elements are within the scope of the claim).

For the foregoing reasons, we determine that the examiner has established a *prima facie* case of obviousness in view of the applied prior art. Reevaluating the *prima facie* case of obviousness based on the totality of the record, including the evidence and arguments submitted by appellants, we determine that the preponderance of evidence favors obviousness within the meaning of § 103. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Accordingly, the rejection of claims 28 through 47 under 35 U.S.C. § 103 as unpatentable over Kobayashi in view of Kumazawa is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

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Administrative Patent Judge)	
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THOMAS A. WALTZ)	APPEALS
Administrative Patent Judge)	AND
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DECISION: AFFIRMED
Send Reference(s): Yes No
or Translation (s)
Panel Change: Yes No
Index Sheet-2901 Rejection(s): _____

Prepared: March 18, 2002

Draft Final

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OB/HD GAU

PALM / ACTS 2 / BOOK
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