PATENT AF/DV

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	12/230,691
Filing Date:	September 3, 2008
Appellants:	Akio OZASA et al.
Group Art Unit:	1791
Examiner:	Atul P. Khare
Title:	BIODEGRADABLE MOLDED ARTICLE
Attorney Docket:	12480-000055/US/DVA

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June 29, 2010

APPELLANTS' REPLY BRIEF UNDER 37 C.F.R. § 41.41

Sir:

In response to the Examiner's Answer mailed May 3, 2010, Appellants request the appeal be maintained and supply the following arguments in reply under 37 C.F.R. § 41.41(a)(1).

I. STATUS OF CLAIMS

Claims 13-34 are pending, and remain finally rejected, in the current application. Claims 1-12 have been cancelled. Claims 13 and 24 are in independent form. No claim amendments are being filed in conjunction with this request. The claims are rejected as follows:

1. Claims 13, 16, 18-24, 27 and 29-34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Canadian Patent No. 2,143,432 to Lorcks et al. (hereinafter "Lorcks") in view of U.S. Patent No. 5,861,216 to Doane et al. (hereinafter "Doane") and further in view of U.S. Patent No. 5,639,518 to Ando et al. (hereinafter "Ando");

2. Claims 14 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lorcks in view of Doane and Ando and further in view of U.S. Patent No. 5,153,037 to Altieri;

3. Claims 17 and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lorcks in view of Doane and Ando and further in view of U.S. Patent No. 5,888,599 to Bradt; and

4. Claims 25 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lorcks in view of Doane and Ando and further in view of U.S. Patent No. 5,888,599 to Shogren.

See, e.g., Final Office Action dated November 17, 2009 ("Final OA").

Claims 13-34 are being appealed. Claims 1-12 have been cancelled.

II. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Review is requested for the rejections of (i) claims 13, 16, 18-24, 27 and 29-34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Canadian Patent No. 2,143,432 to Lorcks et al. (hereinafter "Lorcks") in view of U.S. Patent No. 5,861,216 to Doane et al. (hereinafter "Doane") and further in view of U.S. Patent No. 5,639,518 to Ando et al. (hereinafter "Ando"), (ii) claims 14 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lorcks in view of Doane and Ando and further in view of U.S. Patent No. 5,153,037 to Altieri, (iii) claims 17 and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lorcks in view of Doane and Ando and further in view of U.S. Patent No. 5,888,599 to Bradt, and (iv) claims 25 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lorcks in view of Doane and Ando and further in view of U.S. Patent No. 5,888,599 to Shogren. Appellants direct the Board's attention to the Response filed on September 4, 2009, which addresses the above rejections.

Claims 13-34 are being appealed and claims 13-23 and 24-34 rise and fall together, respectively.

III. ARGUMENT

A. CLAIMS 13, 16 AND 18-23 STAND REJECTED UNDER 35 U.S.C. § 103(A) AS BEING UNPATENTABLE OVER CANADIAN PATENT NO. 2,143,432 TO LORCKS ET AL. (HEREINAFTER "LORCKS") IN VIEW OF U.S. PATENT NO. 5,861,216 TO DOANE ET AL. (HEREINAFTER "DOANE") AND FURTHER IN VIEW OF U.S. PATENT NO. 5,639,518 TO ANDO ET AL. (HEREINAFTER "ANDO"); AND

B. CLAIMS 24, 27 AND 29-34 STAND REJECTED UNDER 35 U.S.C. §103(A) AS BEING UNPATENTABLE OVER CANADIAN PATENT NO. 2,143,432 TO LORCKS ET AL. (HEREINAFTER "LORCKS") IN VIEW OF U.S. PATENT NO. 5,861,216 TO DOANE ET AL. (HEREINAFTER "DOANE") AND FURTHER IN VIEW OF U.S. PATENT NO. 5,639,518 TO ANDO ET AL. (HEREINAFTER "ANDO").

For at least the reasons given below, Appellants maintain the position that Lörcks, Doane, Ando and the combination thereof fail to explicitly teach, or otherwise suggest, all the features recited in claims 13 and 24.

The Examiner's Answer (hereinafter "Answer") states that the step of Lorcks where a plurality of ribbed laminate material layers, including a ribbed synthetic film, is introduced in a mold heated to 220°C with a foaming aqueous starch suspension anticipates the step of "simultaneously thermally softening a coating film and attaching the thermally softened coating film to the irregular surface of the biodegradable expanded molded article so as to maintain the irregular surface of the biodegradable expanded molded article" as recited in claims 13 and 24[1].

However, Appellants respectfully submit that Lorcks merely teaches that "by proper design of the die, structures can be molded into the laminated composite material, such as, e.g, openings, cavities, webs or ribs. This might make sense for packaging and strength reasons".[2] Therefore, Lorcks merely

[1] *See* Answer, lines 5-3 of page 14 and line 15 on page 17 – line 2 on page 18.
[2] *See* Lorcks, page 4, fourth paragraph.

teaches that by introducing a further laminate material into a rib-forming die with the foaming aqueous starch suspension, a ribbed laminated composite material can be formed, e.g., a finished product obtained in such a manner that the cured starch is combined with the further laminate material[3]. Lorcks neither teaches nor suggests that the further laminate material before molding serves as a ribbed laminate material. Therefore, Appellants respectfully submit that the Examiner is inaccurate in their assertion that Lorcks teaches introducing a plurality of ribbed laminate material layers, including a ribbed synthetic film, in a mold heated to 220 °C with a foaming aqueous starch suspension.

Further, the Examiner asserts that due to the physical properties of solid materials, the molding temperature of 220 °C, described in the sixth paragraph on page 5 of Lorcks, is sufficient to cause softening of many or all of the laminate composite materials of Lorcks including synthetic films[4].

However, Appellants submit that one of skill in the art would know that polymers are classified into thermosetting and thermoplastic polymers, that thermosetting polymers are not softened even if they are heated, and there are many types of thermosetting polymers that have melting points lower than 220 °C such that they would be melted instead of softened at 220 °C. Therefore, Appellants respectfully submit that the Examiner is inaccurate in their assertion that the laminate composite materials of Lorcks including synthetic films are softened at 220 °C. For example, Doane teaches that films are prepared by molding the powder of hydroxyl-functional polyester at 100 °C to 180 °C, which suggests that the powder of hydroxyl-functional polyester is melted at 100 °C to 180 °C to a fluid, rather than softened.[5] Therefore, Appellants respectfully submit that the Examiner is inaccurate in their

[3] *See* Id., page 3, lines 5-8 of the last paragraph.
[4] *See* Answer, page 13, line 15 and page 17, lines 3-12.
[5] *See* Doane, column 12, line 66 – column 13, line 5.

assertion that many or all of the laminate composite materials of Lorcks including synthetic films are softened at 220 °C.

Moreover, the Examiner asserts that page 4 of Lorcks does not teach away from the invention as recited in claims 13 and 24 because the statement "the relatively high molding temperature does not affect the further laminate material" does not preclude thermal softening.[6] However, Appellants respectfully submit that Lorcks is referring to the relatively high molding temperature not causing a change in shape and/or state of the further laminate material, and as such, Lorcks does preclude the thermal softening of the further laminate material. As such, Appellants maintain the position that Lörcks teaches away from the features of claims 13 and 24.

Finally, the Examiner comes to conclusions based on the description in the specification as filed, which was not published at the time of filing the subject application. Therefore, Appellants respectfully submit that the Examiner is using impermissible hindsight reconstruction to reject the claims. Without access to the present invention, Appellants submit that there would neither be any motivation nor any inclination of one skilled in the art to combine the aforementioned references in order to render obvious claims 13 and 24.

For at least the reasons given above, Appellants submit that Lörcks, Doane, Ando and the combination thereof fail to explicitly teach, or otherwise suggest, all the features recited in claims 13 and 24.

Claims 14-23 and 25-24 are allowable at least for depending from an allowable base claim. Therefore, withdrawal of the rejection of claims 13-34 under 35 U.S.C. § 103(a) is respectfully requested.

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[6] *See* Answer, page 14, lines 2-5 and page 17, lines 12-15.

VIII. CONCLUSION

Appellants respectfully maintain their request that the Board reverse the Examiner's rejection of the pending claims 13-34.

If the USPTO believes that personal communication will further the prosecution of this application, the Office is invited to contact Erin Hoffman, Reg. No. 57,752, at the telephone number below.

The Commissioner is authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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