

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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DONGHEE AMERICA, INC. and DONGHEE ALABAMA, LLC,  
Petitioner,

v.

PLASTIC OMNIUM ADVANCED INNOVATION AND RESEARCH,  
Patent Owner.

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Case IPR2017-01647  
Patent 6,814,921 B1

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Before MITCHELL G. WEATHERLY, CHRISTOPHER M. KAISER, and  
ROBERT L. KINDER, *Administrative Patent Judges*.

KAISER, *Administrative Patent Judge*.

FINAL WRITTEN DECISION  
35 U.S.C. § 318; 37 C.F.R. § 42.73

## INTRODUCTION

### *A. Background*

Donghee America, Inc. and Donghee Alabama, LLC (collectively, “Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–5, 8, and 9 of U.S. Patent No. 6,814,921 B1 (Ex. 1001, “the ’921 patent”). Plastic Omnium Advanced Innovation and Research (“Patent Owner”) did not file a Preliminary Response. On January 18, 2018, we instituted trial on all claims and grounds in the Petition. Paper 7 (“Inst. Dec.”). During the trial, Patent Owner filed a Response (Paper 11, “PO Resp.”), Petitioner filed a Reply (Paper 21), and Patent Owner filed a Sur-Reply (Paper 26). We held a hearing, the transcript of which has been entered into the record. Paper 31 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6, and we issue this Final Written Decision pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. We conclude that Petitioner has not established by a preponderance of the evidence that any of claims 1–5, 8, and 9 of the ’921 patent is unpatentable.

### *B. Related Matters*

The parties note that the ’921 patent is asserted in *Plastic Omnium Advanced Innovation and Research v. Donghee America, Inc. et al.*, C.A. No. 16-cv-00187-LPS-CJB (D. Del.). Pet. 2; Paper 3, 1.

*C. The Asserted Grounds of Unpatentability*

Petitioner contends that claims 1–5, 8, and 9 of the '921 patent are unpatentable based on the following grounds (Pet. 12–49):<sup>1</sup>

<b>Statutory Ground</b>	<b>Basis</b>	<b>Challenged Claim(s)</b>
§ 103	Kasugai <sup>2</sup> and Kagitani <sup>3</sup>	1–5, 8, and 9
§ 103	PFC <sup>4</sup> and Kagitani	1–5, 8, and 9

*A. The '921 Patent*

The '921 patent, titled “Method for Making a Fuel Tank in Plastic Material,” issued on November 9, 2004. Ex. 1001, at [45], [54]. “Plastic fuel tanks on board vehicles of various kinds must generally meet sealing and permeability standards.” *Id.* at 1:6–7. “One means sometimes used has been to incorporate certain accessories and pipes inside the tanks, thus eliminating their interface with the external environment.” *Id.* at 1:17–20. A stated purpose of the '921 patent is “to provide a process for producing a plastic fuel tank with excellent control of the reproducibility and accuracy of the dimensions, which . . . is well suited to the incorporation of accessories before the molding phase.” *Id.* at 1:47–52.

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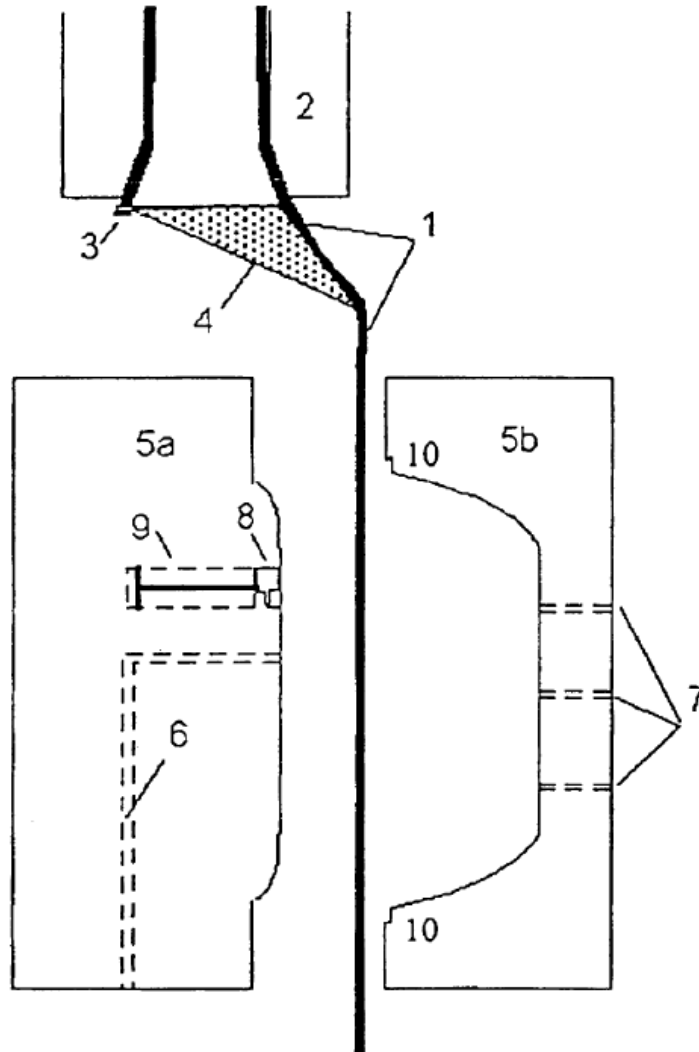
<sup>1</sup> Petitioner also relies on a declaration from Dr. David O. Kazmer. Ex. 1009.

<sup>2</sup> Kasugai, U.S. Patent No. 4,952,347, issued Aug. 28, 1990 (Ex. 1003, “Kasugai”).

<sup>3</sup> Kagitani et al., Japanese Patent Application Publication No. *Hei* 6-218792 A, published Aug. 9, 1994 (English translation and Japanese original both provided) (Ex. 1004, “Kagitani”).

<sup>4</sup> Plastic Forming Company, U.K. Patent Publication No. 1,410,215, published Oct. 15, 1975 (Ex. 1005, “PFC”).

One embodiment of the invention is illustrated in the sole figure of the '921 patent, reproduced below:



The figure depicts “an extrusion-blow-molding installation with continuous extrusion used to produce automobile gas tanks.” *Id.* at 5:17–21. The circular die of extrusion head 2 produces tubular extrudate 1 of circular cross section. *Id.* at 5:21–27. As the tubular material leaves the extrusion head, it “is cut along a generatrix using . . . steel blade” 3. *Id.* at 5:24–27. The cut extrudate “is bent back to form a sheet” that is guided into mold 5. *Id.* at 5:28–30. Mold 5 is closed around the sheet, causing the sheet “to be

compression-molded” in region 10 of mold 5. *Id.* at 5:30–34. Pressurized air is supplied through line 6 to one side of the sheet, and air is evacuated from the other side of the sheet via lines 7. *Id.* at 5:34–38.

*B. Illustrative Claim*

Claims 1–5, 8, and 9 of the ’921 patent are challenged. Claim 1 is illustrative; it recites:

1. A process for manufacturing plastic hollow bodies from two shells formed by molding, which are joined together, at least one shell being produced by compression-molding a portion of a plastic sheet between a mold and a punch and by the remaining portion of the sheet being blow-molded in the region not compression-molded, characterized in that it is applied to the manufacture of a fuel tank and in the sheet is obtained in the same manufacturing line as the shell which will be produced from this sheet, by the cutting and opening an extruded parison of closed cross section.

Ex. 1001, 5:44–6:5 (paragraphing added for clarity).

## ANALYSIS

*A. Claim Construction*

In an *inter partes* review, we construe claim terms in an unexpired patent according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b) (2016);<sup>5</sup> *see Cuozzo Speed Techs. LLC v. Lee*, 136 S. Ct. 2131, 2144 (2016)

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<sup>5</sup> A recent amendment to this rule does not apply here because the Petition was filed before November 13, 2018. *See* “Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before

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