

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PRECISION PLANTING, LLC and AGCO CORP.,
Petitioner,

v.

DEERE & COMPANY,
Patent Owner.

IPR2019-01054
Patent 10,004,173 B2

Before BARRY L. GROSSMAN, JAMES A. TARTAL and
TIMOTHY J. GOODSON, *Administrative Patent Judges*.

TARTAL, *Administrative Patent Judge*.

JUDGMENT

Final Written Decision

Determining No Challenged Claims Unpatentable
Denying in Part and Dismissing in Part Petitioner's Motion to Exclude
Dismissing Patent Owner's Motion to Exclude
35 U.S.C. § 318(a)

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We have jurisdiction to conduct this *inter partes* review under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73 (2018). For the reasons discussed below, we determine that a preponderance of the evidence fails to show that any of claims 1–4, 6–9, or 11–20 (the “Challenged Claims”) of U.S. Patent No. 10,004, 173 B2 (Ex. 1001, “the ’173 patent”) are unpatentable.

I. INTRODUCTION

A. *Summary of Procedural History*

Precision Planting, LLC and AGCO Corp. (collectively, “Petitioner”)¹ filed a Petition (Paper 4, “Pet.”) requesting *inter partes* review of the Challenged Claims. We instituted *inter partes* review of the Challenged Claims on the single ground of unpatentability asserted in the Petition. Paper 20. Deere & Company (“Patent Owner”) filed a Patent Owner Response. Paper 36 (“PO Resp.”). Petitioner filed a Reply to the Patent Owner Response. Papers 58 (“Reply”) (under seal), 59 (publically accessible with redactions). Patent Owner filed a Sur-reply to Petitioner’s Reply. Paper 64 (“Sur-reply”).

Petitioner bears the burden of proving unpatentability of the Challenged Claims by a preponderance of the evidence, and the burden of persuasion never shifts to Patent Owner. *See* 35 U.S.C. § 316(e) (2012); 37 C.F.R. § 42.1(d) (2017); *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). Oral argument was held and a transcript of the hearing appears in the record. Paper 89 (“Tr.”).

¹ Petitioner identifies Monsanto Co. and Bayer AG as additional real parties in interest. Pet. 6.

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Additionally, Petitioner and Patent Owner each filed a motion to exclude opposed by the other, which we address below in Section II.

B. Related Proceedings

The '173 patent is a subject of *Deere & Company v. AGCO Corporation and Precision Planting LLC*, Civil Action No. 1:18-cv-00827-CFC (D. Del.). See Pet. 6; Paper 5, 1; Ex. 2005, 1.² Petitioner also identifies the following proceedings at the Board as related matters:

Case No.	Challenged Patent
IPR2019-01044	U.S. Patent No. 8,813,663
IPR2019-01046	U.S. Patent No. 9,480,199
IPR2019-01047	U.S. Patent No. 9,510,502
IPR2019-01048	U.S. Patent No. 9,686,906
IPR2019-01050	U.S. Patent No. 9,807,922
IPR2019-01051	U.S. Patent No. 9,807,924
IPR2019-01052	U.S. Patent No. 9,820,429
IPR2019-01053	U.S. Patent No. 9,861,031
IPR2019-01055	U.S. Patent No. 9,699,955

Pet. 6.

C. The '173 Patent

The '173 patent, titled “Seeding Machine with Seed Delivery System,” issued on June 26, 2018, from an application filed on August 10, 2017. Ex. 1001, codes (22), (45), (54). The '173 patent states it is a

² An action by Patent Owner asserting the '173 patent against Precision Planting LLC in *Deere & Company v. Precision Planting LLC*, Civil Action No. 1:18-cv-00828-CFC was consolidated with the co-pending District of Delaware case against AGCO Corporation. See Ex. 2005.

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continuation of Application No. 14/616,877, filed on February 9, 2015, a continuation of Application No. 14/504,801, filed on October 2, 2014, and a continuation of Application No. 12/364,010, filed on February 2, 2009. *Id.* at code (63). The '173 patent “relates to a seeding machine having a seed metering system and a seed delivery system for delivering seed from the meter to the ground.” *Id.* at 1:18–20.

The '173 patent explains, as background of the invention, that the “seed metering system receives the seeds in a bulk manner from the seed hopper carried by the planter frame or by the row unit,” and that the “seeds are singulated and discharged at a predetermined rate to the seed placement or delivery system.” *Id.* at 1:42–55. The '173 patent further describes the “most common seed delivery system” as a “gravity drop system” whereby “singulated seeds from the seed metering system merely drop into the seed tube and fall via gravitational force from a discharge end thereof into the seed trench.” *Id.* at 1:56–62. Although the seed tube in prior systems may have a “rearward curvature to reduce bouncing of the seed as it strikes the bottom of the seed trench and to impart a horizontal velocity to the seed in order to reduce the relative velocity between the seed and the ground,” according to the '173 patent “differences in how individual seeds exit the metering system and drop through the seed tube” cause undesirable variation in seed spacing. *Id.* at 1:62–2:2.

The '173 patent describes that its seed delivery system reduces seed spacing variability by capturing the seed from the seed meter, moving the seed down to a lower discharge point, and then accelerating the seed “rearward to a horizontal velocity approximately equal to the forward travel speed of the seeding machine such that the seed, when discharged, has a low or zero horizontal velocity relative to the ground.” *Id.* at 2:28–43.

Figures 2 and 3 of the '173 patent are reproduced below.

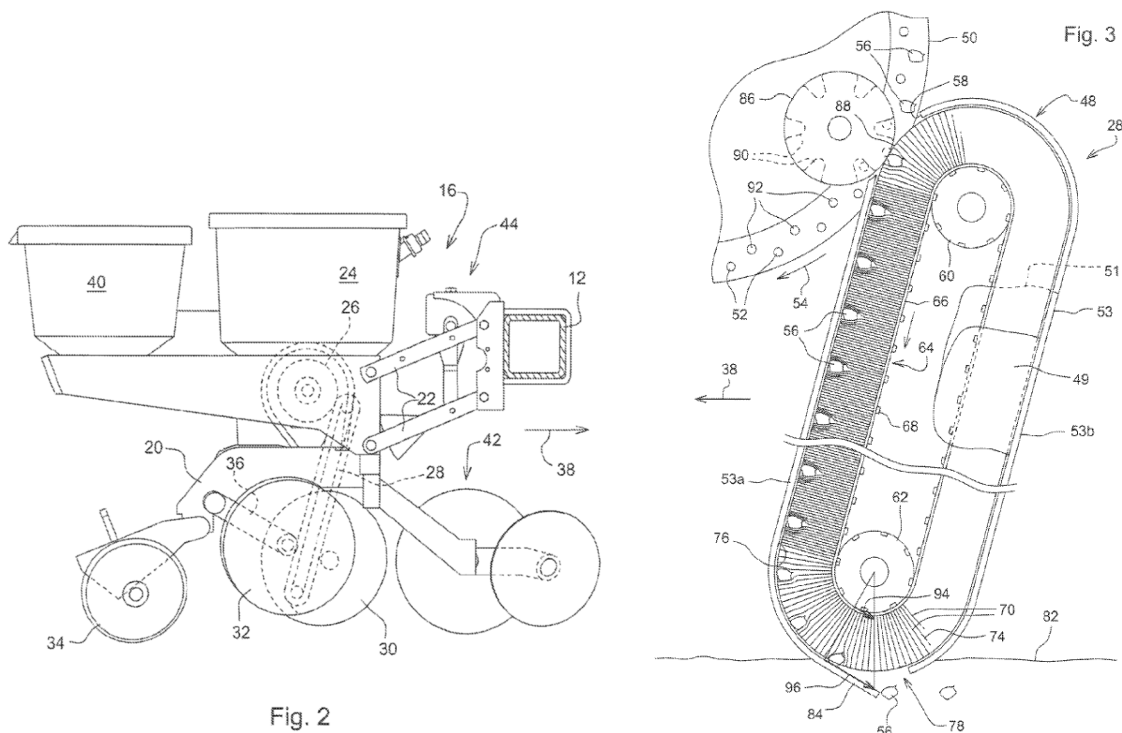


Fig. 2

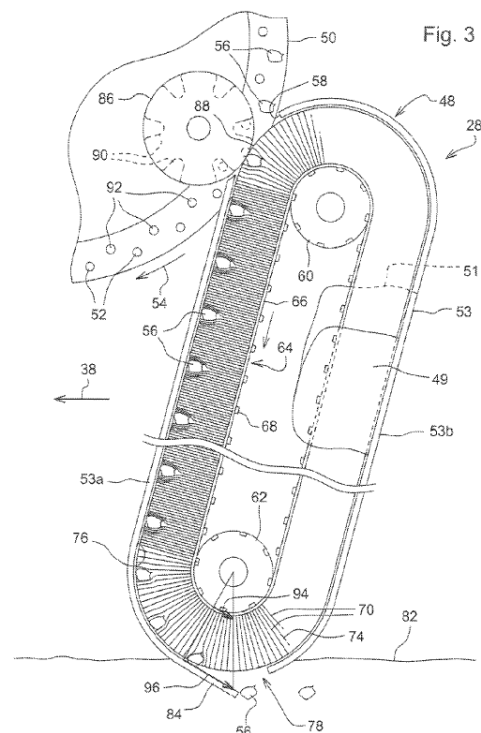


Fig. 3

Figure 2 illustrates a side view of row unit 16 of a seeding machine, including seed hopper 24, seed meter 26, and seed delivery system 28 (shown in more detail in Figure 3). *Id.* at 2:49–52, 3:16–29. Seed stored in seed hopper 24 is provided to seed meter 26 and carried by delivery system 28 into a planting furrow or trench first formed by furrow openers 30 and then closed over the seed by closing wheels 34. *Id.* at 3:23–30.

Figure 3 illustrates an enlarged side view of seed delivery system 28, including housing 48 adjacent to seed disk 50. *Ex.* 1001, 2:51–52, 3:42–53.

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