

NOTE: This disposition is nonprecedential.

**United States Court of Appeals
for the Federal Circuit**

DEERE & COMPANY,
Appellant

v.

RICHARD GRAMM,
Appellee

2020-1488, 2020-1491

Appeals from the United States Patent and Trademark Office, Patent Trial and Appeal Board in Nos. IPR2015-00898, IPR2015-00899.

Decided: February 4, 2021

JEFFRY M. NICHOLS, Brinks Gilson & Lione, Chicago, IL, for appellant. Also represented by JAFON FEARSON, JOSHUA JAMES, LAURA A. LYDIGSEN.

JOHN COTTER, Larkin Hoffman Daly & Lindgren, Ltd., Minneapolis, MN, for appellee. Also represented by THOMAS JOHN OPPOLD.

Before LOURIE, DYK, and MOORE, *Circuit Judges*.

LOURIE, *Circuit Judge*.

Over a half century ago, the Supreme Court decided a patent case between one Graham and John Deere, *Graham v. John Deere Co.*, 383 U.S. 1 (1966), which established the factual inquiries that underly the legal question of obviousness under 35 U.S.C. § 103. We now have an obviousness case between John Deere and another Gramm. John Deere is not so fortunate in the result this time.

In this case, Deere & Company (“Deere”) appeals from two final written decisions of the Patent Trial and Appeal Board (“Board”) holding that claims 12–26 of U.S. Patent 6,202,395 (the “’395 patent”) are not unpatentable as obvious. *See Deere & Co. v. Gramm*, No. IPR2015-00898, 2019 WL 7000106 (P.T.A.B Dec. 20, 2019); *Deere & Co. v. Gramm*, No. IPR2015-00899, 2019 WL 7000102 (P.T.A.B Dec. 20, 2019).¹ Because the Board did not commit legal error and substantial evidence supports the Board’s factual findings, we *affirm*.

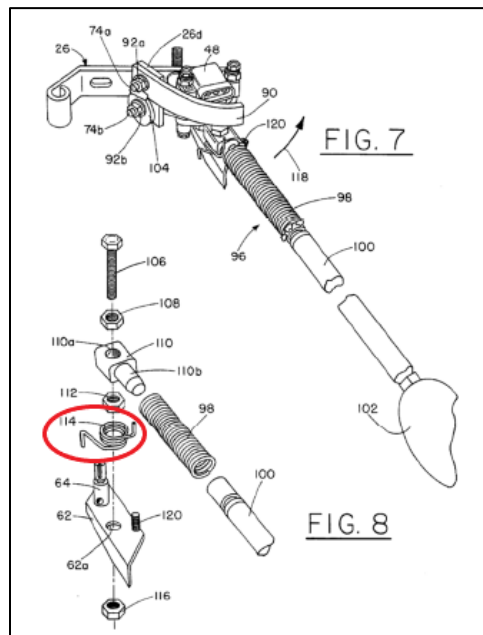
BACKGROUND

Richard Gramm owns the ’395 patent directed to an “apparatus for detecting and controlling the height above the soil of an agricultural machine as it traverses a field.” *See* ’395 patent col. 1 ll. 10–13. The ’395 patent explains that it can be important to maintain the header of a combine crop harvester “above the soil [at] a predetermined, fixed height.” *Id.* col. 1 ll. 17–20. Maintaining a height above the soil is necessary to “avoid damage to the head caused by impact with the soil or other obstruction such as a rock” and to avoid “ingestion of non-crop debris which reduces harvesting efficiency and may also cause damage to

¹ The Board’s reasoning relevant to this appeal in both final written decisions was identical. In this opinion, we will cite the final written decision in IPR 2015-00898 and refer to it as “*Decision*.”

the combine.” *Id.* col. 1 ll. 22–27. However, the header “must also not be raised too high to avoid missing down plants which do not extend upwardly a sufficient distance.” *Id.* col. 1 ll. 28–30.

Relevant to this appeal, the patented apparatus contains a flexible sensor arm that engages the soil and is dragged across the ground as the combine crop harvester travels in the forward direction. *See id.* col. 2 ll. 22–33, col. 3 ll. 24–42, col. 6 l. 9–col. 7 l. 16. Attached to the sensor arm is a “ball 102 in the shape of an ellipsoid which engages the soil as the combine traverses a field.” *Id.* col. 6 ll. 17–19. The sensor arm includes “coiled spring 114,” which “urges sensor arm 96 in a counterclockwise direction of rotation about the motion sensor” and “thus maintains the sensor arm 96 at an inclined angle, with the ball 102 trailing the bracket 26 as the ball engages the soil as the combine traverses the field.” *Id.* col. 6 ll. 36–42. Figures 7 and 8 illustrate an embodiment of the sensor arm:



'395 patent Figs. 7 and 8 (annotation added).

Claim 12 is the only independent claim at issue in this appeal:

12. Apparatus for maintaining a non-cut crop header in a crop harvester a designated height above the soil as the crop harvester traverses a field, said apparatus comprising:

a generally linear arm coupled to the header and having first and second opposed ends, wherein the first end of said arm engages and is displaced over the soil as the header moves above the soil;

angular deflection sensing means coupled to the second end of said arm for measuring a deflection of said arm when the first end of said arm encounters irregularities in the soil as the header moves above the soil and for providing a first signal representing the extent of deflection of said arm;

biasing means for urging said arm to a selected inclined orientation relative to vertical, wherein said arm in said selected inclined orientation extends below and aft of said angular deflection sensing means as the crop harvester moves in a forward direction, said biasing means allowing for forward displacement of the first end of said arm beyond vertical when the crop harvester is moved rearwardly while the first end of said arm engages the soil without damaging said arm, with said biasing means again urging said arm to said selected inclined orientation when the crop harvester is again moved in the forward direction or when the second end of said arm is removed from contact with the soil; and

control means coupled to said header and said angular deflection sensing means and responsive to said first signal for raising or lowering the header in accordance with said first signal in maintaining the header a designated height above the soil, wherein said flexible arm and angular deflection sensing means are attached to a head housing disposed on a forward portion of said combine and said head housing is comprised of polyurethane and includes a metal tip and a mounting bracket for attaching said metal tip to a forward end of said head housing, and wherein said mounting bracket further couples said flexible arm to a forward end of said head housing.

Id. at col. 8 ll. 22–61 (emphasis added).

Deere filed two petitions for *inter partes* review (IPR) of all claims of the '395 patent. On September 23, 2015, the Board instituted review of claims 1–11 and 27–34, but not claims 12–26. On September 22, 2016, the Board issued a final written decision in each IPR holding claims 1–11 and 27–34 unpatentable as obvious. *Deere & Co. v. Gramm*, No. IPR2015-00898, 2016 WL 11503073 (P.T.A.B. Sept. 22, 2016); *Deere & Co. v. Gramm*, No. IPR2015-00899, 2016 WL 11503074 (P.T.A.B. Sept. 22, 2016). We affirmed the Board's final written decisions. *Gramm v. Deere & Co.*, 711 F. App'x 650 (Fed. Cir. 2018). However, in view of the Supreme Court's decision in *SAS Ins., Inc. v. Iancu*, 138 S. Ct. 1348 (2018), the Supreme Court vacated our affirmance and remanded the case for further consideration. *Gramm v. Deere & Co.*, 139 S. Ct. 244 (2018). We then recalled the mandate, again affirmed the Board's holding regarding claims 1–11 and 27–34, and remanded to the Board for further proceedings regarding claims 12–26.

On December 20, 2019, the Board issued a final written decision in each IPR holding that claims 12–26 of the '395 patent were not proven unpatentable as obvious. Deere appealed, and we have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

DISCUSSION

We review the Board's legal determinations de novo, *In re Elsner*, 381 F.3d 1125, 1127 (Fed. Cir. 2004), but we review the Board's factual findings underlying those determinations for substantial evidence, *In re Gartside*, 203 F.3d 1305, 1316 (Fed. Cir. 2000). A finding is supported by substantial evidence if a reasonable mind might accept the evidence as adequate to support the finding. *Consol. Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938). "If two 'inconsistent conclusions may reasonably be drawn from the evidence in record, the PTAB's decision to favor one conclusion over the other is the epitome of a decision that must be sustained upon review for substantial evidence.'" *Elbit Sys. of Am., LLC v. Thales Visionix, Inc.*, 881 F.3d 1354, 1356 (Fed. Cir. 2018) (quoting *In re Cree, Inc.*, 818 F.3d 694, 701 (Fed. Cir. 2016) (internal brackets omitted)).

This appeal centers on the "biasing means" limitation in claim 12, and it is helpful to begin by establishing the several issues on which the parties agree. The parties agree that, in construing the biasing means limitation, the Board correctly determined that it is a means-plus-function element that invokes 35 U.S.C. § 112(f). The parties further agree that the Board correctly identified the three functions of the biasing means as enumerated in the claim, the first of which is:

urging said arm to a selected inclined orientation relative to vertical, wherein said arm in said selected inclined orientation extends below and aft of said angular deflection sensing means as the crop harvester moves in a forward direction

'395 patent col. 8 ll. 35–39. And the parties agree that the corresponding structure to achieve the functions of the biasing means is the “coiled spring” denoted as component 114 in the figures “and equivalents thereof.” *Decision*, 2019 WL 7000106, at *5–7. It is thus undisputed that in order to teach the biasing means limitation, a prior art reference must teach that a coiled spring or an equivalent thereof performs the function of urging the arm to a selected inclined orientation relative to vertical.

The parties’ dispute concerns the Board’s application of its claim construction in comparing the claim to the prior art, specifically the Cleveland reference.² Deere contends that the Board committed legal error by deviating from its claim construction for the biasing means limitation. Deere insists that the Board improperly narrowed the claim to exclude a scenario in which the biasing means urges the arm to the selected inclined orientation through contact with the ground. Deere argues that this claim construction error led to the erroneous finding that Cleveland’s spring does not perform the first function of the biasing means.

Gramm responds that Deere has not actually raised a claim construction issue but rather a challenge to the Board’s factual findings about the content of Cleveland’s teachings. Gramm further argues that the Board’s findings regarding Cleveland are supported by substantial evidence. For the reasons that follow, we agree with Gramm.

First and foremost, we reject Deere’s attempt to obtain de novo review of a factual finding by reframing it as though it presents a claim construction issue. It is well-established that “[o]ur validity analysis is a two-step procedure.” *TI Grp. Auto. Sys. (N. Am.), Inc. v. VDO N. Am., L.L.C.*, 375 F.3d 1126, 1139 (Fed. Cir. 2004). “The first step involves the proper interpretation of the claims. The

² U.S. Patent 3,611,286.

second step involves determining whether the limitations of the claims as properly interpreted are met by the prior art.” *Id.* (quoting *Beachcombers, Int’l, Inc. v. WildeWood Creative Prods., Inc.*, 31 F.3d 1154, 1160 (Fed. Cir. 1994)). The first step of interpreting the claims is a question of law, but the second step of determining whether the alleged prior art met the claim limitations is a question of fact. *Elmer v. ICC Fabricating, Inc.*, 67 F.3d 1571, 1574 (Fed. Cir. 1995); *see also Graham*, 383 U.S. at 17–18 (establishing the “basic factual inquiries” underlying obviousness, including “the scope and content of the prior art” and the “differences between the prior art and the claims at issue”).

Here, after construing the biasing means limitation, the Board determined that Cleveland did not teach the first function of the biasing means. That is a factual finding subject to appellate review for substantial evidence. *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1280 (Fed. Cir. 2015) (“What a reference teaches and the differences between the claimed invention and the prior art are questions of fact which we review for substantial evidence.”) (citing *In re Baxter Int’l, Inc.*, 678 F.3d 1357, 1361 (Fed. Cir. 2012)). Deere attempts to contort the Board’s opinion by suggesting that the Board actually misconstrued the claim in such a way so as to not read on the teachings of Cleveland. We are not persuaded by that argument, which seeks to blur the clear delineation in the law between the two steps of the invalidity analysis.³

Moreover, Deere mischaracterizes the Board’s findings regarding Cleveland. Deere truncates a quote from the Board’s opinion and misleadingly asserts that the Board

³ Because we agree with Gramm that Deere’s argument is not actually based on claim construction, we decline to consider Gramm’s arguments that waiver and judicial estoppel should attach to any such claim construction argument.

found that “Cleveland’s spring urges the arm to the inclined orientation ‘through contact with the ground.’” Appellant Br. 19 (quoting *Decision*, 2019 WL 7000106, at *15). Deere then spends significant portions of its brief arguing the undisputed and unsurprising point that the functions of the biasing means in claim 12 are carried out while the arm contacts the ground. But the full quote from the Board’s decision reveals the flaw in Deere’s argument:

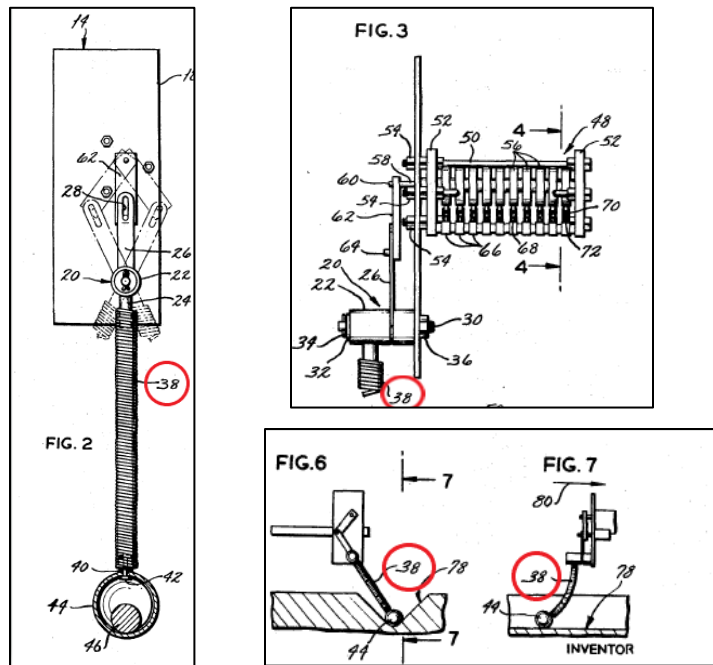
In Cleveland, it is *only* through contact with the ground that spring 38 *is urged* into an inclined orientation, *not because of any urging function performed by spring 38*.

Decision, 2019 WL 7000106, at *15 (emphases added). The Board found that Cleveland’s helical spring—which also functions as part of the “arm” in Cleveland’s apparatus, see J.A. 308 col. 2 ll. 59–65—“is urged” into an inclined position “only” by the ground, and the spring does not itself do any “urging.” Thus, contrary to Deere’s assertion that the Board merely found that Cleveland’s spring performs the first biasing means function in a different way than the ’395 patent, the Board actually found that Cleveland’s spring does not perform that function at all.

We are thus left only with the question whether substantial evidence supports the Board’s finding that Cleveland’s spring does not perform the required function of “urging [the] arm into an inclined orientation relative to vertical.” To support that finding the Board relied on numerous disclosures from Cleveland regarding the “elongated helical spring 38.” See *Decision*, 2019 WL 7000106, at *14–15. As stated in Cleveland:

Spring 38 is flexible along its longitudinal axis but is adapted to maintain its straight configuration in absence of bending forces being applied thereto. Spring 38 and swing member 20 together form an elongated member which is free to swing about the axis provided by hinge bolt 30.

J.A. 308 col. 2 ll. 60–65. The Board looked to Cleveland's figures, including Figures 2, 3, 6, and 7, which together demonstrate how the helical spring functions as part of Cleveland's apparatus as it moves across a field:



J.A. 307 (annotations added). The Board then relied on passages in Cleveland's written description, all of which demonstrate that Cleveland's spring "urges the arm to a vertical orientation, not a selected orientation relative to vertical." *Decision*, 2019 WL 7000106, at *14–15 (quoting Cleveland's disclosure at J.A. 309–310 col. 3 l. 67–col. 4 l. 26, col. 5 ll. 5–12). The Board thus found:

In Cleveland, it is only through contact with the ground that spring 38 is urged into an inclined orientation, not because of any urging function performed by spring 38. Cleveland makes this clear by purposely constructing its device such that ". . . helical spring 38 will be deflected in the manner shown in Fig. 7."

Id. (quoting Cleveland’s disclosure at J.A. 309 col. 3 ll. 67–71). The disclosures in Cleveland that were cited by the Board constitute substantial evidence supporting the Board’s finding that Deere failed to show that Cleveland’s spring performs the first function of the biasing means in claim 12 of the ’395 patent.

Finally, we disagree with Deere’s argument that this latest round of IPR decisions conflicts with the earlier final written decisions regarding claims 1–11 and 27–34. In those earlier decisions, the Board found that claim 4, which includes a “biasing means for urging said flexible arm downward into engagement with the soil,” would have been obvious in view of the prior art. *See Deere & Co.*, 2016 WL 11503073, at *22; ’395 patent col. 7 ll. 65–67. But we agree with the Board’s conclusion that:

“urging said flexible arm downward into engagement with the soil” (as recited in claim 4) is not the same function as “urging said arm to a selected inclined orientation relative to vertical . . .” (function [1] of the biasing means of claim 12).

Decision, 2019 WL 7000106, at *13. The Board has never suggested that Cleveland’s spring does anything other than urge the flexible arm into engagement with the soil. The Board simply found here that Cleveland’s spring does so by urging the arm “to a vertical orientation, not a selected orientation relative to vertical.” *Id.* at *15. As discussed above, that finding is supported by substantial evidence.

CONCLUSION

We have considered Deere’s remaining arguments but we find them unpersuasive. Accordingly, the Board’s final written decisions are *affirmed*.

AFFIRMED