

United States Court of Appeals for the Federal Circuit

IN RE: NORDT DEVELOPMENT CO., LLC,
Appellant

2017-1445

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in No. 13/241,865.

Decided: February 8, 2018

JEREMY COOPER DOERRE, Tillman Wright PLLC,
Charlotte, NC, argued for appellant.

JOSEPH GERARD PICCOLO, Office of the Solicitor,
United States Patent and Trademark Office, Alexandria,
VA, argued for appellee Joseph Matal. Also represented
by NATHAN K. KELLEY, THOMAS W. KRAUSE, WILLIAM
LAMARCA.

Before MOORE, TARANTO, and STOLL, *Circuit Judges*.
STOLL, *Circuit Judge*.

Nordt Development Co., LLC appeals the Patent Trial
and Appeal Board's decision affirming an examiner's
rejection of claims 1 and 14 of U.S. Patent Application No.
13/241,865. *Ex Parte Nordt*, No. 2015-001233, 2016 WL
6560183 (P.T.A.B. Nov. 1, 2016). For the reasons below,

we disagree with the Board's claim construction of "injection molded" as a process limitation with no patentable weight, vacate the Board's finding of anticipation, and remand for additional proceedings consistent with this opinion.

BACKGROUND

The '865 application is directed to an elastic knee brace having a framework (106) and a hinge (108) with a strut (112) and arm components (114, 116). Application Figure 1 is shown below and illustrates a side perspective view of the front of the knee brace. The elastic nature of the knee brace allows for and aids in the flexing of the knee.

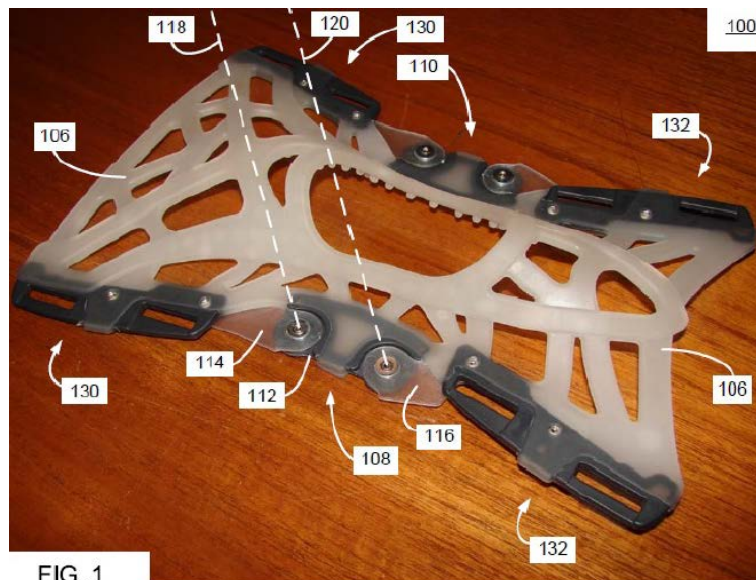


FIG. 1

Claim 1 is representative of the two claims at issue on appeal:

1. A support for an area of a body that includes a hinge joint, comprising:
 - (a) a hinge mechanism comprising an *injection molded* strut component and *injec-*

tion molded first and second arm components;

(b) an elastically stretchable framework *injection molded* about the strut and arm components of the hinge mechanism, the framework being configured to extend across the hinge joint of the area of the body, and the framework defining a flexible, elastically stretchable web of elastomeric interconnecting members;

(c) wherein the first arm component is connected to the strut component such that the first arm component is rotatable relative to the strut component only about a first pivot axis;

(d) wherein the second arm component is connected to the strut component such that the second arm component is rotatable relative to the strut component only about a second pivot axis; and

(e) wherein the strut component is configured to extend with the framework across the hinge joint such that the first pivot axis is located on a first side of the hinge joint and the second pivot axis is located on a second, opposite side of the hinge joint.

Nordt, 2016 WL 6560183, at *1 (emphases added).

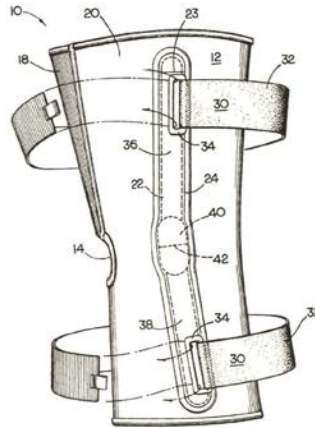
The specification describes the “injection molded” aspect of the invention in a section titled “Preferred Manufacturing Methods” near the end of the written description. This section includes the following relevant paragraphs:

[¶140] The supports of the invention and, in particular, the embodiments collectively shown and described above preferably are manufactured in injection molding processes, whereby the various components of each embodiment of the support, including, inter alia, the framework and strut components, are integrally formed from elastomeric materials. The injection molding processes preferably comprise, for each support, multi-step injection molding, whereby each component can be formed from different elastomeric materials having different elastic stretchability even though the components are integrally constructed.

[¶141] In particular, the strut components and strap interface components can be formed through injection molding of a first elastomeric material, and then the framework can be formed through injection molding of a second elastomeric material about the strut components and strap interface components. This is particularly useful in manufacturing embodiments having strut components and strap interface components that are intended to provide a degree of rigidity to side areas of the framework, which can be readily made in an efficient and cost effective manner.

J.A. 81.

During prosecution, the examiner rejected claims 1 and 14 as being anticipated by U.S. Patent No. 6,238,360 (“Gildersleeve”). Gildersleeve teaches a knee brace (10) with a sleeve (12) containing a stiffener (22) having a connector portion (40) which connects a proximal (36) and a distal (38) portion. ’360 patent col. 3 ll. 27–33, col. 5 ll. 30–36.



Gildersleeve teaches that the sleeve (12) “may be formed of any desirable fabric such as fully-, non-, or partially-stretchable fabric which may or may not be breathable” and “may be fabricated using conventional stitching to conform to knees, elbows or other body joints as desired.” *Id.* at col. 3 ll. 27–33. Gildersleeve also teaches that the stiffener (22) “may be formed of elastic, non-elastic or partially elastic material,” *id.* at col. 1, ll. 56–58, and that in the preferred embodiment, stiffener (22) is contained within a sheath (24) “formed by stitching material to sleeve 12” and “generally configured in shape to conform to the shape of the stiffener 22,” *id.* at col. 3, ll. 60–63.

Comparing Gildersleeve to the claims, the examiner found that Gildersleeve’s sleeve (12) met the claimed framework, Gildersleeve’s connector (40) met the claimed strut component, and Gildersleeve’s proximal (36) and distal (38) portions met the claimed arm components. Nordt did not dispute the examiner’s findings. Instead, Nordt attempted to distinguish Gildersleeve by further limiting the recited “strut” and “arm” components with the phrase “injection molded.” Nordt also amended claim 1 to include clause (b), which recites, in part, “an elastically stretchable framework *injection molded* about the strut and arm components of the hinge mechanism.” J.A. 23 (emphasis added). At the same time, Nordt argued that

“injection molded” conveys “a clear structural limitation,” but that “to the extent that the examiner would prefer alternative, or additional, language related to such structural limitation, Applicant would be happy to make such changes.” Nordt’s Amendment and Remarks dated September 24, 2012, at 11, in App. No. 13/241,865.

The examiner maintained the rejection based on Gildersleeve after concluding that “injection molded” is “a method of manufacturing an apparatus and . . . claim 1 is an apparatus claim.” J.A. 28. The examiner explained that “although Gildersleeve does not disclose [that] the sleeve (12) is injection molded,” Gildersleeve anticipates the claim because it “does disclose [that] the sleeve is a flexible, elastically stretchable web of elastomeric interconnecting members [col. 3, ll. 27–30].” *Id.* The examiner explained that “[i]n order to anticipate the injection molded feature, the prior art must disclose the finished product and not the method of making the product.” *Id.*

Nordt appealed the examiner’s rejection to the Board, arguing that “injection molded” conveys a structural limitation in that it describes the structural relationship between the framework and the strut and arm components. The Board affirmed the examiner’s rejection after finding that “Appellants do not persuasively explain what structural limitation is imparted by this manufacturing practice.” *Nordt*, 2016 WL 6560183, at *2.

This appeal followed, and we have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

DISCUSSION

Nordt’s only argument on appeal is that the Board erred in construing claims 1 and 14 as product-by-process claims with “injection molded” as the process limitation, and thereby refusing to accord “injection molded” any patentable weight. We review the Board’s claim construction, which is based on a review of only intrinsic evidence,

de novo. *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S Ct. 831, 841 (2015).

We have held that, when considering the patentability of product claims that contain process limitations, claim scope is generally based on the product itself, not the process. *In re Thorpe*, 777 F.2d 695, 697 (Fed. Cir. 1985) (“[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself.”). If the process limitation connotes specific structure and may be considered a structural limitation, however, that structure should be considered. *In re Garnero*, 412 F.2d 276, 279 (CCPA 1969) (holding that “interbonded one to another by interfusion” connotes structure to a claimed composite and should therefore be considered in the determination of patentability).

The Board declined to accord “injection molded” any patentable weight after finding that Nordt failed to explain the specific structural limitation imparted by “injection molded.” In doing so, the Board first presumed “injection molded” to be a process limitation in a product-by-process claim, then required Nordt to rebut its presumption by explaining the specific structural limitation provided by “injection molded.”

Nordt primarily relies on *Garnero* on appeal. Specifically, Nordt argues that the Board erred in presuming the “injection molded” limitation to be a process, rather than structure. In *Garnero*, our predecessor court dealt with a similar claim element and found that the Patent Office erred in presuming the limitation “interbonded one to another by interfusion” to be a process, rather than structural, limitation. *Garnero*, 412 F.2d at 279 (“The trouble with the solicitor’s approach is that it necessarily assumes that claim 1 should be construed as a product claim containing a process, rather than structural, limitation.”). The *Garnero* court found that the limitation “is as capable

of being construed as a structural limitation as ‘intermixed,’ ‘ground in place,’ ‘press fitted,’ ‘etched,’ and ‘welded,’ all of which at one time or another have been separately held capable of construction as structural, rather than process, limitations.” *Id.* The *Garnero* court noted that “[t]he correct inquiry” is “whether the product defined” in the claim is “patentably distinguishable over [the prior art] in view of the structural limitation” defined by the limitation. *Id.*

We agree with Nordt that the claim term at issue here is structural and should have been afforded weight when assessing patentability. While the Board typically will not accord patentable weight to a process limitation in a product-by-process claim, *see, e.g., Thorpe*, 777 F.2d at 697, this is not such an instance. In presuming “injection molded” to be a process limitation, the Board confounded two somewhat distinct inquiries—the first being whether “injection molded” is a process or structural limitation, the second being the precise meaning of the limitation if structural.

As to the first inquiry, we find that “injection molded” connotes structure. Although the application describes “injection molded” as a process of manufacture, *see* J.A. 81, ¶ 140 (explaining that the knee brace is preferably “manufactured in injection molding processes”), neither the Board nor the examiner dispute Nordt’s assertion that “there are clear structural differences” between a knee brace made with fabric components and a knee brace made with injection-molded components. J.A. 34. For one, the specification describes injection molding as forming an integral component. *See, e.g.,* J.A. 81, ¶ 140. Indeed, the specification describes injection molded components to be “integrally formed from elastomeric materials” and states that “multi-step injection molding” may be used, “whereby each component can be formed from different elastomeric materials having different elastic stretchability even though the components are integrally

constructed.” *Id.* Thus, at a minimum, the specification demonstrates that “injection molded” connotes an integral structure.

Moreover, as we have explained, “words of limitation that can connote with equal force a structural characteristic of the product or a process of manufacture are commonly and by default interpreted in their structural sense, unless the patentee has demonstrated otherwise.” *3M Innovative Props. Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1371–72 (Fed. Cir. 2003). Indeed, since *Garnero*, we have in numerous instances held such limitations to convey structure even when they also describe a process of manufacture. *See, e.g., Hazani v. U.S. Int’l Trade Comm’n*, 126 F.3d 1473, 1479 (Fed. Cir. 1997) (concluding that “chemically engraved” was not a process term); *Vanguard Prods. Corp. v. Parker Hannifin Corp.*, 234 F.3d 1370, 1372 (Fed. Cir. 2000) (holding that the claim term “integral” describes a structural requirement, not the particular manufacturing process discussed in the specification); *3M Innovative Props. Co.*, 350 F.3d at 1371 (finding “superimposed” to describe a structural relationship and not a process); *SmithKline Beecham Corp. v. Apotex Corp.*, 439 F.3d 1312, 1322 (Fed. Cir. 2006) (Newman, J., dissenting) (listing “a molded plastic” as an example of a process limitation that connotes structure). Here, not only does the specification itself convey a structural meaning to “injection molded,” Nordt has repeatedly represented that it does.

We acknowledge that the issue presented in this case was not an easy one. Indeed, we agree with the Board that Nordt failed to persuasively or precisely explain “what structural limitation is imparted by [‘injection molded’].” *Nordt*, 2016 WL 6560183, a *2. *See* J.A. 33, Nordt’s April 10, 2014, Appeal Brief at 10, arguing only that “injection molded” is “used to describe the structural relationship between the framework and the strut and arm components.” Had Nordt done so, it may well have

succeeded in convincing the Board that the limitation requires structure. Nordt's failure to identify that structure, however, does not affect our conclusion, as the structural nature of "injection molded" can be gleaned from the plain claim language and the specification itself.

We remand for the Board to construe the "injection molded" limitation in the first instance. While the specification supports an interpretation that requires an integral structure, we leave it to the Board to determine whether this claim language or the surrounding claim language requires any additional structure.

CONCLUSION

Because the Board affirmed the examiner's anticipation rejection based on an incorrect claim construction, we vacate the rejection and remand for further proceedings consistent with this opinion.

VACATED AND REMANDED

COSTS

Costs to Appellant.