

Keywords: structural limitations; method of manufacture; product-by-process

General: When considering the patentability of the product claims that contain process limitations, certain process limitations connote structure for examination purposes.

In Re: Nordt Development Co., LLC. (Fed. Cir. 2018)
Decided Feb. 8, 2018

I. Facts

Nordt Development Co., LLC (“Nordt”) was prosecuting U.S. Patent Application No. 13/241,865 (“’865 application”) generally directed to an elastic knee brace, having a framework (106) and a hinge (108) with a strut (112) and arm components (114, 116)^{1a}. The elastic nature of the knee brace allows for and aids in the flexing of the knee. During prosecution, the examiner rejected independent claims 1 and 14 of the ‘086 application as anticipated by U.S. Patent No. 6,238,360 (“’360 patent”), which is generally directed at a knee brace (10) with a sleeve (12) containing a stiffener (22) having a connected portion (40) which connects a proximal (36) and a distal (38) portion^{1b}. The ‘360 patent discloses that the sleeve may be formed of any desirable fabric such as “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,” and “may be formed of elastic, non-elastic, or partially elastic material.”

To attempt to distinguish claim 1 from the ‘360 patent, during prosecution, Nordt amended independent claim 1 by further limiting the “strut” and “arm” to recite “injection molded,” and argued that “injection molded” conveys “a clear structural limitation.” Specifically, claim 1 was amended to recite:

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 *injection 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.

Paragraphs 140 and 141 of the specification provide support for the injection molded arrangement of these parts². In response to Nordt’s amendments, the examiner maintained the rejection of anticipation in view of the ‘360 patent because “injection molded” is “a method of manufacturing an apparatus and... claim 1 is an apparatus claim,” and 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.” Nordt appealed the examiner’s rejection to the Board, arguing that “injection molded” conveys a structural limitation that

describes the structural relationship between the framework and the strut and arm components. The Board affirmed the examiner's rejection finding that "Appellants do not persuasively explain what structural limitation is imparted by this manufacturing practice."

II. Issues

Did the Board err in upholding the examiner's interpretation of "injection molded" as being directed to a method of manufacturing that fails to impart structure to the rejected claims?

III. Discussion

Yes, the Fed. Cir. held that when considering the patentability of the product claims that contain process limitations, claim scope is generally based on the product itself, not the process. The court noted that 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" and, accordingly, found "injection molded" to be a process limitation in a product-by-process claim, requiring Nordt to rebut its presumption by explaining the specific structural limitation provided by "injection molded." Nordt argued that the Board erred in presuming the "injection molded" limitation to be a process, rather than structure and the court agreed.

The court agreed that the present case was not easy, as Nordt failed to persuasively explain what structural limitation is imparted by the injection mold; however neither the Board nor the examiner disputed Nordt's assertion that "there are clear structural differences" between a brace made with fabric components and a knee brace made with injection-molded components. In reaching this conclusion, the Fed. Cir. referenced *Thorpe* and *Garnero*. In *Thorpe* it was held that "[e]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself." In *Garnero*, it was found that the limitation of "interbounded one to another by interfusion... is capable of being construed as a structural limitation as 'intermixed,' 'ground in place,' 'press fitted,' 'etched,' and 'welded,' all of which have been separately held capable of construction as structural" limitations. The Fed. Cir. held that, in a similar fashion, "injection molded" connotes an integral structure. In line with *Garnero*, the Fed. Cir. held that if the process limitation connotes specific structure that may be considered a structural limitation, that structure should be considered.

The Fed. Cir. concluded that "injection molded" denotes structure in claims 1 and 14 of the '865 application and should be examined accordingly. As such, the Fed. Cir. remanded for the Board to construe the "injection molded" limitation in the first instance. Because the Board affirmed the examiner's anticipation rejection based on incorrect claim construction, the Fed. Cir. vacated and remanded the rejection for further proceedings consistent with this opinion.

IV. Conclusion

In line with *Thorpe* and *Garnero*, the Fed. Cir. gave the language of "injection molded" patentable weight as denoting structure. As such, the Fed. Cir. appears to be taking the stance that product-by-process claims may impart structure that must be taken into account by examiners and the Board during examination of structure claims.

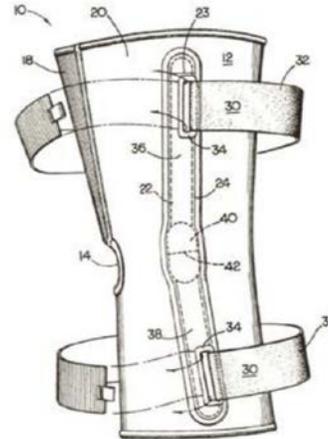
V. Endnotes

1. (a) Figure 1, '865 application



FIG. 1

(b) Figure 1, '360 patent



2. Specification of the '865 application discloses:

[¶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.