

NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

2009-1305

SOUTHERN MILLS, INC.,

Plaintiff-Appellant,

v.

POLARTEC, LLC,

Defendant-Appellee.

D. Clay Holloway, Kilpatrick Stockton LLP, of Atlanta, Georgia, argued for plaintiff-appellant. With him on the brief were Susan A. Cahoon, Kris J. Doyle, D. Clay Holloway and Louise T. Rains.

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Appealed from: United States District Court for the Northern District of Georgia

Judge Beverly B. Martin

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SOUTHERN MILLS, INC.,

Plaintiff-Appellant,

v.

POLARTEC, LLC,

Defendant-Appellee.

Appeal from the United States District Court for the Northern District of Georgia in case no. 1:07-CV-0893, Judge Beverly B. Martin.

DECIDED: May 14, 2010

Before MICHEL, Chief Judge, BRYSON, and DYK, Circuit Judges.

BRYSON, Circuit Judge.

This appeal comes to us from a consent judgment of noninfringement following a district court's claim construction order. We affirm in part, reverse in part, and remand.

I

Appellant Southern Mills, Inc., is the assignee of U.S. Patent No. 5,727,401 ("the '401 patent"), which is directed to a fire-resistant fabric suitable for use in a firefighter's turnout garment. Southern Mills filed suit against Polartec, Inc., in the United States District Court for the Northern District of Georgia, accusing Polartec of infringing most of

the claims of the '401 patent. The claims that are the focus of this appeal are claims 1, 6, and 17.

Claim 1 recites a fabric suitable for use as a “thermal barrier” in a firefighter’s turnout garment having a “face side” facing the firefighter and a “back side” facing the garment, and comprising

a 3-end knit formed of stitch yarns, tie yarns, and nap yarns, said stitch yarns and said tie yarns following substantially identical parallel paths along said knit, wherein said stitch yarns form the face side of the fabric and said nap yarns are tied into the knit at periodic locations along the back side of the fabric by the tie yarns;

wherein portions of the nap yarns are pulled away from the 3-end knit to form a fleece on the back side of the fabric; and

wherein said stitch yarns, tie yarns, and nap yarns are made of a fibrous flame resistant material.

Claim 6 recites a process of making a fabric suitable for use as a thermal barrier in a firefighter’s turnout gear, comprising

forming a 3-end knit of stitch yarns, tie yarns, and nap yarns, wherein the stitch yarns and the tie yarns follow substantially identical parallel paths along the knit and wherein the nap yarns are loosely tied into the knit at periodic intervals; and

subjecting the knit to a napping operation so that the nap yarns are pulled away from the knit to form a fleece;

wherein the stitch yarns, tie yarns, and nap yarns are made of a flame resistant material.

Claim 17 recites a “fleece knit thermal barrier fabric” suitable for use in a firefighter’s garment, comprising

a knitted face layer including a plurality of flame resistant tie yarns; and

a napped back layer integrally formed with said knitted face layer, said napped back layer including a plurality of flame resistant nap yarns that are tied into said knitted face layer by said tie yarns and which have

portions thereof pulled away to form a nap surface for facing the intermediate moisture barrier layer of the garment.

The principal dispute at the Markman hearing concerned the proper construction of the term “3-end knit,” which appears in claims 1 and 6 and their dependent claims. Southern Mills proposed that the term be construed to mean a “fabric containing yarns capable of serving one of three different functions in the fabric.” That definition, Southern Mills contended, would include the use of either one, two, or three different yarns, as long as the yarns used in the fabric were collectively capable of performing the stitch, tie, and nap functions. Polartec argued for a narrower definition that would require the use of three different yarns, with each yarn performing only one of the specified functions.

The district court found the claim language to be inconclusive and accordingly looked to the specification. After conducting a detailed review of the specification, the court adopted Polartec’s requested definition and construed “3-end knit” to mean “a knit formed of three different yarns, each serving one of three different functions: stitch, tie, and nap.” The court explained that “[t]he very first sentence of the Detailed Description section reads: ‘The 3-end knit structure comprises the interaction of three yarns each serving their own function.’” Moreover, the patent described the stitch yarn as being “the only yarn of the three that is visible from the face side of the cloth.” The court noted that for each of the three functions, the patent provides a separate list of suggested materials and types of yarn, indicating that the patent contemplates the use of three different yarns in the knit structure.

The district court next construed the three different yarn functions. The court ruled that “stitch yarns” form the face side of the knit and are the only ones visible from

the face side; that “tie yarns” attach the nap yarns to the back side of the knit and are not visible from the face side; and that “nap yarns” lie on the back side of the knit, are tied into the knit at periodic intervals by the tie yarns, and are not visible from the face side of the knit. The court based its construction on language in the claims as well as the specification. In particular, the court observed that claim 1 states that the “stitch yarns form the face side of the fabric,” and that the “nap yarns are tied into the knit at periodic locations along the back side of the fabric by the tie yarns.” See ’401 patent, col. 5, ll. 59-62. The court also relied on language from the specification stating that “[t]he stitch or face yarn . . . is the only yarn of the three that is visible from the face side of the cloth,” and that “[t]he nap yarn . . . is attached to the knit by the tie or tie-in yarn which is not visible from the face side of the fabric.” Id., col. 3, ll. 49-51, 65-67. The court added that its earlier construction of “3-end knit” foreclosed the argument that a single yarn could be used to perform both the stitch and the tie functions such that the tie yarn would also be visible from the face side.

After the court issued its claim construction order, the parties agreed that Southern Mills could not prove infringement under the claims as construed. The parties therefore consented to entry of a judgment of noninfringement so as to enable Southern Mills to obtain review of the court’s claim constructions.

II

Southern Mills argues that the district court erred in limiting the invention to a knit formed of three different yarns. It contends that the portions of the specification that require the use of three different yarns represent only a preferred embodiment, and that

a person skilled in the art would understand the patent to claim fabrics using fewer than three yarns.

A

The main thrust of Southern Mills' appeal is a challenge to the district court's claim constructions as applied to claims 1 and 6. Those claims and their dependent claims all recite that the claimed fabric is a "3-end knit." The specification defines a "3-end" fabric as a two-sided fabric that includes "a knit formed of a stitch yarn and a tie yarn, wherein the stitch yarn lies on the fabric face side. A nap yarn lies on the back side of the fabric and is tied into the knit at periodic intervals." '401 patent, col. 2, ll. 41-44. The specification adds that to manufacture the 3-end fabric, "a knit is formed of the stitch yarn, the tie yarn, and the nap yarn." Id., col. 2, ll. 56-58.

Southern Mills contends that the "3-end knit" does not require the use of three different yarns, as long as it consists of "yarns capable of serving one of three different functions." In so arguing, Southern Mills relies on the statement in the specification that "[t]he term '3-end' means that yarns serve one of 3 different functions in the fabric." '401 patent, col. 2, ll. 35-36. While it is true that the yarns must perform those three functions, it is also evident from the specification that those three functions are performed by three different yarns. That much is plain from the language of the specification that describes the 3-end knit structure as comprising a stitch yarn, a tie yarn, and a nap yarn, and from the repeated references in the specification to the stitch, tie, and nap "yarns" rather than "functions."

Perhaps the clearest statement to that effect is at the beginning of the Detailed Description section of the patent, where the specification states: "The 3-end knit

structure comprises the interaction of three yarns each serving their own function.” ’401 patent, col. 3, ll. 22-23. Other statements in the specification make the same point. For example, the portion of the specification that describes the 3-end knit structure states that the “stitch or face yarn” is “the only yarn of the three that is visible from the face side of the cloth.” Id., col. 3, ll. 65-67. That statement implies that the 3-end knit structure comprises three yarns, not one or two yarns that perform the three functions. As another example, the specification describes in detail the different preferred composition and weight of each of the yarns, id., col. 4, ll. 25-36, providing another indication that the 3-end knit structure contemplates the use of three separate yarns.

Southern Mills attempts to downplay the significance of those statements from the specification by characterizing them as merely descriptions of a preferred embodiment, which therefore do not limit the meaning of “3-end knit.” The characterizations of “3-end knit” in the specification, however, are distinctly definitional; they do not purport to describe one or more variants of a 3-end knit, but rather set forth what the patentee regarded as the meaning of the term “3-end knit” as used in the claims.

In support of its proposed construction of “3-end knit,” Southern Mills relies principally on a sentence in the specification that refers to a “2-end fleece” pattern. In the course of describing a preferred embodiment of the 3-end knit structure, illustrated by Figure 1 of the patent, the specification states that “[t]he knit pattern shown in Fig. 1 is called a 3-end fleece pattern. Other patterns can be used, such as a 2-end fleece or a terry-cloth, for example.” ’401 patent, col. 4, ll. 48-51. According to Southern Mills, that language reflects a distinction between “pattern” and “structure.” The term “3-end

fleece pattern,” Southern Mills argues, refers to a fabric in which three yarns perform the three designated functions of the stitch yarns, tie yarns, and nap yarns, while “2-end fleece pattern” refers to a fabric in which two yarns perform those three functions. By contrast, the term “3-end knit structure” contemplates the use of yarn to perform the three designated functions, but does not require the use of three different yarns to do so. As interpreted by Southern Mills, the reference to “2-end fleece pattern” thus indicates that neither the patent as a whole, nor those claims that require a “3-end knit,” require the use of three different yarns.

We agree with the district court that Southern Mills’ argument regarding that passage of the specification is unpersuasive. The terms “2-end fleece” and “terry-cloth” are used only once in the patent and are not defined. Southern Mills makes no attempt to explain the meaning of the reference to terry-cloth; as to the term “2-end fleece,” Southern Mills relies on the testimony of Dr. Adanur, its expert. Dr. Adanur’s testimony, however, does not provide persuasive support for Southern Mills’ position. As the district court explained, Dr. Adanur expressly acknowledged that the term “2-end” has no recognized meaning in the field of technical textiles. He simply asserted that, within the context of the ’401 patent, the term has the meaning advocated by Southern Mills. Moreover, when he was directed to language in the specification that was contrary to his interpretation of the term “3-end,” his response on each occasion was that the language in question referred to a preferred embodiment. As such, Dr. Adanur’s testimony was unhelpful because it constituted only a recitation of how he would construe that term, not an explanation of its “‘accepted meaning in the field’ to one skilled in the art.” Symantec Corp. v. Computer Assocs. Int’l, Inc., 522 F.3d 1279,

1290-91 (Fed. Cir. 2008); see also Phillips v. AWH Corp., 415 F.3d 1303, 1318 (Fed. Cir. 2005) (en banc) (“[C]onclusory, unsupported assertions by experts as to the definition of a claim term are not useful to a court.”). Because the specification repeatedly makes clear that the 3-end knit structure requires three yarns to perform the three designated functions, it would be speculative to conclude that the unelaborated reference to a “2-end fleece” pattern teaches an embodiment of the 3-end knit structure that uses fewer than three yarns.

Southern Mills also relies on a statement in the Summary of the Invention that the yarns employed in the manufacture of the claimed fabric “may all be the same, but the 3-end structure allows the selection of the best yarn for each of the three functions: stitch, tie, and nap.” ’401 patent, col. 2, ll. 36-39. As the district court concluded, the most reasonable interpretation of the phrase “may all be the same,” particularly in light of the remainder of the sentence in which the phrase appears, is that it refers to the type of material to be selected for each yarn, not to whether more than one of the yarn functions may be performed by a single yarn.

Accordingly, we conclude that the district court was correct in its construction of the term “3-end knit.” We therefore affirm the district court’s judgment as to asserted claims 1 and 6, and their asserted dependent claims.

B

Southern Mills briefly addresses the district court’s construction of certain claim limitations pertaining to independent claim 17. Unlike claims 1 and 6, claim 17 does not recite a “3-end knit,” but instead recites “a fleece knit thermal barrier fabric” that comprises “a knitted face layer” and “a napped back layer.” Claim 17 contains express

references to “tie yarns” and “nap yarns,” but not to “stitch yarns.” In referring to the “knitted face layer,” claim 17 recites only that the face layer “includ[es] a plurality of flame resistant tie yarns”; in referring to the “napped back layer,” it recites that the back layer includes “a plurality of nap yarns that are tied into said knitted face layer by said tie yarns.”

Southern Mills argues that the district court’s claim construction, as applied to claim 17, was erroneous in two related respects. First, the court included in its definition of “tie yarns” that they are “not visible from the face side of the knit.” Second, the court defined “face side” as “the smooth side of knitted fleece fabric that faces the wearer and is formed by stitch yarns.” The combined effect of those two claim constructions, Southern Mills argues, was to limit claim 17 to fabrics having three different yarns (tie yarns, nap yarns, and stitch yarns or “face yarns”¹), even though the claim expressly recites only two yarns (tie yarns and nap yarns).

Although the district court concluded that the specification supports its construction of “tie yarns,” we disagree. The portion of the specification that refers to tie yarns as “not visible from the face side of the fabric,” ’401 patent, col. 3, ll. 50-51, is found in the description of the “3-end knit.” The specification does not indicate that the 3-end knit is implicitly recited in claim 17, or that the characteristic of the tie yarns described in that portion of the specification, i.e., not being visible from the face side of the fabric, is necessarily found in structures other than the 3-end knit. Thus, according to its terms, claim 17 would read on a fabric that uses only two yarns—a nap yarn

¹ Although the district court stated that it was treating the terms “stitch yarns” and “face yarns” differently for purposes of its claim construction order, it construed those two terms to have the same meaning.

forming the back layer of the knit, and a tie yarn performing the functions of tying the back layer of the knit to the face layer and making up the face layer itself.

Moreover, claim 18, which depends from claim 17, adds the limitation that “said knitted face layer further includes a plurality of flame resistant face yarns which follow substantially identical parallel paths along said knitted face layer as said flame resistant tie yarns, said face yarns forming a face surface on said knitted face layer which is adapted to face the garment wearer.” The addition in claim 18 of the limitation requiring a face surface formed of face yarns (that is, stitch yarns) suggests that claim 17 does not require that the face layer include face yarns, much less that it consist exclusively of face yarns. See Phillips, 415 F.3d at 1314-15 (“[T]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.”). Although it is possible to distinguish claim 18 from claim 17 by reference to the additional limitation in claim 18 that the face yarns “follow substantially identical parallel paths along said knitted face layer” as the tie yarns, the most conspicuous difference between claims 17 and 18 is the addition of the “face yarn” limitation. Therefore, absent a clearer indication that the “face yarn” limitation was included in claim 17 by implication, we conclude that the difference between claims 17 and 18 supports Southern Mills’ argument that claim 17 does not require the presence of a separate “face yarn” or stitch yarn.

Based on the language of claim 17 and its context, we therefore conclude that the district court’s ruling that tie yarns are “not visible from the face side of the knit” is erroneous as applied to claim 17. While the patent makes clear that tie yarns are not visible from the face side of the fabric in the “3-end knit” that is recited in most of the

claims, that is not true of claim 17, which does not require the use of the “3-end knit,” either expressly or by clear implication. Because we disagree with the district court’s construction of the term “tie yarns” as applied to claim 17, and because the parties agreed to a consent judgment based on the court’s claim construction order, we reverse the judgment with respect to claim 17 and its asserted dependent claims. The judgment is otherwise affirmed.