United States Court of Appeals for the Federal Circuit

IQRIS TECHNOLOGIES LLC,
Plaintiff-Appellant

v.

POINT BLANK ENTERPRISES, INC., NATIONAL MOLDING, INC.,
Defendants-Appellees

2023-2062

Appeal from the United States District Court for the Southern District of Florida in No. 0:21-cv-61976-BB, Judge Beth Bloom.

Decided: March 7, 2025

JAMES LEWIS RYERSON, Greenberg Traurig LLP, Florham Park, NJ, argued for plaintiff-appellant. Also represented by BARRY SCHINDLER, DOUGLAS R. WEIDER.

ROBERT FLUSKEY, II, Hodgson Russ LLP, Buffalo, NY, argued for defendants-appellees. Also represented by MELISSA SUBJECK.

Before LOURIE, LINN, and STOLL, *Circuit Judges*.

STOLL, *Circuit Judge*.

Plaintiff-Appellant IQRIS Technologies LLC ("IQRIS") sued Defendants-Appellees Point Blank Enterprises, Inc. ("Point Blank") and National Molding, LLC ("National Molding") (collectively, "Defendants") in the United States District Court for the Southern District of Florida for infringement of two of IQRIS's patents. Point Blank and National Molding moved for summary judgment of noninfringement, arguing that the accused products lacked a "pull cord" as required by the asserted patent claims. The district court granted the motion, concluding that the two accused products did not infringe literally or under the doctrine of equivalents as a matter of law. IQRIS appeals, arguing the summary judgment rests on an erroneous construction of the claim term "pull cord." Because the district court's construction improperly limited "pull cord" to a directly pulled cord that lacks a handle, we vacate the grant of summary judgment and remand for further consideration consistent with this opinion.

BACKGROUND

I

The asserted patents in this case, U.S. Patent Nos. 7,814,567 ("the '567 patent") and 8,256,020 ("the '020 patent"), share a common specification. The asserted patents relate to quick release systems on tactical vests worn by soldiers, law enforcement officers, and other first responders. As the specification explains, if a first responder wearing a protective vest is injured, she may need to remove the vest quickly to receive medical attention. Alternatively, a soldier in danger of drowning due to being weighed down by the tactical vest needs to be able to remove it quickly.

The background section of the specification describes prior art tactical vests that use fasteners such as Velcro, snaps, or buckles, requiring a user to manipulate several

fasteners, typically one at a time, making removal time consuming or impossible. The background also describes conventional "cutaway vests" with three sections—front, back, and cummerbund—attached together by cables. To remove the vest, the user pulls a handle that is attached to the cables and withdraws the cables from the vest thereby disassembling the vest sections. Reassembly requires manually rerouting a cable through a series of rings and loops to bring the various vest components back together. The specification explains reassembly of cutaway systems "can be a time consuming and tedious process." '567 patent col. 2 ll. 2–3.

The asserted patents purport to overcome the problems in these conventional vests by providing a protective garment with "a reduction in operating parts, faster release, and quicker reassembly than the systems currently in use." *Id.* at col. 2 ll. 5–7. As shown in Figure 1B of the asserted patents (reproduced below), tactical ballistic vest (100) has a front portion (10) and connectors—each connector including a hook (13) and an anchor strap (15)—for releasably attaching the front portion (10) to a back portion (20) (not shown).

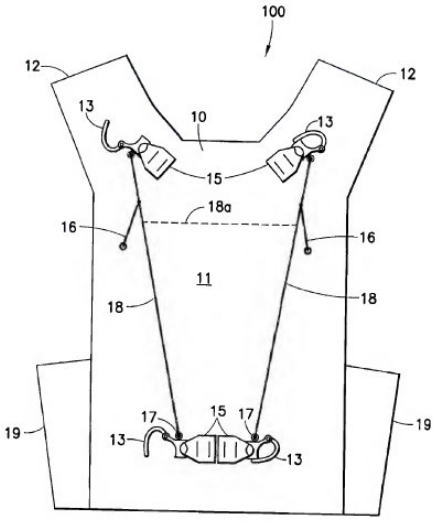

FIG.1B

Id. Fig. 1B.

As shown, each releasable hook (13): (a) attaches to an anchor strap (15), which is affixed to the front portion (10); and (b) includes a release knob (17) for moving the hook (13) into an open position. Most relevant here, the specification discloses that cords (18) and (18a) connect to release knobs (17) on releasable hooks (13). "[W]hen the pull cord [(16)] is pulled" the releasable hooks (13) "disengag[e] simultaneously" and the front portion of the vest completely detaches from the rear portion. *Id.* at col. 5 ll. 9–12.

Claim 1 of the '567 patent is representative of the asserted claims and recites:

> 1. A ballistic garment, comprising:
>
> a front panel of the ballistic garment;
>
> a rear panel of the ballistic garment;
>
> a plurality of rings, wherein each of the plurality of rings is fastened to a first end of a respective anchor element and each of a second end of each respective anchor element is fixed to the rear panel of the ballistic garment;
>
> at least one releasable hook for releasably attaching the front panel of the ballistic garment to the rear panel of the ballistic garment, wherein the at least one releasable hook is fastened to the front panel of the ballistic garment;
>
> wherein each of the plurality of rings is releasably clasped by the at least one releasable hook;
>
> wherein a cover at least partially covers the plurality of rings and the at least one releasable hook; and
>
> a pull cord coupled to the at least one releasable hook, wherein the pull cord actuates the at

> least one releasable hook to disengage the at least one releasable hook to which the pull cord is coupled from the at least two rings to allow detachment of at least a part of the front panel of the ballistic garment from at least a part of the rear panel of the ballistic garment.

Id. at col. 6 ll. 27–51.

II

National Molding manufactures precision-engineered plastic components, among which are the "Quad Release" and "Evil Twin" quick-release systems for tactical vests. Point Blank sells tactical vests that incorporate the Quad Release and Evil Twin release systems (the "Accused Products"). Quad Release and Evil Twin share many common features but are not identical.

Both Accused Products include a trigger that sits atop a base for the trigger, called a trigger manifold. Both also use "Bowden" cables, which consist of a wire inside a sheath, where mechanical force is transmitted by movement of the wire within the outer sheath. J.A. 5102. Bicycle brake systems commonly use Bowden cables. In the Accused Products, multiple Bowden cables are connected to the trigger. Activation of the trigger on the trigger manifold causes movement of the wires within the sheath, which in turn disengages the vest by releasing the buckles.

As to the differences between the Accused Products, Quad Release has four Bowden cables while Evil Twin has two. Quad Release and Evil Twin also use different triggers. The trigger of Quad Release is a type of lever that, when moved, pulls the wire inside the Bowden cables, whereas the Evil Twin trigger is a sliding mechanism that does the same when moved. Despite these differences, IQRIS did not raise distinct infringement arguments for the two Accused Products before the district court.

III

The parties disputed the interpretation of the claim term "pull cord." IQRIS proposed construing the term as "a component which, when put into tension, can result in activating the releasable fastener." *IQRIS Techs. LLC v. Point Blank Enters., Inc.*, No. 21-cv-61976, 2022 WL 17176840, at *2 (S.D. Fla. Nov. 23, 2022). Point Blank and National Molding asserted that a pull cord is "a cord on the exterior of the ballistic garment grasped by a user that is capable of disengaging the releasable fastener or releasable hook when a user pulls on the pull cord." *Id.* Following briefing and a *Markman* hearing, the district court construed "pull cord" as a "cord that can be directly pulled by a user to disengage a releasable fastener or releasable hook." *Id.* at *4. Although the parties disputed whether the pull cord was external or internal to the vest, the court declined to "define pull cord in terms of its location" because language describing the pull cord as "on the protective garment," i.e., external, would improperly read individual embodiments of the invention into the claims. *Id.*[1]

Point Blank and National Molding then moved for summary judgment of noninfringement, arguing that the Accused Products lack a "pull cord" as construed by the district court. Addressing literal infringement, the district court held that the Accused Products' "trigger manifold" "is not a 'cord,' but rather a rigid structure that consists of a lever in the Quad Release, and a slide in the Evil Twin." *IQRIS Techs. LLC v. Point Blank Enters., Inc.*, 669 F. Supp. 3d 1256, 1268 (S.D. Fla. 2023). Continuing, the court determined the Bowden cables on the Accused Products are entirely internal to the vest and cannot be directly pulled by a user without ripping into the vest and

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[1] Neither party challenges this aspect of the district court's claim construction.

thus held that "neither the Bowden cables nor their internal wires satisfies the Court's definition of 'pull cord.'" *Id.* The district court rejected IQRIS's "attempts to create issues of fact" through expert testimony that the trigger in the Accused Products acts as a handle to pull on the pull cord (i.e., internal wire in Bowden cable) such that a user 'directly' pulls the cord. *Id.* at 1268–69. The district court concluded that, even treating the trigger as a handle, the Bowden cables are analogous to the generic cords (18) and (18a) illustrated in Figure 1B, "which a user *indirectly* tightens by *directly* pulling on the pull cord." *Id.* The district court explained "it is the pull cord's function of being 'directly' pulled by a user that distinguishes the pull cord from other 'cords' described and depicted within the Patents." *Id.* at 1268. Because the court's construction required the pull cord to be directly pulled by the user, the court also rejected IQRIS's arguments that (1) adding an additional object to the end of a pull cord to aid in gripping would not transform the pull cord into something other than a pull cord; and (2) the asserted patent claims use comprising language and thus do not exclude the existence of additional components such as triggers. *Id.* at 1269. The district court concluded that the Accused Products "do not simply have objects attached to the end of the wire to make gripping easier"; "[r]ather, they have an entirely separate mechanism—the 'trigger manifold'—that replaces the pull cord altogether." *Id.* Based on this conclusion, the court granted summary judgment of no literal infringement for both Accused Products.

The court next considered whether to grant summary judgment of no infringement under the doctrine of equivalents. The court held that, under its construction of pull cord, no reasonable jury could find that the Accused Products with Quad Release infringe the asserted claims by equivalents because, under the function, way, result test, the Quad Release operates in a different way: by allowing a user to apply "*indirect* force to the internal wire by

applying a *direct* force to the trigger." *Id.* at 1270. As further support for its determination, the court emphasized Defendants' expert testimony that the Quad Release has a "mechanical advantage" over a pull cord because the trigger reduces the amount of force that the user must apply to activate the release. *Id.* The court explained that its function, way, result analysis applied solely to Quad Release because "there is insufficient evidence indicating how [the Evil Twin] system operates and whether it provides any advantage over the pull cord system." *Id.* at 1271.

The court held that even assuming the Evil Twin trigger is equivalent to the claimed pull cord under the function, way, result test, summary judgement of no equivalent infringement was appropriate because holding otherwise would ensnare the prior art criticized in the background of the invention section of the specification. Specifically, the court concluded that IQRIS's equivalency argument relied on viewing the Accused Products' triggers as handles attached to a pull cord. In the court's view, however, the asserted patents "disparage . . . cutaway vests with 'handle' release systems because they entailed a tedious and time-consuming reassembly process." *Id.* at 1271–72. Thus, the court reasoned, if it considered the Quad Release and Evil Twin trigger systems equivalent to the claimed pull cord, it would allow the patents-in-suit to cover the very prior art design that they explicitly criticized. *Id.* at 1272.

IQRIS appeals. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

DISCUSSION

IQRIS urges us to vacate the district court's summary judgment because it rests on an erroneous construction of "pull cord." Specifically, IQRIS contends the district court erroneously construed "pull cord" to (1) require a user to pull on the pull cord directly; and (2) exclude cords that include a handle. We address each issue in turn below.

Claim construction "is ultimately a question of law we review de novo where, as here, it is decided only on the intrinsic evidence." *Hologic, Inc. v. Minerva Surgical, Inc.*, 44 F.4th 1358, 1365 (Fed. Cir. 2022). We review a district court's entry of summary judgment under the law of the regional circuit, here the Eleventh Circuit. *See Teva Pharm. Indus. v. AstraZeneca Pharms. LP*, 661 F.3d 1378, 1381 (Fed. Cir. 2011). In the Eleventh Circuit, a grant of summary judgment is reviewed de novo, "construing the facts and all reasonable inferences from the facts in favor of the nonmoving party." *Lanard Toys Ltd. v. Dolgencorp LLC*, 958 F.3d 1337, 1341 (Fed. Cir. 2020) (citation omitted).

I

DIRECTLY PULLED

We first address whether the district court erred by limiting "pull cord" to cords that are *directly* pulled by a user. The parties rely exclusively on intrinsic evidence to interpret this term, and the record lacks any other evidence as to how a person of ordinary skill would understand pull cord. We start with the claim language. The claims merely recite that the pull cord is "coupled to the at least one releasable hook" and that "the pull cord actuates the at least one releasable hook to disengage the at least one releasable hook to which the pull cord is coupled." '567 patent col. 6 ll. 45–48. The claims say nothing about who or what pulls the pull cord. Thus, the claim language itself suggests that a "pull cord" is a cord that actuates a releasable hook when pulled. The claims do not specify pulling directly or indirectly.

Turning to the specification, we acknowledge the district court's observation that the specification refers to element (16), which is directly pulled, as a "pull cord," but refers to element (18), which is indirectly pulled, simply as a "cord." *Id.* at col. 5 ll. 12–14. In our view, this is the

strongest evidence in support of the district court's construction.

While this is a close question, we are not inclined under our precedent to limit the term "pull cord" to the preferred embodiments in the specification. Even when all embodiments in the written description depict a pull cord that is directly pulled, our precedent counsels against reading this requirement into the claims when the claims do not expressly require as much. There is a fine line between reading the claims in light of the specification and importing limitations from the specification into the claims, and here, where there is no evidence suggesting that the ordinary meaning of pull cord is limited to a cord that is *directly* pulled, we are not inclined to import limitations from the preferred embodiments into the claimed invention. *Playtex Prods., Inc. v. Procter & Gamble Co.*, 400 F.3d 901, 907–08 (Fed. Cir. 2005) (collecting cases). It is the claims, not the preferred embodiments, that define the metes and bounds of the patentee's invention. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312, 1323 (Fed. Cir. 2005) (en banc). As is the case here, the patentee is free to choose a term and expect to obtain the full scope of its plain and ordinary meaning unless the patentee explicitly redefines the term or disavows its full scope. Given the claim language and absence of lexicography or disavowal, we do not adopt the district court's interpretation requiring a pull cord to be directly pulled by a user.

EXCLUDING A HANDLE

IQRIS contends that neither the plain and ordinary meaning of "pull cord" nor the text of the asserted claims and shared specification limit the meaning of the term "pull cord" to a cord excluding a handle. We agree—nothing in the claim language, specification, or prosecution history supports this construction.

Starting with the claim language, the representative claim recites: "a pull cord coupled to the at least one

releasable hook, wherein the pull cord actuates the at least one releasable hook to disengage the at least one releasable hook . . . to allow detachment of at least a part of the front panel of the ballistic garment." '567 patent col. 6 ll. 45–50. The claim language recites what the pull cord does, but it is silent about the structure of the pull cord.

Nor does the specification support the conclusion that a pull cord cannot have a handle. Indeed, the specification suggests otherwise because each of the figures depicts a circular ball at the end of the pull cord (16), suggesting that the inventors contemplated pull cords with handles. While Defendants urged the district court to construe "pull cord" as not including a handle, they admitted that the patent "figures also illustrate that the pull cord (16) includes a tab or bead on the end of the pull cord (16) to aid grip during pulling." J.A. 2386.

We do not agree with the district court that the specification disclaims pull cords that include a handle by disparaging prior art cutaway vests with a handle because "they entailed a tedious and time-consuming reassembly process." *IQRIS Techs.*, 669 F. Supp. 3d at 1271. "To disavow claim scope, the specification must contain 'expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.'" *Cont'l Cirs. LLC v. Intel Corp.*, 915 F.3d 788, 797 (Fed. Cir. 2019) (quoting *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 653 F.3d 1296, 1306 (Fed. Cir. 2011)). Here, the specification criticizes reassembly of cutaway vests as a "time consuming and tedious process." '567 patent col. 2 ll. 2–3. But the specification also explains that this is because "the cables need to be rerouted through the entire series of rings and loops throughout the vest, thereby interlocking the vest components together"—not because of the handle per se. *Id.* at col. 1 l. 67–col. 2 l. 2. While a user actuates disassembly of the cutaway vest by pulling "a handle that is attached to the cables," the specification disparages the time consuming and tedious process of *reassembling* the vest,

not the use of a handle. *Id.* at col. 1 ll. 63–64. Indeed, nowhere does the specification particularly criticize the cutaway vest's handle. "[T]he standard for disavowal is exacting, requiring clear and unequivocal evidence that the claimed invention includes or does not include a particular feature." *Poly-Am., L.P. v. API Indus., Inc.*, 839 F.3d 1131, 1136 (Fed. Cir. 2016). This high bar is not satisfied here where, at most, the specification identifies shortcomings in the prior art that are not specifically directed to the handle.

Defendants nonetheless assert that, although the overall design of the cutaway vests results in the "difficult reassembly process, the fundamental feature at fault is the handle." Appellees' Br. 39 (emphasis removed). But this assertion is unsupported by the specification, which says nothing derogatory about the handle. As such, the specification cannot be reasonably viewed as a clear and unequivocal disavowal of handles.

Our conclusion is further supported by other portions of the patent specification. The specification discloses that, in the present invention, the pull cord is coupled to a releasable hook such that, after the releasable hook is disengaged, the vest can be reassembled by reengaging the hook to the corresponding ring, as opposed to rerouting a cable through a series of rings and loops as a cutaway vest requires. As the specification explains, because of this "configuration of the connectors, the present invention can offer up to 95% faster reassembly of a detached garment over the prior art systems." '567 patent col. 6 ll. 9–11. Nothing in the specification suggests that reassembly of the vest via the releasable hook would be impacted by the presence or absence of a handle on the pull cord.

For these reasons, we conclude that the district court erred by interpreting "pull cord" to exclude pull cords that include a handle when analyzing infringement under the doctrine of equivalents.

II

The district court's summary judgment of no literal or equivalent infringement depended on a flawed construction that improperly limited "pull cord." Because we reject the district court's claim construction, we vacate the judgment of noninfringement. *Kaneka Corp. v. Xiamen Kingdomway Grp. Co.*, 790 F.3d 1298, 1303 (Fed. Cir. 2015) ("Summary judgment should ordinarily be vacated or reversed if the district court bases summary judgment on an erroneous claim construction."). We leave to the district court on remand the task of applying the correct claim construction in the first instance under appropriate factual development, including the issues of literal infringement and infringement under the doctrine of equivalents. We do not decide whether summary judgment would be appropriate under our new construction of "pull cord."

CONCLUSION

We have considered the remaining arguments and do not find them persuasive. For the foregoing reasons, we vacate and remand the district court's grant of summary judgment of noninfringement.

VACATED AND REMANDED

COSTS

Costs to Appellant.