

NOTE: This disposition is nonprecedential.

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

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**OLAF SOOT DESIGN, LLC,**  
*Plaintiff-Cross-Appellant*

v.

**DAKTRONICS, INC.,**  
*Defendant-Appellant*

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2020-1009, 2020-1034

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Appeals from the United States District Court for the Southern District of New York in No. 1:15-cv-05024-GBD-OTW, Judge George B. Daniels.

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Decided: January 7, 2021

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JAMES M. BOLLINGER, Troutman Pepper Hamilton Sanders LLP, New York, NY, argued for plaintiff-cross-appellant. Also represented by MAGNUS ESSUNGER, KATHERINE HARIHAR, GERALD EAMES PORTER, PHOENIX PAK.

KENNETH BRESSLER, Blank Rome LLP, New York, NY, argued for defendant-appellant. Also represented by DOMINGO M. LLAGOSTERA, RUSSELL T. WONG, Houston, TX.

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Before PROST, *Chief Judge*, LOURIE and REYNA, *Circuit Judges*.

Opinion for the court filed by *Chief Judge* PROST, in which LOURIE and REYNA, *Circuit Judges*, join.

Additional views filed by *Circuit Judge* LOURIE.

PROST, *Chief Judge*.

Olaf Sööt Design, LLC (“OSD”) sued Daktronics, Inc. (“Daktronics”), alleging that Daktronics’s Vortek product infringes claim 27 of U.S. Patent No. 6,520,485 (“the ’485 patent”). Four of the eight elements of claim 27—elements b, d, e, and h—were tried to a jury, which ultimately found that the Vortek product met each of these elements under the doctrine of equivalents. After the jury verdict, Daktronics moved for judgment as a matter of law (“JMOL”) of noninfringement. Daktronics argued that the Vortek product did not meet element h either literally or under the doctrine of equivalents. The district court denied this motion. *See Olaf Sööt Design, LLC v. Daktronics, Inc.*, 406 F. Supp. 3d 328, 338 (S.D.N.Y. 2019) (“*Decision Denying JMOL*”). Daktronics appealed the final judgment of infringement and several additional rulings. OSD cross-appealed the district court’s judgment of no willful infringement and denial of OSD’s motion for an exceptional-case determination and attorneys’ fees. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

We reverse the final judgment of infringement, moot-ing the remainder of Daktronics’s appeal and OSD’s cross-appeal.

## BACKGROUND

### I

The ’485 patent discloses a theater winch for moving scenery and lighting by winding and unwinding cables, which are attached to the scenery, around a drum.

'485 patent col. 3 ll. 41–51. An embodiment of the winch described by the '485 patent is shown below. The winch is a “zero fleet angle winch,” which means that the cables wind and unwind together without tangling and are maintained perpendicular to the drum. *Id.* at col. 4 ll. 14–29. The winch achieves zero fleet angle via movement of cable drum 11 laterally along carriage 40 as cable drum 11 ro-

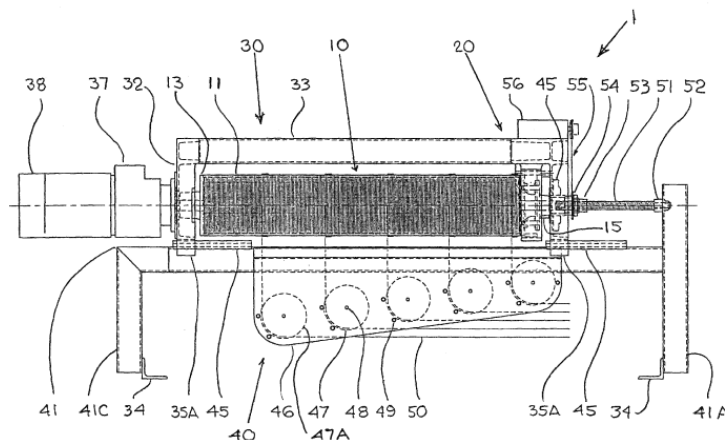


FIG 7

tates, permitting cables 50 to wind and unwind uniformly and preventing the cables from winding on themselves. *Id.* at col. 4, ll. 14–29.

More specifically, “nut 53 is non-rotatably mounted to the drum assembly 10 brake end cap 14 elongated hub.” *Id.* at col. 4 ll. 38–40. A motor rotates drum 11 and the mounted nut around fixed screw 51, which causes the nut to engage with and rotate around fixed screw 51. *Id.* at col. 4, ll. 30–60. Such engagement causes the nut and drum 11 to move laterally along carriage 40. *Id.* at col. 4, ll. 30–60. As drum 11, the elongated hub, and the nut move laterally, “the screw 51 can pass, via the hollow hub, inside the drum 11, which is also hollow.” '485 patent col. 4 ll. 40–41. Advantages of this setup include that “the screw 51 is protected” inside drum 11 and that the “overall length (its long

dimension) of the winch 1” is reduced. *Id.* at col. 4, ll. 41–42, 47–49.

Claim 27—the only claim at issue on appeal—recites:

27. A motorized fly system winch, drum and carriage combination for raising and lowering an object, comprising:

- a) a carriage,
- b) a base member having first and second end portions,
- c) an elongated hollow drum having cable grooves and having a longitudinal axis and rotatably mounted on the base member and a cable for simultaneously winding and unwinding the cable on or off the drum grooves when the drum is rotated, said cable passing from the outside of the drum directly or via a sheave to the object such that rotation of the drum causes the object to move up and down,
- d) first means for slideably mounting the base member to the carriage,
- e) said drum having at a first end a hollow hub rotatably journaled at the first end portion of the base member,
- f) second means for rotating the drum relative to the base member such that the base member with its drum and the carriage can move with respect to each other in synchronism with the rotation of the drum to control the cable run to the object,
- g) said second means comprising an elongated screw having a first end non-rotatably mounted to the carriage and a second end connected to the drum and axially aligned with the hollow hub and the hollow drum, said screw extending mainly outside of the hollow drum when the cable is wound up

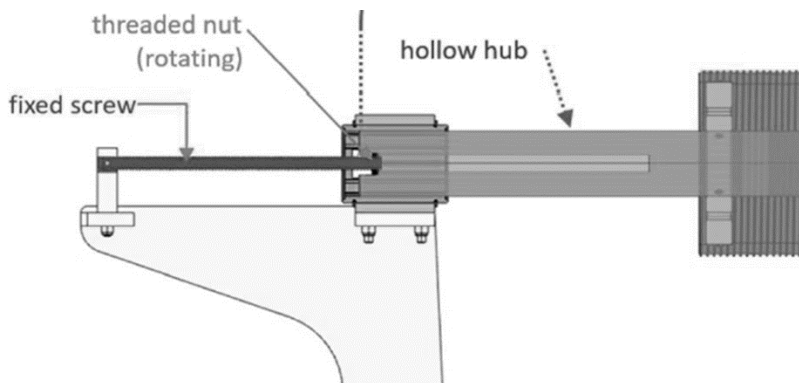
on or unwound from the drum and the object is in its respective up or down position,

*h) said hollow hub and hollow drum being sized such that the screw can move into the hollow hub to allow the hollow drum to receive the screw as the cable unwinds from or winds up on the drum as the object moves to its respective down or up position.*

(emphasis added).

## II

The relevant portion of Daktronics's Vortek product is depicted below. As shown, *see* Cross-Appellant's Br. 16, the internal passage for the screw ends within the hub, approximately two inches from the inside of the wider grooved drum member that receives and engages with the cables.



## DISCUSSION

We conclude that the Vortek product does not infringe claim 27 of the '485 patent as a matter of law and thus reverse the final judgment of infringement. This holding moots the remainder of Daktronics's appeal and OSD's cross-appeal.

## I

In *O2 Micro International Ltd. v. Beyond Innovation Technology Co.*, we explained that “[w]hen the parties present a fundamental dispute regarding the scope of a claim term, it is the court’s duty to resolve it.” 521 F.3d 1351, 1362 (Fed. Cir. 2008). Otherwise, a legal question will be “improperly submitted to the jury.” *Id.*

Here, the district court failed to resolve a fundamental dispute regarding the scope of claim element h—specifically, whether the hub is part of the drum.

OSD argued in its claim construction briefing that “the hub is a part of the drum.” J.A. 415. Because it is undisputed that the Vortek hub is able to receive the screw, under OSD’s interpretation of element h that the hub is part of the drum, it would necessarily follow that the Vortek drum would be able to receive the screw, as element h requires.

Daktronics, on the other hand, contended that the hub and drum are separate and that OSD was attempting to “drop[] the [claim] requirement that the drum receives the screw.” J.A. 836. Because it is undisputed that the Vortek screw is received by the hub and not the wider grooved drum member that receives the cables, under Daktronics’s interpretation of element h that the hub is not part of the drum, the Vortek drum would not receive the screw, as element h requires.

In its *Markman* order, the court stated that “[n]o construction of [element h] is necessary” and failed to resolve the parties’ dispute as to the meaning of the claim. *Olaf Sööt Design, LLC v. Daktronics, Inc.*, 220 F. Supp. 3d 458, 467–68 (S.D.N.Y. 2016). The court did not otherwise resolve this claim construction dispute prior to the jury trial. This failure violates *O2 Micro*.

The district court belatedly resolved the claim construction dispute in its post-jury-verdict decision denying

JMOL of noninfringement. Specifically, the district court concluded that the hub is part of the drum and, on that basis, rejected Daktronics's argument that the Vortek product does not infringe as a matter of law because the Vortek drum does not receive the screw. *Decision Denying JMOL*, 406 F. Supp. 3d. at 340–41. The district court explained that “the jury relied on ample evidence that the hollow drum and the hollow hub are not separate entities for purposes of receiving the screw.” *Id.* at 342. That claim construction dispute was for the judge to decide, not the jury. The district court's failure to resolve this material claim construction dispute prior to trial resulted in a claim construction dispute being “improperly submitted to the jury.” *O2 Micro*, 521 F.3d at 1362.

## II

In *O2 Micro*, “[b]ecause we determine[d] that the district court [was] in the best position to determine the proper construction of the claim in the first instance,” we did not resolve the claim construction dispute in the first instance and instead remanded for further proceedings. *Id.* at 1362–63, 1366. Here, however, because we have the benefit of the district court's belated claim construction, and because the parties have briefed the dispute, no remand is necessary. We agree with Daktronics that, with respect to claim 27, the claimed hollow hub is not a component of the claimed hollow drum.

“The proper construction of a patent's claims is an issue of Federal Circuit law.” *Powell v. Home Depot U.S.A., Inc.*, 663 F.3d 1221, 1228 (Fed. Cir. 2011). “The construction of claim terms based on the claim language, the specification, and the prosecution history are legal determinations.” *Trs. of Columbia Univ. v. Symantec Corp.*, 811 F.3d 1359, 1362 (Fed. Cir. 2016) (citing *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 328 (2015)).

Claim terms “are generally given their ordinary and customary meaning,” which “is the meaning that the term

would have to a person of ordinary skill in the art in question at the time of the invention.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). “[T]he claims themselves provide substantial guidance as to the meaning of particular claim terms.” *Id.* at 1314. “[T]he person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.* at 1313. Although claim terms are interpreted in the context of the entire patent, it is improper to “read[] limitations from the specification into the claim.” *Id.* at 1323. “[T]he line between construing terms and importing limitations can be discerned with reasonable certainty and predictability if the court’s focus remains on understanding how a person of ordinary skill in the art would understand the claim terms.” *Id.*

Element h of claim 27 recites, in relevant part, that the “hollow hub and hollow drum [are] sized such that the screw can move into the hollow hub to allow the hollow drum to receive the screw.” This language makes clear that the hollow hub is not part of the hollow drum. The claim language treats the hub and drum as two components, reciting that both “the hollow hub *and* hollow drum” are sized to receive the screw. Furthermore, it would make no sense for the hollow hub to be part of the hollow drum given that the claim says that the screw moves into the hollow hub “*to allow* the hollow drum to receive the screw.” That language indicates that the screw’s entry into one component, the hollow hub, *facilitates* entry of the screw into another component, the hollow drum, not that entry into the hollow hub *is* entry into the hollow drum. In sum, the clearest reading of the claim language is that the hollow hub is not a component of the drum.

The specification confirms this conclusion. In particular, the specification explains that the “hub is hollow so that the screw 51 can pass, via the hollow hub, inside the



drum 11, which is also hollow.” ’485 patent col. 4 ll. 39–41. This passage confirms that the screw enters the drum via passage through another component, the hollow hub. And, after explaining that the hub is hollow, the passage continues treating the hub and drum as separate components by disclosing that the drum is “also” hollow.

OSD contends that the hub is part of the drum. In support, OSD argues that element e of claim 27—which recites “said drum having at a first end a hollow hub”—confirms that the hub is a component of the drum. We disagree. Element e merely specifies that the hollow hub is positioned at one of the ends of the drum.

OSD also points to the specification’s explanation that “the grooved cable drum 11 can be constructed of one tubular member 12, one drive end cap 13 and one brake end cap 14, all welded together,” *id.* at col. 5 ll. 7–9, and that the hub is “part of the cable drum 11 brake end cap 14,” *id.* at col. 3 ll. 59–61. However, this language is permissive, not mandatory: at most, this passage explains that the hub *can* be part of the drum, not that the hub *is* part of the drum. And the specification passage discussed previously contemplates embodiments in which the hub is not considered part of the drum. *See id.* at col. 4 ll. 39–41. For these reasons, and because claim 27 indicates that the hub is not part of the drum, we are not persuaded by OSD’s reliance on this passage of the specification.<sup>1</sup>

Accordingly, we conclude that, for purposes of claim 27, the hub is not part of the drum.

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<sup>1</sup> We note that “[i]t is not necessary that each claim read on every embodiment.” *Baran v. Med. Device Techs., Inc.*, 616 F.3d 1309, 1316 (Fed. Cir. 2010).

## III

Under the proper construction, the Vortek product does not infringe claim 27 either literally or under the doctrine of equivalents. The Vortek product does not literally meet element h of claim 27 because the hollow drum of the Vortek is not able to receive the screw.

In addition, we conclude as a matter of law that the Vortek product does not meet element h under the doctrine of equivalents. The Vortek drum is unable to receive the screw, and the Vortek product has no equivalent function. Thus, a finding of infringement under the doctrine of equivalents would be inappropriate under these specific circumstances because such a finding would impermissibly eliminate the requirement that the hollow drum be able to receive the screw as the cable winds or unwinds on the drum. *See, e.g., Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997) (“[T]he application of the doctrine [of equivalents], even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety.”); *Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.*, 843 F.3d 1315, 1344–45 (Fed. Cir. 2016) (rejecting a theory of infringement under the doctrine of equivalents that would vitiate a claim limitation by rendering it meaningless); *Freedman Seating Co. v. Am. Seating Co.*, 420 F.3d 1350, 1358 (Fed. Cir. 2005) (concluding that “an element of an accused product or process is not, as a matter of law, equivalent to a limitation of the claimed invention if such a finding would entirely vitiate the limitation”); *Pfizer, Inc. v. Teva Pharms., USA, Inc.*, 429 F.3d 1364, 1379 (Fed. Cir. 2005) (“The all limitations rule ‘provides that the doctrine of equivalents does not apply if applying the doctrine would vitiate an entire claim limitation.’” (quoting *Asyst Techs., Inc. v. Emtrak, Inc.*, 402 F.3d 1188, 1195 (Fed. Cir. 2005))).

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#### CONCLUSION

We have considered OSD's remaining arguments but find them unpersuasive. For the foregoing reasons, we conclude that the Vortek product does not infringe claim 27 of the '485 patent, and we therefore reverse the final judgment of infringement. In view of this conclusion, we dismiss the remainder of Daktronics's appeal and the entirety of OSD's cross-appeal as moot.

**REVERSED-IN-PART AND DISMISSED-IN-PART**

NOTE: This disposition is nonprecedential.

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LOURIE, *Circuit Judge*, additional views.

I concur in the panel's decision and fully agree with its reasoning as set forth in Chief Judge Prost's opinion. I write these separate comments to express concern over the use of the doctrine of equivalents to find infringement when four claim limitations have not literally been met by the accused device.

Infringement under our law is basically determined by whether the accused device, or process, or compound, meets the claims of the patent. That is literal infringement, the usual situation in patent litigation. We do have a doctrine of equivalents, which is clearly part of our law.

*Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605 (1950); *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722 (2002); *Eli Lilly & Co. v. Hospira, Inc.*, 933 F.3d 1320 (Fed. Cir. 2019). But almost always when an equivalence issue arises, it is with respect to one, or perhaps two, claim limitations.

Equivalence requires meeting the function-way-result test, or the insubstantial differences test, or both. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 40 (1997) (“Different linguistic frameworks may be more suitable to different cases, depending on their particular facts.”). But the Supreme Court has cautioned that the application of these tests requires “a special vigilance against allowing the concept of equivalence to eliminate completely any such elements” that are not literally met. *Id.* In short, in applying the doctrine of equivalents, judges and juries must use common sense.

I have previously noted that in the pharmaceutical industry it is quite possible that two compounds might satisfy the function-way-result test even though they are not equivalent on a structural, or identity, basis. See *Mylan Institutional LLC v. Aurobindo Pharma Ltd.*, 857 F.3d 858, 869 (Fed. Cir. 2017) (noting that the substantially different compounds aspirin and ibuprofen could be considered to have the same function, way, and result). In such a case, the law should not be so rigid as to restrain a factfinder from recognizing the clear lack of equivalence.

Similarly, common sense must be applied to the insubstantial differences test. Having multiple differences from the claim should be a hallmark of noninfringement. It fails the straight face test to assert that the accused subject matter does not meet the claims in multiple distinct ways, but infringes anyway.

Here, we have four claim limitations that are not met literally. I have found no case in which we have affirmed a finding of infringement under the doctrine of equivalents

when four separate claim limitations are not met literally. That would be equivalent (no pun intended) to holding that the accused product infringes when it does not infringe. We have a concept in patent law of “inventing around,” and that is considered socially desirable for the promotion of competition and the benefit of consumers. *See, e.g., Westvaco Corp. v. Int’l Paper Co.*, 991 F.2d 735, 745 (Fed. Cir. 1993); *State Indus., Inc. v. A.O. Smith Corp.*, 751 F.2d 1226, 1235–36 (Fed. Cir. 1985). To find that multiple significant instances of inventing around still infringe runs counter to that important theory of patent law. Such a conclusion, whether by a jury, as here, or by a judge, makes a mockery of claims.

Moreover, shockingly, the patent owner in this case cross appeals on the issue of willful infringement and relies on supposed evidence that the accused infringer allegedly copied the patent owner’s product. To argue willfulness in making or selling a device that fails in four separate respects to literally meet the claims would almost qualify for a chutzpah award. *See Dainippon Screen Mfg. Co. v. CFMT, Inc.*, 142 F.3d 1266, 1271 (Fed. Cir. 1998); *Refac Int’l, Ltd. v. Lotus Dev. Corp.*, 81 F.3d 1576, 1584 (Fed. Cir. 1996); *Checkpoint Sys., Inc. v. United States Int’l Trade Comm’n*, 54 F.3d 756, 763 n.7 (Fed. Cir. 1995) (noting that “chutzpah” describes “the behavior of a person who kills his parents and pleads for the court’s mercy on the ground of being an orphan”). The only acts that seem willful were avoiding the patented device.

We have here found deficiencies in the district court’s analysis of element (h) of the asserted claim, but I write only to call attention to the danger in the orderly thinking about infringement determinations, by business people, by attorneys, or by courts, in extending equivalence to multiple claim limitations, which has the potential of destroying the primacy of claims. Yes, we have a doctrine of equivalents, but “it is the exception . . . not the rule, for if the public comes to believe (or fear) that the language of patent

claims can never be relied on, and that the doctrine of equivalents is simply the second prong of every infringement charge, regularly available to extend protection beyond the scope of the claims, then claims will cease to serve their intended purpose.” *Wallace London & Clemco Prods. v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538 (Fed. Cir. 1991).