

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

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**POLY-AMERICA, L.P.,**  
*Plaintiff-Appellant*

v.

**API INDUSTRIES, INC.,**  
*Defendant-Appellee*

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2016-1200

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Appeal from the United States District Court for the District of Delaware in No. 1:14-cv-00599-SLR-SRF, Judge Sue L. Robinson.

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Decided: October 14, 2016

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AARON P. MAURER, Williams & Connolly LLP, Washington, DC, argued for plaintiff-appellant. Also represented by SANJIV PRAKASH LAUD, CRAIG D. SINGER.

JACK B. BLUMENFELD, Morris, Nichols, Arsht & Tunnel LLP, Wilmington, DE, argued for defendant-appellee. Also represented by MICHAEL J. FLYNN; MARK I. KOFFSKY, EFREM SCHWALB, Koffsky Schwalb LLC, New York, NY.

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

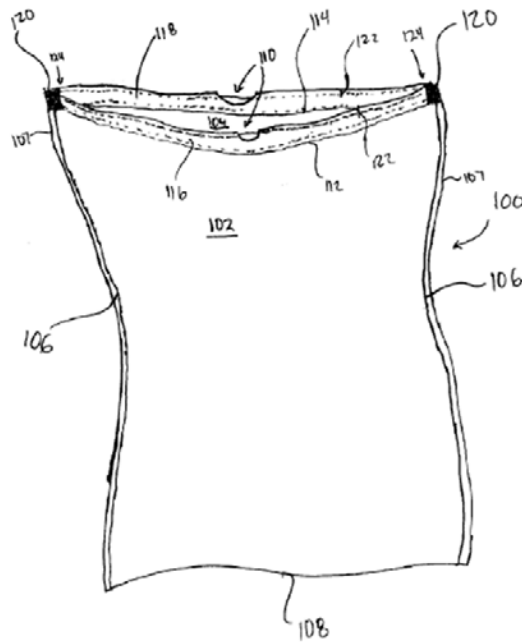
REYNA, *Circuit Judge*.

This case is about disavowal of claim scope. The specification and prosecution history of Poly-America, L.P.'s ("Poly-America") U.S. Patent No. 8,702,308 ("308 patent") contain clear and unequivocal statements that the inventor intended to limit the claimed invention to a trash bag with "short seals" at its upper corners that extend inwardly to narrow the bag's upper opening. In light of the inventor's disavowal, the district court correctly construed the term "short seal" to require that such seals extend inwardly. We therefore *affirm*.

## I. BACKGROUND

### A. Patented Technology

The '308 patent is "directed toward an improved construction of an elastic drawstring trash bag." '308 patent col. 3 ll. 46-47.



*Id.* fig. 1.

The claimed apparatus is made from two “panels” of polymeric material joined at the sides and the bottom to form an enclosed bag. At the bottom, the panels are joined by a “bottom fold.” At the top, a piece of each panel is folded over and sealed to form a “hem.” Inside each hem is a drawstring. *See id.* col. 3 ll. 46–54.

The patent identifies two different seals located along the sides of the bag. The long seals along the length of the panels are referred to as “side seals.” *Id.* col. 4 ll. 66–67. The small seals in the upper corners of the bag are referred to as “short seals.” *Id.* col. 5 ll. 25–30. The short seals bind together each panel’s hem and the ends of the drawstrings located therein. *Id.*

A principal feature of the claimed invention is Poly-America’s use of inwardly extended short seals to reduce the width of the trash bag’s upper opening. When coupled with elastic drawstrings, the narrowed opening allows those drawstrings to wrap around the rim of a trash receptacle more securely than prior art trash bags that do not have a narrowed upper opening. *See id.* col. 6 l. 32–col. 7 l. 19.

Throughout its written description, the ’308 patent indicates the significance of the extended short seal feature and the reduced upper opening width the extended short seals provide. To start, the title of the invention is “Reduced Opening Elastic Drawstring Bag.” The Abstract explains that:

[w]hen the bag of the present invention is in a relaxed state, the reduced upper opening width of the elastic drawstring bag is therefore less than bag proper width, allowing a consumer to pull the elastic drawstring bag over the lip of a trash receptacle and allowing the elastic drawstrings to snugly fit around the trashcan.

The Background of the Invention section explains that prior art trash bags do not have extended short seals and can be difficult to secure over the lip of a trash receptacle. *Id.* col. 2 ll. 15–54. The Summary of the Invention states that: “Embodiments of the elastic drawstring bag contemplated by the present invention have an upper opening with a width that is less than 97% of the width of the rest of the bag (by virtue of the extended short seals).” *Id.* col. 4 ll. 4–7. Of the five figures in the ’308 patent, the only figure that does not reveal a reduced upper opening by virtue of extended short seals is the figure that depicts prior art drawstring bags. *Id.* figs. 1–5.

The written description reiterates that the use of extended short seals to reduce the width of the bag’s upper opening is an improvement upon prior art trash bags. *Id.* col. 5 ll. 46–57. It also identifies the use of extended short seals to create a reduced width upper opening as “one of the characteristics of the present invention”:

In looking at both FIG. 1 and FIG 2, it is important to note that one of the characteristics of the present invention is a reduction in the upper width (when the bag is in a relaxed state) of the bag resulting from the extended short seals.

*Id.* col. 6 ll. 11–15.

#### B. Independent and Dependent Claims

The ’308 patent has three independent claims: 1, 10, and 16. Claim 10 differs from claims 1 and 16 in that it does not explicitly provide for a narrowed opening. Claim 1 includes a limitation of “the relaxed upper opening width being less than the bag proper width.” *Id.* col. 7 ll. 27–52. Claim 16 describes “the distance between an interior edge of the first short seal and an interior edge of the second seal being less than a bag proper width.” *Id.* col. 8 l. 65–col. 9 l. 18. In contrast, claim 10 does not expressly state any limitation as to the size of the short

seals or the relationship between the size of the upper opening and the bag proper:

10. An elastic drawstring trash bag comprising:

a polymeric bag comprised of a first panel and a second panel, the first panel and the second panel joined at a first side, a second side, and a bottom,

a first hem formed in the first panel, the first hem having a first elastic drawstring disposed therein,

a second hem formed in the second panel, the second hem having a second elastic drawstring disposed therein,

the first panel, the first elastic drawstring, the second panel, and the second elastic drawstring inseparably joined together at a first short seal and at a second short seal, and

a first access cutout along the upper edge of the first panel and a second access cutout along the upper edge of the second panel, the first and second elastic drawstrings being accessible through the respective first and second access cutouts.

*Id.* col. 8 ll. 23–38.

Claims 12–14, which are dependent on claim 10, provide specific limitations as to how much the upper opening must be narrowed. Claim 12 provides for “the ratio of a distance between the first seal and the second seal to a width of the bag proper being less than 97%.” *Id.* col. 8 ll. 45–48. Claim 13 provides for “the ratio of a distance between the first seal and the second seal to a width of the bag proper being greater than 94% but less than 100%.” *Id.* col. 8 ll. 49–53. Claim 14 provides for “the

ratio of a distance between the first seal and the second seal to a width of the bag proper being between 94% and 97%, inclusive thereof.” *Id.* col. 8 ll. 54–58.

### C. Prosecution History

During prosecution, the examiner twice rejected all of Poly-America’s claims as being obvious over the combination of two prior art patents—Schneider (U.S. Patent No. 7,137,737 B2) and Bonke (U.S. Patent No. 5,133,607 A)—which teach a pull-strip bag with short seals at the upper hem and a plastic liner bag with elastic top, respectively. J.A. 199–202, 240–46. In Poly-America’s response to the second rejection, it distinguished Schneider from all of the ’308 patent’s independent claims on the basis that Schneider’s short seals were not extended to reduce the bag’s “relaxed upper opening width” in relation to the “bag proper width”:

In Schneider, the short seals are merely an extension of the linear side seals with the side seals and short seals on each side of the bag parallel to the side seals and short seals on the other side of the bag. Therefore, because the short seals are a linear extension of the side seals, the distance between the interior edges of the short seals is identical to the distance between the interior edges of the side seals. . . . Thus, applying Applicant’s claimed definitions of the terms, the “relaxed upper opening width” of Schneider is the exact same as the “bag proper width,” not less than the “bag proper width” *as required by Applicant’s independent claims.*

J.A. 272–73 (emphasis added). The examiner subsequently withdrew his objection and allowed all sixteen claims. J.A. 346. The examiner explained that “the prior art fails to teach elastic drawstrings welded into the bag hem at short seals that form an upper opening that is smaller than the width of the bag.” J.A. 282.

#### D. District Court Proceedings

Poly-America sued API Industries, Inc. (“API”) for infringement of claim 10 of the ’308 patent. Among other terms, the district court construed the term “short seal” of claim 10. Poly-America proposed that “short seal” be construed as “a seal that inseparably welds or joins the first and second elastic drawstrings and the first and second panels of the bag.” J.A. 32. The district court instead adopted API’s proposed construction: “A seal for securing the elastic drawstring, which seal is located adjacent to a side seal, and that is not substantially aligned with the side seal, but extends inwardly from the interior edge of the side seal.” *Id.* The district court explained that this construction was consistent with the specification and the prosecution history. J.A. 2–4.

Under the district court’s construction of short seal, the accused device would not infringe claim 10, because API’s accused bags are conventional drawstring trash bags with short seals that are substantially aligned with the side seal—*i.e.*, the short seals do not extend inwardly, so the width of the relaxed upper opening is equal to the bag proper width. Following claim construction, Poly-America stipulated to non-infringement, and the district court entered final judgment in API’s favor. J.A. 7. Poly-America appeals the district court’s entry of judgment in favor of API. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

#### II. STANDARD OF REVIEW

Where the district court’s claim construction relies only on intrinsic evidence, the construction is a legal determination reviewed de novo. *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 840–42 (2015). A district court’s subsidiary fact findings about extrinsic evidence are reviewed for clear error. *Id.* Here, the district court’s claim construction did not rely on extrinsic evidence, so our review is de novo.

### III. DISCUSSION

Poly-America argues that in construing the term “short seal” to require inward extension, the district court erred by importing limitations from embodiments described in the specification, misreading the prosecution history, and ignoring principles of claim differentiation. We disagree.

Claim terms are generally given their ordinary and customary meaning, which is the meaning they would have to a person of ordinary skill in the art at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). We depart from the plain and ordinary meaning in only two instances. *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014). The first is when a patentee acts as his own lexicographer. *Id.* The second is when the patentee disavows the full scope of the claim term in the specification or during prosecution. *Id.* There is no indication or assertion of lexicography in this case. The only question is whether the inventor disavowed trash bags with short seals that do not extend inwardly to narrow the upper opening width in relation to the bag proper width.

Disavowal can be effectuated by language in the specification or the prosecution history. *See Phillips*, 415 F.3d at 1316–17. In either case, the standard for disavowal is exacting, requiring clear and unequivocal evidence that the claimed invention includes or does not include a particular feature. *See Openwave Sys., Inc. v. Apple Inc.*, 808 F.3d 509, 513–14 (Fed. Cir. 2015); *Omega Eng’g., Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323–26 (Fed. Cir. 2003). Ambiguous language cannot support disavowal. *Omega*, 334 F.3d at 1324; *see also Schindler Elevator Corp. v. Otis Elevator Co.*, 593 F.3d 1275, 1285 (Fed. Cir. 2010).

While disavowal must be clear and unequivocal, it need not be explicit. *Trs. of Columbia Univ. v. Symantec Corp.*, 811 F.3d 1359, 1363–64 (Fed. Cir. 2016). For



example, an inventor may disavow claims lacking a particular feature when the specification describes “the present invention” as having that feature. *See e.g., Luminara Worldwide, LLC v. Liown Elecs. Co.*, 814 F.3d 1343, 1353 (Fed. Cir. 2016). Here, the specification states that: “In looking at both FIG. 1 and FIG 2, it is important to note that one of the characteristics of *the present invention* is a reduction in upper width . . . resulting from the extended short seals.” ’308 patent col. 6 ll. 11–15 (emphasis added). Directing the reader to figures one and two, which demonstrate the extended short seal feature, does not limit the import of this clear statement that describes a characteristic feature of the invention.

Similarly, an inventor may disavow claims lacking a particular feature when the specification distinguishes or disparages prior art based on the absence of that feature. *See Openwave*, 808 F.3d at 513–14; *SightSound Techs., LLC v. Apple Inc.*, 809 F.3d 1307, 1317 (Fed. Cir. 2015). That is exactly what the specification to the ’308 patent does by stating that prior art bags are difficult to secure over trash receptacle lips and explaining that the use of extended short seals reduces the claimed bag’s upper opening, making it easy to fit around a trashcan. *See* ’308 patent col. 2 ll. 49–51, col. 5 ll. 36–48, col. 6 l. 32–col. 7 l. 19.

Poly-America’s reply to the examiner’s second rejection of all claims also contains a clear and unmistakable disavowal of short seals that do not extend inwardly: “The ‘relaxed upper opening width’ of Schneider is the exact same as the ‘bag proper width,’ not less than the ‘bag proper width’ *as required by Applicant’s independent claims.*” J.A. 273 (emphasis added). Despite Poly-America’s contentions, it is irrelevant that the terms “bag proper width” and “relaxed upper opening width” are not present in claim 10, because when considered in light of the specification, it is clear that all of the claimed trash bags have a “relaxed upper opening width” and a “bag

proper width.” *See* ’308 patent col. 6 ll. 11–27. Ultimately, the only meaning that matters in claim construction is the meaning in the context of the patent. *See Trs. of Columbia Univ.*, 811 F.3d at 1365.

The district court’s analysis does not involve importing limitations from embodiments described in the specification. Every embodiment described in the specification has inwardly extended short seals and every section of the specification indicates the importance of inwardly extended short seals. These two facts provide together a proper reason to limit the claims in this way. Moreover, even if these indications were not themselves sufficient, they, when taken together with the statements from the ’308 patent’s specification and prosecution history identified above, provide clear and unequivocal evidence that the inventor intended to disavow any claim scope encompassing short seals that are not inwardly extended.

Poly-America argues that requiring the short seals in claim 10 to be inwardly extended would render redundant dependent claim 13’s provision for “a distance between the first seal and the second seal to a width of the bag proper being greater than 94% but less than 100%.” ’308 patent col. 8 ll. 49–53. Construing short seals to require inward extension would inherently provide for a distance between short seals that is less than 100 percent of the bag proper width, but that does not render the more specific range provided by dependent claim 13 redundant.

Poly-America also argues that because other independent and dependent claims explicitly provide for reduced upper opening width, claim differentiation principles preclude importing that limitation into claim 10, which does not contain such an explicit limitation. But claim differentiation does not serve to broaden claims beyond their meaning in light of the patent as a whole, and it cannot override clear statements of claim scope found in the specification and prosecution history. *See*

*Toro Co. v. White Consol. Indus., Inc.*, 199 F.3d 1295, 1302 (Fed. Cir. 1999).

#### IV. CONCLUSION

The '308 patent clearly and unequivocally disavows claims comprising short seals that do not extend inwardly. Therefore, the district court correctly construed the terms "short seal" to require inward extension and correctly entered judgment in favor of API. We *affirm*.

#### **AFFIRMED**

#### COSTS

No costs.