

Keywords: Prosecution History Estoppel; Doctrine of Equivalents

General: Infringement plaintiff is precluded from expanding scope of caulking tube patent to cover equivalents of claimed location for inner “ribs,” since applicant, in amending claims to overcome prior art, chose to claim ribs “extending to said rear end” of tube.

Research Plastics Inc. v. Federal Packaging Corp.

76 U.S.P.Q.2d 1133 (Fed. Cir. 2005)

Decided August 18, 2005

I. Facts

Research Plastics Inc. owns U.S. Patent No. 5,628,433 (hereinafter “the ‘433 patent”), which generally relates to caulking tubes. The ‘433 patent discloses and claims a plurality of ribs or air space defining members disposed along an inner peripheral wall or surface of a hollow tube *adjacent or extending to a rear end* of the hollow tube. As described in the ‘433 patent, these ribs or air space defining members enable air to escape from within the hollow tube as the plunger is inserted through the rear end of the hollow tube and moved toward a fluent material (e.g., a caulk or another adhesive) contained within the hollow tube. For example, claim 1 recites “air spaces defined *adjacent said rear end* of said tube body by air space defining members *extending to said rear end*.” In addition, claim 1 recites “a plunger member received within said tube body adjacent said rear end.” By further example, claim 10 recites “said ribs *extending to said rear end* of said hollow tube body.” The specification of the ‘433 patent discloses that a plunger is received within the rear end and advanced by a gun to dispense the material from the nozzle.

During prosecution, the ‘433 patent was rejected as obvious over U.S. Patent No. 4,852,772 (hereinafter “the Ennis patent”). The Ennis patent discloses ridges similar to the ribs of the ‘433 patent, except that the ridges are disposed near the nozzle end rather than the rear end of the tube. In contrast to the ‘433 patent, the Ennis patent discloses filling the tube through the Nozzle with the plunger initially depressed toward the nozzle. As the fluid material enters through the nozzle, the fluid material forces the plunger rearward to the open rear end of the tube. In the Ennis patent, the ridges are disposed near the nozzle to enable air escape during the filling process. In the ‘433 patent, the ribs are contrastingly disposed near the open rear end to enable air to escape as the plunger is inserted into the tube after the tube is already filled with a material. In response to the rejection, Research Plastics amended claims 1 and 10 to recite the ribs extending to or adjacent the rear end of the hollow tube. Along with these amendments, Research Plastics explained that the Applicant’s invention includes members that define spaces that extend to the rear end of the tube, such that the air spaces are provided when the tube is full.

Federal Packaging made and sold two different types of caulking tubes with ribs disposed in the open end region of the tube. For example, one previous caulking tube (“old style”) includes ribs that are offset from an open rear end of the tube by a beveled edge. In other words, the cylindrical interior surface of the caulking tube tapers in an outward and rearward direction to the open rear end of the caulking tube’s outer cylindrical wall, yet the ribs do not extend in this tapered region adjacent the open rear end of the caulking tube. In a more recent design (“new style”), Federal Packaging modified the caulking tube to place the ribs further inward from the open rear end of the caulking tube. Specifically, the ribs in the modified caulking tube are disposed further inward from the rear edge of the tube’s cylindrical interior wall and the beveled edge.

On August 14, 1998, Research Plastics brought suit against Federal Packaging, alleging infringement of its ‘433 and ‘499 patents. In a Markman hearing, the district court construed “rear end” to mean the outer most edge of the tube rather than a rear portion of the tube. The parties

subsequently filed cross motions for summary judgment, and the district court granted summary judgment of non-infringement of the '433 patent. The district court also determined that Research Plastics was barred from establishing infringement under the doctrine of equivalents due to prosecution history estoppel.

II. Issues

- A. Did the district court properly construe the claim term rear end?
- B. Was the district court correct in determining that Research Plastics was barred from establishing infringement under the doctrine of equivalents due to prosecution history estoppel?

III. Discussion

A. Yes and No. Regarding claim construction, the present court agreed with the district court's interpretation of "rear end" to mean the point forming the edge of the tube's body rather than the rearward portion of the tube, yet the present court disagreed with the district court's interpretation of the chamfered or beveled edge as being inside the rear end of the tube. Instead, the present court interpreted the claim term "rear end" as the entire rear edge of the tube, including the points at the rear end on both the inside and the outside of the tube and the area in between. In other words, the present court interpreted the rear end to include both the inside and outside rear edges of the tube. In reaching this claim construction, the present court reviewed the claim language, the written description, and the prosecution history. For example, the present court noted that Research Plastics distinguished the claims over the Ennis reference by amending the claims to recite the ribs *extending to or adjacent the rear end of the tube*. In addition, the present court noted that Research Plastics argued during prosecution that air spaces are provided adjacent the rear end of the tube such that the *air spaces are provided when the tube is full*. In view of these arguments, the present court noted that if the term "rear end" was *hypothetically* construed as an undefined area, and the ribs were positioned adjacent to this area, further inside the tube, *air spaces would not be provided when the tube was full*. Moreover, the present court emphasized that the forgoing hypothetical claim construction would not avoid the prior art that Research Plastics distinguished around. Consequently, the present court stated that Research Plastics' amendment must be seen as an affirmative disclaimer of ribs not extending to the rear edge of the tube.

Regarding literal infringement, the present court remanded the issue to the district court for reconsideration in view of the proper claim construction of the term "rear end" as discussed above. Again, the present court construed the claim term "rear end" to include both the inside rear edge and the outside rear edge of the tube, rather than merely the outside rear edge.

B. Yes. Regarding infringement under the doctrine of equivalents, the present court agreed with the district court that Research Plastics is precluded from expanding the scope of the '433 patent to cover equivalents of the location of the ribs under the *Festo* doctrine. Citing *Festo*, the present court explained that a narrowing amendment made to avoid prior art creates a presumption that the patentee surrendered the territory between the original claims and the amended claims. Furthermore, the present court explained that the patentee may rebut the presumption by showing that the alleged equivalent (1) cannot reasonably have been described at the time the amendment was made, (2) was tangential to the purpose of the amendment, or (3) was not foreseeable and thus not claimable at the time of the amendment. The present court addressed each of these criteria, stating that none of the criteria apply in the present case. For example, the present court noted that there would have been no difficulty in describing ribs placed rearward from the nozzle end, yet not extending completely to the rear edge. In addition, the present court noted that Research Plastics' claim amendments were clearly not tangential to the purpose of the amendment. In fact, the claim

amendments were made specifically to distinguish over the Ennis patent. Finally, the present court explained that it was foreseeable at the time of issuance of the patent that rib placement was the point of differentiation. For these reasons, the present court concluded that Research Plastics was precluded from asserting infringement under the doctrine of equivalents.

IV. Conclusion

In general, the use of geometrical, dimensional, or positional claim terms should be carefully used or modified with terms, such as substantially, generally, portion, and so forth. Otherwise, the positional claim limitations may result in a very narrow claim construction to a specific point on the claimed structure.