Claim Drafting and Claim Amendment to Reduce the Festo Effect

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The Federal Circuit's recent decision in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 56 USPQ2d 1865 (Fed.Cir. 2000) is viewed by many as having an immediate impact on all pending U.S. patent applications. Most notably, the decision seems to virtually eliminate any scope of equivalents for amended claim elements.

Commentators on the Festo decision have been quick to point out the need to review patent drafting and prosecution in light of the decision. For instance, it has been suggested that thorough prior art searches and thorough analysis of the known prior art could be helpful in drafting around all known prior art.[1] The addition of more independent claims, and the addition of more narrowly drafted claims, have also been proposed. These approaches are meant to reduce the likelihood the Examiner will reject a claim, and so reduce the likelihood that a range of equivalents will be lost due to a claim amendment.

While these approaches should be considered, these approaches may not be practical in every case. For instance, it may not be practical to do an exhaustive prior art search for each and every filed patent application. Without unlimited time, employee resources, and/or financial resources, one may be forced to balance available resources spent on the search in view of the potential value of invention rights.

Further, even when a seemingly exhaustive prior art search and analysis is conducted, there can be problems down the road. No matter how thorough a search is conducted, it is still possible the Examiner will find a more pertinent reference. Or, the Examiner may interpret a reference cited by the Applicant in manner different from the interpretation of the Applicant's attorney.

Worse still, the Examiner may believe he or she has found a more pertinent reference, and reject the claim on the basis of prior art that is (at least in the attorney's view) clearly not on point, or even completely irrelevant. Depending on the circumstances, it may not be practical (again, time/cost constraints vs invention value) to go to appeal to overcome an unreasonable examiner, and claim amendment may be a necessary evil.

So, while it makes sense to do what is possible to avoid amending claims in light of *Festo*, it is probably prudent to assume the worst...that you may have to amend claims despite your best laid plans. In that spirit, the following suggestions are offered for reducing the *Festo* effect. An added side benefit to some of the following suggestions is that ***broader*** claims may actually result, even if no amendment is ultimately required.

SPLITTING CLAIM RANGES

Most any invention can be described with claims including ranges. Chemical claims can include composition ranges. Mechanical claims can include component property ranges (e.g. dimensional, relative strength), motion ranges, functional ranges, and the like. Electrical/electronic claims can include ranges, such as for voltage, current, and resistance. Similarly, method claims often include ranges, such as those directed to temperature, pressure, and time. Virtually any invention, including those related to business methods and software, can be described in terms of ranges.

A typical claim including a range (albeit simplistic in the example below) could be:

> A composition comprising between x% and y% of element A.

This is a common method of reciting a range. However, it may not be the best approach. If, after *Festo*, the range "between x% and y%" is amended, what is the result? Is equivalents for the entire range lost? What if the most pertinent prior art only addresses the upper bound, or only the lower bound? (Sound familiar? *Consider Warner Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 US 17, 41 USPQ2d 1865 (1997)). What if, based on the prosecution history, it is not completely clear that amendment was made to address only one end of the claim range? Surely, if there is that equivalents for the entire range was surrendered by amendment.

To help reduce the range of equivalents lost by amendment, consider eliminating at least some of the potential uncertainty by splitting up the range as follows:

> A composition:
>
> the composition comprising at least x% of element A; and
>
> the composition comprising no more than y% of element A.

The claim with a split range clearly sets out two limits. The prosecution history will be clear with respect to what part or parts of the range were amended. Arguably, if one limit is amended, equivalents for the other limit is retained in full.

But there is an additional advantage to the split range version, even if you never amend the claim. The split range format, when used in drafting, can lead to ***broader*** claims. This is because the split format begs the question: " Do I need both limits to overcome the prior art? " When an inventor/attorney reviews a claim with the "between" range, he or she might easily assume the upper and lower bounds are needed/desired. On the other hand, the split range format is more likely to make a drafter or reviewer explicitly consider if both limits are truly needed. Sometimes, one limitation could be broadened, or may not be needed at all.

AVOID "RUN-ON" CLAIMS

A "Run-On" claim can be described as a claim with no clear separation of claim elements and/or claim limitations. Consider the following claim:

A layered coating applied to a metallic substrate without substantially any resulting loss in fatigue properties of the substrate which comprises a first ductile layer on the substrate comprising a metal selected from the noble metal group of elements; and a second erosion-resistant layer on the first layer comprising a hard material formed of a boride, carbide, nitride or oxide of a metal selected from Group III to Group VI elements; wherein the thickness of the first layer ranges from about 0.1 to about 1.5 mils and the thickness of the second layer ranges from about 0.2 to about 2.5 mils.

The above claim could be rewritten in a clearer, more structured form, such as:

> A coating applied to a metallic substrate, the coating comprising:
>
> a first layer disposed on the substrate; and
>
> a second layer disposed on the first layer;

properties of the substrate;

wherein the first layer is a relatively ductile layer;

wherein the first layer comprises a material formed of a metal selected from the noble metal

group of elements;

wherein the second layer is a relatively erosion-resistant layer;

wherein the second layer comprises a material formed of a boride, carbide, nitride or oxide of a metal selected from Group III to Group VI elements;

wherein the thickness of the first layer is at least about 0.1 mils;

wherein the thickness of the first layer is no more than about 1.5 mils;

wherein the thickness of the second layer is at least about 0.2 mils; and

wherein the thickness of the second layer is no more than about 2.5 mils.

Admittedly, the difference in the two claims is primarily one of form. However, it can be argued that there are at least two advantages to the second format over the first format.

First, if the claim in the first format is amended, there may be a question with respect to what claim elements/limits the amendment extends. This is because it is difficult to determine distinct boundaries between precise claim limitations in the claim.

For instance, if the claim limit "ductile" is amended, does that amendment effect the scope of equivalents for any of the other characteristics of the first layer, such as any potential equivalents with respect to the metal composition? With the first format, it might be easier for an accused infringer to convince a judge or jury that such an amendment should limit the scope of equivalents as to all the characteristics of the first layer. On the other hand, amendment of the second format should result in a prosecution history that is clear as to what was meant to be amended and what was not meant to be amended.

Second, the first claim format is difficult to read, despite the fact that it is not very long by claim length standards. It is easy to imagine an inventor's or other reviewer's eyes glazing over as he or she tries to parse the language of the first format. As result, the inventors or reviewers may never ask, "do we really need all these limitations?" The second format, on the other hand, is easier to read, and begs that might be removed in the broadest claim. As a result, the final claim on filing may actually be ***broader*** than the claims as originally drafted.

For an example of setting out claim elements and claim limitations in a mechanical apparatus claim, as compared to a run-on form, see "Landis on Mechanics of Patent Claim Drafting".[2]

ADDING CLAIMS LIMITS OR ELEMENTS VS MODIFYING LIMITS OR ELEMENTS

A third approach to avoiding the Festo Effect involves adding a claim limit or element, rather than amending a limitation in response to a rejection. The addition of claim limits/elements may be preferred over amending a limitation in response to a rejection, depending on the circumstances.

For instances, for strategy reasons, a relatively broad claim may be filed with the hope that the claim not only protects the client's business, but also provides licensing potential for applications outside the client's business. Likewise, a specific division of a multi-division company may file a claim with sufficient breadth to cover not only the specific division's products, but also applications in other divisions of the same company. This can be good strategy. However, if amendment is later needed in response to an examiner's rejection, it is important to not lose sight of the primary claim coverage desired.

For instance, suppose you file the following claim to cover your client's business, but you draft it to be broad enough to cover other potential applications in the client's sister divisions:

> A method of processing an article, the method comprising the step of associating the article with a solution comprising at least about 40% element X.

Assume your client's primary interest is in repairing automotive components having worn coatings by stripping the worn coatings with the composition, that the method is inoperative below 40% X for your client's applications, and assume your preferred embodiment is 75%-90% element X.

Next, suppose the above claim is examined and rejected in view of a reference teaching stripping contaminants from machine tools using a solution containing between 10 and 60% element X, and that the Examiner is willing to cut a deal and give you your broadest claim if amended to recite at least 75% element X. You could amend the claim with respect to the weight percent of element X, but you would most likely lose any equivalents because of Festo.

competitors, a better approach could be to amend your broadest claim by adding another limitation and/or another step, as follows (as well as combinations and permutations of the following):

> A method of removing a worn portion of an article, the method comprising the step of associating the article with a solution comprising at least about 40% element X.
>
> -or-
>
> A method of removing an article coating, the method comprising the step of associating the article coating with a solution comprising at least about 40% element X.
>
> -or-
>
> A method of repairing an article, the method comprising the step of:
>
> A) removing a worn portion of the article by associating the article with a solution comprising at least about 40% element X; and
>
> B) restoring the portion removed in step A.

Based on the facts at hand, any of the three approaches above will, in most cases, provide more meaningful coverage than the coverage obtained by merely amending the range of X. The primary point here is that, in view of Festo, your client's business interests may be better served by overcoming a rejection by adding a claim element or limit rather than by amending a limitation to specifically address the Examiner's rejection.

CONCLUSION

The three suggestions above are provided in the spirit of promoting discussion and, hopefully, assistance in claim drafting and amendment. While one or more of the suggestions may be in use, in one form or another, by practitioners around the country, it's hoped the above presentation frames the suggestions in a new light in view of the Festo decision and the heightened risk of loss of equivalents by claim amendment.

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ENDNOTES

1. Life After Festo: Guarding Against Copyists, W. D. Wallace, Intellectual Property Today, January 2001, pp 8-11.
2. Landis on Mechanics of Patent Claim Drafting, Third Edition, Robert C. Faber, March 1990, p39-40.