

## Claims of Innocence

In my [last post](#), I discussed the background of a recent 337 complaint made by AAVN, Inc., to the US International Trade Commission. Within the complaint, AAVN alleges that AQ Textiles, LLC and Creative Textile Mills Pvt. Ltd are infringing on a patent owned by AAVN called the [790 patent](#). The complaint requests a general exclusion order prohibiting the respondents from importing several marketed products that allegedly infringe on the 790 patent.

On its face, the complaint makes a compelling case of infringement. AAVN purchased Sterling Manor sheets and bedding products imported by AQ Textiles, LLC and Creative Textile Mills Pvt. Ltd and submitted them to a test lab for a point by point comparison of the Sterling Manor products against the 790 patent. The results from the lab test would appear to be conclusive that, in every measurable sense, the imported products infringe on the patent.

However, I have reservations that this will be a slam dunk for AAVN.

Let me say upfront, that I am just second guessing from the bleachers. I have full confidence in the legal team that both prosecuted the patent and that is prosecuting the 337 complaint. From what I see, these teams have impeccable reputations, exceptional qualifications and excellent experience and competence. In short: there are plenty of dead lawyers on the letterheads. Let me also say clearly that I have no inside knowledge of the details of this case or about the parties participating in the case.

My concerns are instead based on the scope of protection that was granted by the USPTO. The actual complaint alleges infringement of seven claims made in the patent but, if I were betting, the success of this case will hinge on the first claim so I will focus on that.

As I have written in prior [posts](#), claims are specific statements of what has to be done to infringe on a patent. Moreover, in order to be an infringing act against a patent every element of the claim must occur. In the case of the 790 patent, the first claim contains several claim elements which can be summarized as follows:

- 1) the warp yarn density ranges from 90 to 235 warp ends per inch;
- 2) the weft yarn density ranges range from 100 to 765 picks per inch;
- 3) the picks woven into the fabric contain two separate polyester weft yarns running parallel to each other;
- 4) the two weft yarns are wound on a multi yarn package;
- 5) the two weft yarns are inserted into the fabric as a single pick insertion event;
- 6) the two weft yarns are inserted using an air jet insertion method;
- 7) the two weft yarns are wound at a package angle of between 15 and 20 degrees; and,
- 8) the shore hardness of the multi yarn package is between 65 and 70.

In general, when writing a claim it is usually best whenever possible to limit claim elements to the characteristics of the actual product and to avoid claims elements that involve how the product was produced. This is because when claim elements are limited to the actual product, it is relatively easy to determine whether a specific claim element has been violated. It is much more difficult to determine when a production claim has been violated without specific knowledge of the product's production process. This is because information about the production process is much more difficult to get.

The first claim of the 790 patent provides a good example as to why this is true. I have no problems with the first three claim elements. They are simple, specific and easily checked in the commercially available product. But

claim elements 4 and 5 are more problematic. To know whether these elements have been violated, the patent holder will have to determine the loom set up and the type of weft packages that were used in the production of the product. These are manufacturing details that can't be determined from the end product. Since it may be possible to determine that the fabric was formed on an air jet loom I am less concerned with claim element 6. While the problems with claim elements 7 and 8 are essentially the same as with claim elements 4 and 5, I am much more concerned with these claim elements because of their specificity. For example, if the respondent can demonstrate that either the package angle used in the production of the product was not between 15 and 20 degrees or that the shore hardness of the packages was not between 65 and 70 then they will have effectively proven that they have not infringed on the 790 patent. And even if the respondents can't make the above demonstration, a relatively minor modification in the packaging specification may very well result in future production that will not infringe on the patent.

So it is fair to ask why patent claims would be written this way. Unfortunately, the answer usually is that there wasn't much choice. When a technology is new and the competition is limited it is relatively easy to differentiate patented products. However, over time related technologies will converge and differences between newer patents become slimmer. In addition, the number of patents issued in the technology accumulates to the point where there is a large body of prior art against which the newer patent applications are judged. This accumulation of prior art makes it difficult to differentiate new patents that are entering into the space. This accumulation of prior art is what people are referring to when they speak of a crowded art. And as a rule, textile patents belong to crowded arts.

So in the end it is very likely that the patent representative was forced to use the production claim elements because that is where the novelty of the invention lied. Sheets, bedding and high end count fabrics are all well known in the textile industry. Double insertion of independent weft yarns is also a well-established technique. However, winding multiple yarns on a single package and using a single weft carrier to carry two yarns are relatively unusual practices. And, depending on the market, further limiting the patent to air jet technology could have significantly increased the probability of being granted the patent for relatively little loss of generality. I could also see situations where an examiner would give an applicant little choice but to specify patent angles and shore hardness.

It really just depends on what came before you.

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